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COPPER, NICKEL, LEAD AND ZINC DEPOSITS

OF ONTARIO

By

Roman Shklanka

ABSTRACT

In this fifth inventory report on the copper, nickel, lead and zinc resources in Ontario, more than 1600 deposits are classified and briefly described. Their economic aspects are emphasized. Known development work undertaken and sources of information are included.

In 1967, 65 percent of Ontario's total mineral production came from mines producing copper, nickel, lead or zinc. Two types of ores, nickel-copper and copper-lead-zinc, account for more than 95 percent of this production; they are derived mainly from two geological types - Ni-Cu deposits associated with mafic and ultramafic rocks and conformable Cu-Pb-Zn deposits.

A more than doubling of the value in the past twelve years of copper, nickel, lead and zinc produced in the province, corresponding to marked increases in the quantity of copper, lead and zinc produced and a slight increase in nickel production, indicate the continued success of exploration efforts expended in the province.

List of Contributors

Preparation of this inventory of copper, nickel, lead and zinc deposits in Ontario has been a joint effort of members on staff of the Geological Branch of the Ontario Department of Mines. Contributors and their area of responsibility are listed below.

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- S.A. Ferguson² compiled the mines and most prospects within the Timmins Resident Geologist's district.
- P.E. Giblin³ compiled the deposits in the Sault Ste. Marie Resident Geologist's district.
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COPPER, NICKEL, LEAD AND ZINC DEPOSITS OF ONTARIO

By

Roman Shklanka, Editor¹

INTRODUCTION

This is the fifth inventory report on the copper, nickel, lead and zinc resources of Ontario, superceding Metal Resources Circular No.2, issued in 1957. The format departs slightly from previous usages in order to make it more amenable to data processing. Mineral deposits rather than properties are described. These are arranged alphabetically, first according to district or county (Figure 1) and second according to township or 15-minute area² of latitude and longitude. The deposits are classified according to their stage of development into: mines, with producers and past producers indicated; prospects, denoting deposits upon which significant development work has been undertaken; and occurrences, which represent the comparatively undeveloped deposits. The mines and prospects are described briefly as to geology with the economic aspects emphasized. Types of development work, and the year and by whom it was performed are noted. Sources of information are included for reference purposes. The occurrences within each district or county are tabulated at the end of each respective section. Included here are the location, reference sources, main metals present and significant features.

Copper, nickel, lead and zinc form a convenient unit for inventory purposes because of the complex intermingling of these metals in many deposits. Deposits which may contain these metals but in which other metals (e.g. silver, gold, cobalt, molybdenum) are dominant are mainly omitted. For these deposits the reader is referred to other inventory reports either recently prepared by the department or in progress.

Production

Production statistics for 1967, preliminary figures for 1968 and total production to 1967 for copper, nickel, lead and zinc in Ontario are given in Table 1. These metals accounted for 43 percent of the total dollar value of mineral production in Ontario, to the end of 1967, and 58 percent of the total mineral production in 1967. Including co-product

¹Review and Resources Geologist, Ontario Department of Mines, Toronto.
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²Defined by the latitude and longitude of the southeast corner.

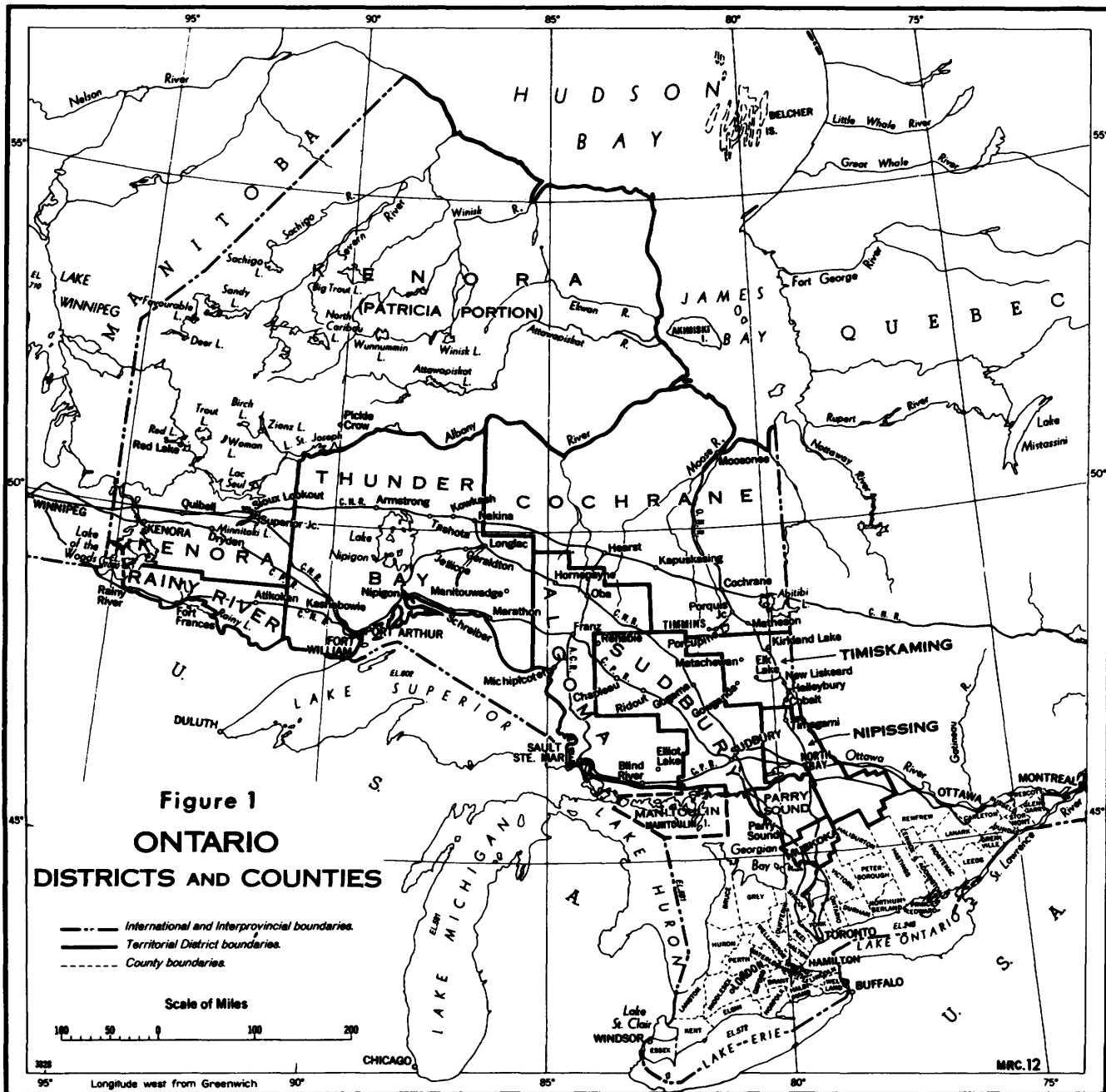
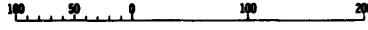


Figure 1

**ONTARIO
DISTRICTS AND COUNTIES**

- International and Interprovincial boundaries.
- Territorial District boundaries.
- County boundaries.

Scale of Miles



Longitude west from Greenwich

MRC.12

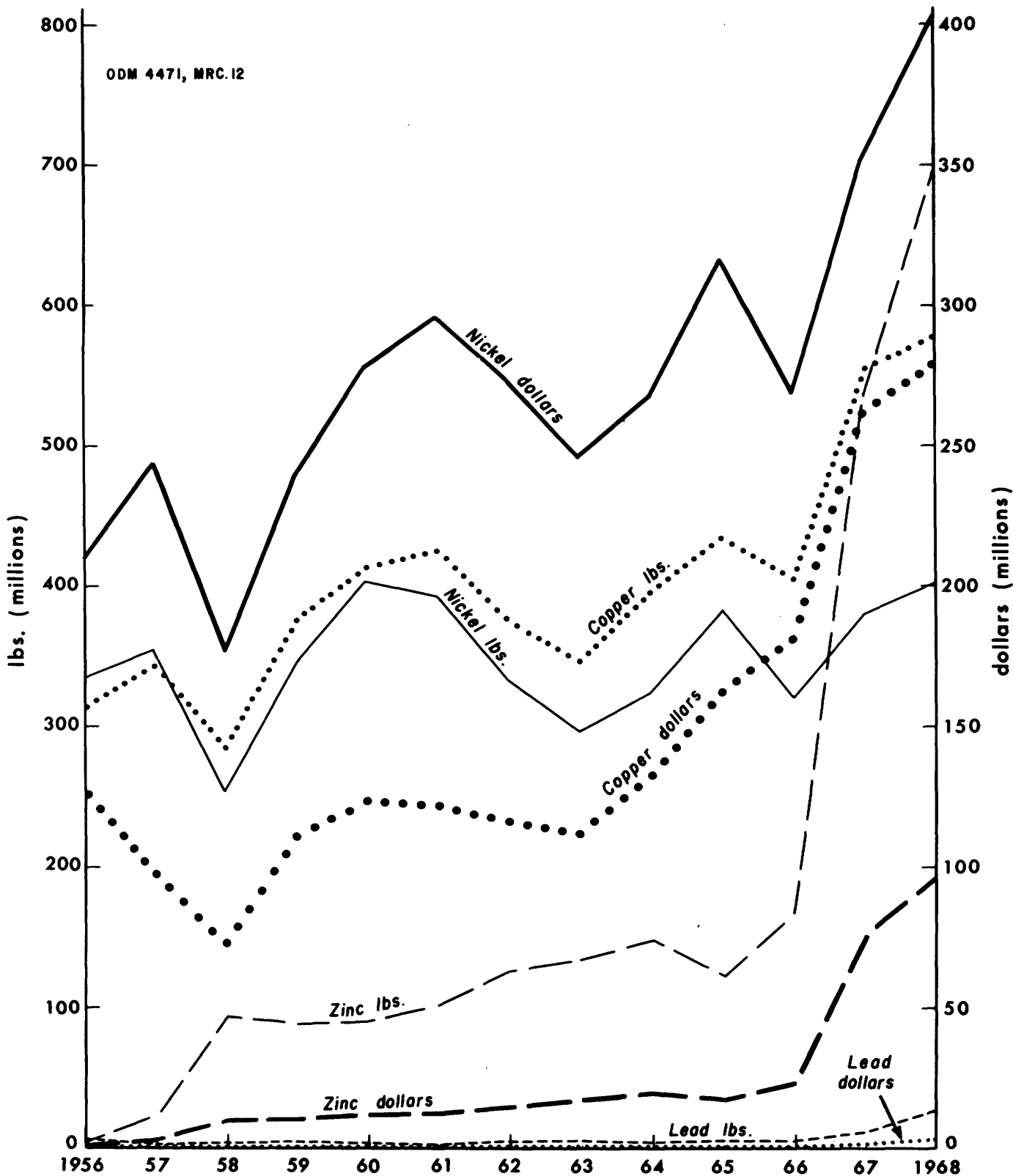


Figure 2 - Value and quantity of Cu, Ni, Pb and Zn production in Ontario, 1956 to 1968.

and by-product statistics, copper, nickel, lead and zinc mines accounted for 65 percent of the total mineral production in Ontario for 1967. The bulk of this production comes from the Sudbury area mines, with the Manitouwadge area mines and the Kidd Creek Mine as the most important additional sources.

Totals for quantity and value of copper, lead and zinc production in Ontario for the past 12 years are graphically tabulated in Figure 2. The remarkable growth in production of copper, lead and zinc, and the continued maintenance of Ontario's level of nickel production indicate the success of exploration efforts achieved for these metals. Producing mines at the end of 1968 and mines under development are tabulated and located on Figure 3.

Copper, nickel, lead and zinc in the province are derived from the following broad ore classes.

1. Nickel-copper ores - In 1967, this type accounted for 73.2 percent of the total value of production. The same year 19,888,664 tons were milled and returned a calculated average unit price of 28 dollars per ton. This included by-products valued at 59.2 million dollars consisting of:

159,985 ozs. platinum
872,245 tons iron ore
193,205 ozs. palladium
2,845,303 lbs. cobalt
22,550 ozs. rhodium
1,626,992 ozs. silver
195,972 lbs. sulphur
42,408 ozs. gold
7,539 ozs. iridium
16,619 ozs. ruthenium
134,800 lbs. selenium
6,500 lbs. tellurium

2. Copper-lead-zinc ores (including copper-zinc ores) - In 1967, this type accounted for 24.0 percent of the total value of production. The same year 5,903,032 tons were milled and returned a calculated average unit price of 33 dollars per ton. This included by-products and co-products valued at 20.8 million dollars consisting of:

8,379,106 ozs. silver
2,024,006 lbs. cadmium
7,281 ozs. gold
38,476 tons sulphur

3. Copper ores - In 1967, this type accounted for 2.7 percent of the total value of production. The same year 1,539,286 tons were milled and returned a calculated average unit price of approximately 13 dollars per ton. This included some gold and silver recovered as by-products.

4. By-product ores - In 1967, 0.1 percent of the total value of copper, nickel, lead and zinc was recovered as by-products of gold ores and silver-cobalt ores.

Table 1: Production Statistics, Copper, Nickel, Lead and Zinc in Ontario.

	1968 (Preliminary)		To end of 1967		1967	
	Quantity (lbs.)	Value (dollars)	Quantity (lbs.)	Value (dollars)	Quantity (lbs.)	Value (dollars)
Copper	576,969,537	277,522,347	11,959,282,756	2,747,570,023	522,291,827	261,814,899
Nickel	406,358,758	403,563,549	11,239,541,502	5,458,292,964	380,117,521	352,238,885
Lead	28,070,482	3,795,129	126,593,972	11,713,686	11,058,534	1,548,195
Zinc	691,109,298	97,446,411	1,670,546,597	224,665,920	537,064,861	77,820,698



Figure 3—Cu, Ni, Pb, Zn Mines in Ontario (as at the end of 1968).

Main Geological Types

A. Nickel

1. Deposits associated with mafic and ultramafic intrusions

a) Ni-Cu deposits:

Most nickel ores and deposits are of this class with chalcopyrite, pyrrhotite and pentlandite the most common minerals. The deposits may be disseminated, massive, or both. They may occur within, marginal, or near the base of the host intrusion. The intrusions include dikes, sills, or stocks of Archean or Proterozoic age. Many of the intrusions follow fault zones, some are post orogenic, some are pre-orogenic, and some appear to be related to associated volcanism. Genetic classes represented probably include magmatic segregation, replacement, sulphide injection, or composite types.

Distinctive varieties include:

Deposits associated with the Sudbury irruptive and its offsets (Sudbury area mines).

Deposits associated with peridotite (Shebandowan Mine, Gordon Lake Mine, Alexo Mine, McWatters Prospect).

Deposits associated with gabbro, differentiated gabbroic intrusions or diabase (Great Lakes Nickel Prospect, Thunder Bay Nickel Prospect).

Deposits associated with anorthosite (Drainage Lake Prospect).

b) Ni-Fe deposits:

Disseminations and veins of nickeliferous magnetite within serpentinite (Puddy Lake Prospect).

2. Vein deposits

a) Ag-Co deposits:

Silver-cobalt-calcite vein deposits, mainly in the Cobalt area, contain nickel, dominantly as arsenides and sulpharsenides, some of which is recovered with or without copper as a by-product.

b) Ni-Cu deposits:

Quartz veins bearing erratic chalcopyrite and nickeliferous pyrrhotite are known in the Sault Ste. Marie-Cobalt area. Most are in or near diabase intrusions.

B. Copper

1. Deposits associated with mafic and ultramafic intrusions

a) Ni-Cu deposits:

Same as A. 1. a). These deposits account for a major portion of the province's copper production.

2. Deposits associated with alkalic complexes

a) Cu deposits:

Chalcopyrite with pyrrhotite or pyrite in gabbroic facies of the complexes (Sandspit-Popover Prospect, Kinasco Prospect).

b) Cu-Fe-Ti deposits:

Chalcopyrite, pyrite, pyrrhotite associated with titaniferous magnetite in gabbroic facies of the complex (Anaconda Prospect, Bamooos Lake Prospect, Coubran Lake Prospect).

3. Conformable deposits

a) Cu-Pb-Zn deposits:

Conformable deposits, with dominant metal values ranging from Cu to Cu-Pb-Zn but mainly consisting of Cu-Zn, are Ontario's main source of lead, zinc, silver and cadmium and its second most important source of copper. The bulk of these deposits consist of chalcopyrite, pyrrhotite, pyrite, galena and sphalerite in various proportions. Mineralization is massive and (or) disseminated, layering is prevalent and zoning is common. The deposits are lenticular or tabular, stratiform or slightly discordant, and metamorphosed. Chert, iron formation, or graphitic schists may be associated with the deposits. The deposits commonly occur at distinct stratigraphic boundaries (e.g. felsic-mafic volcanic contact). Two associations may be present - a volcanic, commonly rhyolitic association (Kidd Creek, Mine, Temagami Mine, North Coldstream Mine) or a sedimentary association (Geco Mine, Willroy Mine, Willecho Mine). The deposits may represent more than one genetic variety and probably range from volcanic to fumarolic to sedimentary in origin.

b) Cu deposits:

Two types of conformable copper deposits are known: native copper in Keweenawan basalt and conglomerate (Quebec Mine); and chalcopyrite, of possible syngenetic origin, in Huronian sediments (Cobden River Prospect, Desbarats Prospect).

4. Fissure deposits

Numerous veins, stockworks, and stringer zones contain copper mineralization either alone or with one or more of lead, zinc, silver, gold, nickel, cobalt, uranium, and molybdenum. They are scattered throughout the province but some of the more distinctive varieties are:

- a) Quartz veins with chalcopyrite, pyrite or specularite along the north shore of Lake Huron (Pater Mine, Massey Mine, Baldwin Prospect).
- b) Carbonate veins with chalcocite, bornite, chalcopyrite and rarely native copper especially near the east shore of Lake Superior.
- c) Quartz or quartz-carbonate veins containing gold with various amounts of chalcopyrite, galena or pyrite occur throughout the province (Lake Beaverhouse Mine).
- d) Silver-cobalt veins in the Cobalt area with some copper recovered as a by-product.

5. Porphyry-type deposits

Disseminated copper deposits, of a type which have a potential large tonnage but low grade include:

- a) Chalcopyrite in felsic intrusions including porphyry, syenite, or granitic rocks (McIntyre Mine, High Lake Prospect, Ryan Mine, Jogran Prospect).
- b) Chalcopyrite disseminated along shear zones (Mayburn Mine Prospect, Kabamichigama Prospect, Potter Prospect).
- c) Chalcopyrite in contact metasomatic, including skarn, deposits (Lake Tp. Occurrence; Hart Tp. Prospect).

6. Diatreme deposits

Mainly chalcopyrite and pyrite in breccia zones associated with Keweenawan volcanism (Tribag Mine).

C. Lead and Zinc

1. Conformable deposits

- a) Cu-Pb-Zn deposits:

Same as B. 3. a).

2. Mississippi-valley type deposits

- a) Pb-Zn deposits:

Disseminated galena and sphalerite in carbonate rocks, preferentially concentrated in reefal facies (Bruce Peninsula Deposits, Disraeli Lake Occurrence).

3. Fissure deposits

Veins, stockworks and stringer zones containing lead and (or) zinc with or without one or more of copper, cobalt, silver, gold. They are scattered throughout the province but some of the more distinctive varieties are:

- a) Sphalerite and galena with quartz, calcite, barite and fluorite as mainly NW-trending, post-Precambrian veins in southern Ontario.
- b) Galena, sphalerite, chalcopyrite with quartz, amethyst, calcite, fluorite as mainly ENE-trending, veins in Keweenawan rocks near the west shore of Lake Superior; or E-trending veins along the north shore of Lake Superior.
- c) Galena, sphalerite, pyrite, pyrrhotite in NNW-trending quartz veins in the Favourable Lake area (Berens River Mine).

Sources of Information and Acknowledgments

The information in this circular has been obtained from published reports and unpublished property descriptions on file in Resident Geologists' offices throughout the province. Duplicate files of some of the unpublished data are available for viewing in Toronto. Locations of most deposits described herein may be obtained from the Ontario Mineral Map (ODM map 2148) or the Ontario Department of Mines series of 1 inch to 4 miles compilation maps. For recent developments the reader is referred to the Ontario Department of Mines, Annual Reviews.

Completion of individual contributions for this inventory took place between November, 1968, and June 1969. No attempt was made to update individual sections to the time of publication.

The authors gratefully acknowledge the information provided by a large number of mining companies, property owners and individuals, for use in the preparation of this inventory.

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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
con.	= concession
d.d.	= diamond drill (drilling)
EM	= electromagnetic
G.A.C.	= Geological Association of Canada
G.R.	= Geological Report
GSA	= Geological Society of America
GSC	= Geological Survey of Canada
INCO	= The International Nickel Company of Canada Limited
IP	= Induced polarization
MAG	= Magnetic, magnetometer
Mem.	= Memoir
M.P. 50	= Miscellaneous Paper (MP) 50
M.R.B.	= Mineral Resources Branch, Department of Energy, Mines and Resources, Ottawa
M.R.C. 7	= Mineral (Metal) Resources Circular No. 7
N, S, E, W	= north, south, east, west
N50W, dip 50NE	= North 50 degrees west, dipping 50 degrees northeast
OBM	= Ontario Bureau of Mines (before 1920)
ODM	= Ontario Department of Mines (1920 and on)
p.	= page (s)
pers. com.	= personal communication
P.R.	= Preliminary Report
pt.	= part
R.	= Range

Res. = Resources
Rept. of Prog. = Report of Progress
Sec. = Section
SP = Self potential
Summ. Rept. = Summary Report
Tp. = Township

DESCRIPTION OF DEPOSITS

ALGOMA DISTRICT

ABERDEEN TOWNSHIP

Fraser Prospect

Main Metals: Cu.

Location: Aberdeen Tp.; S 1/2, lot 3, con. II.

Geology: A quartz vein contains chalcopyrite.

History: 1901 2 shafts; one 33 feet and another 8 feet deep, by Pioneer Iron Co.

References: OBM, 1902, Vol. 11, p.271.

Kirk Prospect

Main Metals: Cu.

Location: Aberdeen Tp.; S 1/2, lot 11, con. V; S shore of Aberdeen Lake.
Reference: ODM map 2108.

Geology: A quartz vein in diabase, 2 to 8 feet wide contains minor chalcopyrite.

History: 1919-22 Inclined shaft 126 feet deep; 360 feet of drifting on the 50-foot level; raise to surface; and an adit 625 feet long, by Kirk Gold Mines Ltd.

References: ODM, 1915, Vol.24, pt.1, p.68-69.
GSC, 1936, Mem. 192, p.21.

Indian Lake Prospect

Main Metals: Cu.

Location: Aberdeen Tp.; S 1/2, lot 6, con. II.
Reference: ODM map 2108.

Geology: A quartz vein contains chalcopyrite.

History: 1902 Shaft 30 feet deep.

References: OBM, 1902, Vol. 11, p.271-272.

Rock Lake Mine (Past Producer)

Main Metals: Cu.

Location: Aberdeen Tp.; S 1/2, lot 3, con. I.
Reference: ODM map 2108.

Geology: A stockwork of discontinuous quartz-carbonate-chalcopyrite veins in a fault zone, which strikes N55W and dips 90 to 70N, has an average width of 50 to 100 feet. It has been traced by drilling for a strike length of 1000 feet and by surface prospecting for length of 2 miles.

Economic Features: Drilling in the vicinity of the old workings obtained copper values ranging from 0.11 to 0.51% Cu, traces Au and Ag, over core lengths ranging from 5 to 45 feet. Production grade averaged 35 lbs./ton Cu.

History: 1898-1903 Two adits; vertical 3-compartment shaft to 420 feet; levels at 100, 200, 300 feet; 606 feet of lateral development on 3 levels; stoping from 100- and 200-foot levels; 2 raises to surface from 100-foot level.
1899-1903 Production: 1,524,000 lbs. copper, valued at \$103,082, from 43,300 tons of ore, by Rock Lake Mining Co. Ltd.
1950 3204 feet of d.d. by East Sullivan Mines Ltd.
1955 Geol. survey.

References: ODM, Sault Ste. Marie files SSM-41,-42.

ABERDEEN ADDITIONAL TOWNSHIP

Two Horse Lake Prospect

Main Metals: Cu, Fe.

Location: Aberdeen Additional Tp.; lot 3, con. VI, 1/8 mi. E of S end of Two Horse Lake.
Reference: ODM map 2108.

Geology: A shear zone along diabase-iron formation (altered limestone?) contact is silicified, carbonatized, chloritized, and contains

chalcopyrite and pyrite. The zone strikes N55W, dips 40S, and has an exposed strike length of 130 feet, with a maximum width of 35 feet.

Economic Features: Low copper values, generally less than 1%, were obtained in drilling. Most d.d. on the property performed to evaluate the iron occurrence.

History: 1962 Trenching, and 658 feet of d.d. in 5 holes by Conwest Exploration Co. Ltd.
1963-64 2856.9 feet of d.d. in 28 holes and MAG survey by New Senator-Rouyn Ltd.

References: ODM, Sault Ste. Marie files SSM-468,-657.
ODM, 1968, M.R.C. 11, p.20.

ANDERSON TOWNSHIP

Taylor Prospect

Main Metals: Cu.

Location: Anderson Tp.; N 1/2, lots 2,3,4, con. V; S 1/2, lots 3,4, con. VI.
Reference: ODM map 2108.

Geology: A quartz-carbonate-chalcopyrite vein occurs in a shear zone along a granite-dabase dike contact, that strikes N70W, and dips 65-70N. The vein has been traced for 900 feet along strike, and the width ranges from 2 to 15 feet.

History: 1901-02 Four shafts, each less than 50 feet deep, and 2 adits, by Taylor Copper Mining Co.

References: ODM, Sault Ste. Marie files SSM-6,-44.

AWERES TOWNSHIP

Hillman Prospect

Main Metals: Cu.

Location: Aweres Tp.; W 1/2, Sec. 29; E 1/2, Sec. 30; 1 mile W of Hwy. 17.
Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein occurs in a fault zone which strikes

E. The dip appears to be vertical. At the shaft site the vein-fault zone is 15 feet wide.

Economic Features: The chalcopyrite content of vein is apparently low and erratic. The vein was intersected in 2 drill holes about 600 feet apart along strike but, only a few specks of chalcopyrite are reported in the logs. No samples were taken for assay. A chip sample collected at the shaft assayed 1.33% Cu, and nil Au, over width of 8 feet.

History: 1907 Shaft, reputed to be 45 feet deep, by Hillman Mines, Ltd.
1955-56 1147 feet of d.d. in 3 holes by Detta Minerals, Ltd.
1961 125 feet of d.d. in 1 hole by H. Johnson.

References: ODM, Sault Ste. Marie files SSM-47,-48.

Nystedt Prospect

Main Metals: Cu.

Location: Aweres Tp.; central part of Sec. 10; 1/2 mile NW of junction of Hwys, 552 and 556.
Reference: ODM map 2108.

Geology: Chalcopyrite, specularite, minor pyrite and pyrrhotite occur as discrete grains. and as small irregular veins, often associated with quartz, in fractured syenite and granite.

Economic Features: Sampling of certain trenches indicated economically interesting copper values. Drilling of these deposits and of geophysical anomalies returned generally low values, most commonly less than 0.25% Cu.

History: Pre-1954 Short adit.
1965-66 2766.4 feet of d.d. in 18 holes; trenching; EM and IP surveys; geol. and geochem. surveys by Kennco Explorations (Canada) Ltd.

Ownership: Young Men's Christian Association, Sault Ste. Marie, Ont.

References: ODM, Sault Ste. Marie file SSM-953.

BRIDGLAND TOWNSHIP

Band-Ore Prospect

Main Metals: Cu.

Location: Bridgland Tp.; lot 10, con. I, lot 11, con. II.
Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins cut sediments of the Gowganda Formation. Channel sampling returned values ranging from 0.36% Cu across 4.0 feet to 4.96% Cu across 2.0 feet (Northern Miner, Feb. 22, 1968).

History: 1967-68 649 feet of d.d. in 2 holes; trenching, by Band-Ore Gold Mines, Ltd.

References: ODM, Sault Ste. Marie file SSM-1165.
Northern Miner, 1967, Sept. 28; 1968, Feb. 22, March 28.

Paynter Prospect

Main Metals: Cu.

Location: Bridgland Tp.; lots 6 and 7, con. I.
Reference: ODM map 2108.

Geology: Two parallel quartz-chalcopyrite veins in diabase, 400 feet apart, strike N70W, and dip 90. The South vein appears to be the better mineralized, and has been traced along strike for 1200 feet.

Economic Features: Surface sampling of the South vein indicated an average grade of 1.87% Cu over an average width of 7.1 feet, for a length of 732 feet. Subsequent d.d. obtained lower-grade copper values over narrower widths.

History: Pre-1957 Trenching by J. Allard and P. Talarico.
1957 Trenching; EM survey; 2874 feet of d.d. in 14 holes by Alcourt Mines, Ltd.
1966 Trenching; 973.5 feet of d.d. in 8 holes by R. Paynter.

References: ODM, Sault Ste. Marie files SSM-50,-241,-1108.

Roaring River Prospect

Main Metals: Cu.

Location: Bridgland Tp.; lots 1 and 2, con. IV.
Reference: ODM map 2108.

Geology: Two principal quartz-chalcopyrite veins, striking NW, cut Gowganda Formation sediments.

Economic Features: Vein traced intermittently for a length of about 8000 feet and width ranges from 3 feet to 8 feet. Assay results

from core samples ranged from 0.04% Cu over 1.4 feet to 2.43% Cu over 1.7 feet. Most assay results were less than 1% Cu (Files SSM-52,-537).

History: 1957 MAG, EM, SP, geol. surveys, and 2644 feet of d.d. in 7 holes by Roaring River Mines Ltd.
752 feet of d.d. in 2 holes by Anglo-Barrington Mines Ltd.
1960 2353 feet of d.d. in 5 holes by Roaring River Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-51,-52,-537.

CHESLEY TOWNSHIP

Ranson Prospect

Main Metals: Cu, Au, Ag.

Location: Chesley Tp.; S 1/2, lot 11, con. V.

Reference: ODM map 2108.

Geology: A quartz-carbonate vein occurs in a shear zone along a granite-d diabase dike contact, that strikes, on average, N80W, and dips 65N. The vein has been traced for about 4000 feet on strike, and ranges in width from about 1 foot to 9 feet. Chalcopyrite, pyrite, and minor galena occur in the vein.

Economic Features: Three main showings on the vein. The westernmost, 'A' showing is located 900 feet W of No. 1 shaft. A bulk sample, 500 lbs., from a width of 9 feet., assayed 9.84% Cu; 0.085 oz./ton Au; 0.445 oz./ton Ag. The vein is 6 feet wide at 'B' showing, (at No. 1 shaft); and the dump at the shaft is estimated to average 4% Cu (ODM 1957). The vein maintained an average width of 6 to 7 feet to 60-foot depth in the shaft, thereafter it was replaced by narrow quartz stringers. 'C' showing, located 1200 feet E of No. 1 shaft exposes a vein for a length of 60 feet, and ranges in width from 10 inches to 2 feet. A chip sample over 28 inches assayed nil Au; 0.63% Cu.

History: 1901-03 Three shafts sunk by Ranson Copper Mining Company: No. 1 shaft, inclined 65N, sunk to 213 feet with some lateral work at a depth of 200 feet. No. 2 shaft, 1 mile W of No. 1 shaft, 75 feet deep, inclined 75N. No. 3 shaft, 1 mile SW of No. 1 shaft, 47 feet deep.
1948 Sampling by Glenrock Gold Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-6.
ODM, 1957, M.R.C. 2, p.77.

CHESLEY ADDITIONAL TOWNSHIP

Sabourin Prospect

Main Metals: Pb, Ag, Zn, Cu.

Location: Chesley Additional Tp.; N 1/2, lot 4, con. II.

Reference: ODM map 2108.

Geology: A quartz vein about 5 feet wide, striking N70W, and dipping steeply to S, occurs along a quartz-argillite contact. The vein length is not recorded. Argentiferous galena, sphalerite, and chalcopryrite occur in fractures within the quartz vein. Chip samples assayed 2.24 oz./ton Ag, 1.65% Pb, over 22 inches; 1.46 oz./ton Ag, 0.72% Pb, over 60 inches; and trace Ag, 0.12% Pb over 15 inches.

History: 1948 Trenching; sampling; geol. mapping by R.J. Sabourin.

References: ODM, Sault Ste. Marie file SSM-7.

COBDEN TOWNSHIP

Goulding Mine (Past Producer)

Main Metals: Cu.

Location: Cobden Tp.; N 1/2, lot 10, con. V.

Reference: ODM map 2108.

Geology: Quartz-chalcopryrite veins cut Gowganda Formation quartzite. The veins strike N80W to N30W, dip 90 to 80N, and are exposed intermittently over a strike length of about 600 feet. Widths evidently are up to a maximum of 12 feet.

Economic Features: In May, 1962, 263.3 dry tons of material, averaging 1.45% Cu, were shipped. In June, 1962, 222.5 dry tons, averaging 1.34% Cu, were shipped.

History: 1906-07 Test pits by Cobden Copper Co. Ltd.
1961-62 175 feet of d.d. in 3 holes; trenching; production as noted above by J. St. Onge and P. Faubert. Shipments made to the mill of Pronto Uranium Mine near Spragge.

References: ODM, Sault Ste. Marie, file SSM-488.

ODM, 1964, G.R. 20, p.62-65.

DAY TOWNSHIP

Dempsey Prospect

Main Metals: Cu.

Location: Day Tp.; S 1/2, lot 1, con. III; 3 miles E of Sowerby.
Reference: ODM map 2108.

Geology: Chalcopyrite and pyrite occur in a quartz-carbonate vein that cuts Gowganda Formation sediments. The vein strikes N85W, the dip is not reported, and the width ranges from 6 to 10 feet.

History: Circa 1890's Adit, length unknown.

References: ODM, 1963, G.R. 17, p.49.
ODM, Sault Ste. Marie file SSM-724.

Sowerby Prospect

Main Metals: Cu, Co, U, Ni,

Location: Day Tp.; N 1/2, lot 7, con. III; 1/2 mile N of Sowerby.
Reference: ODM map 2108.

Geology: A brecciated zone in diabase contains carbonate, chalcopyrite, smaltite, pitchblende (uraninite), and uranophane. Some uranium mineralization also occurs in adjacent sediments of the Gowganda Formation. The zone appears to strike NE.

Economic Features: The best uranium assay from core samples was 0.074% U₃O₈ over 5 feet; best copper assay was 0.53% Cu over 5 feet; best cobalt assay was 0.008% Co over 5 feet; best nickel assay was trace Ni.

History: About 1957 Trenching.
1957 4411 feet of d.d. in 15 holes by Basswood Mines Ltd., and Elite Cobalt Mines Ltd.

References: ODM, 1968, M.R.C. 9, p.4-5.
ODM, Sault Ste. Marie files SSM-53,-724.

Two Lake Mine (Past Producer)

Main Metals: Cu.

Location: Day Tp.; N 1/2, lot 8, con. IV; 2 miles NW of Sowerby.
Reference: ODM map 2108.

Geology: Chalcopyrite occurs in quartz-carbonate veins that cut Gowganda Formation sediments.

History: Pre-1915 Approximately 25 tons of vein material excavated and stockpiled at site.

References: ODM, 1915, Vol. 24, pt. 1, p.237.

DEROCHE TOWNSHIP

Edgar Prospect

Main Metals: Cu.

Location: Deroche Tp.; S 1/2, lot 9, con. II; S of Hwy. 556, 2 miles NE of Bellevue.
Reference: ODM map 2108.

Geology: Chalcopyrite and pyrite occur in quartz-carbonate veinlets in brecciated diabase.

History: 1952 942 feet of d.d. in 2 holes, geol. survey, by Teck Exploration Co., Ltd.

References: ODM, Sault Ste. Marie file SSM-1138.

Kirby-Legge and

Kerr-Scott Prospects

Main Metals: Pb, Zn, Ag.

Location: Deroche Tp.; N 1/2, lots 10 and 11, con. II, 1 3/4 miles NE of Bellevue (Kirby-Legge Prospect); and S 1/2, lots 9 and 10, con. III, 2 miles NE of Bellevue (Kerr-Scott Prospect).
Reference: ODM map 2108.

Geology: Shear zones in mafic rocks strike N, and dip 70E to vertical. The main zone has been traced over length of 1500 feet. Widths vary from about 1 to 7 feet. Shear zones are mineralized with lenses and stringers of sulphides and sulphide-bearing quartz-carbonate veins. Argentiferous galena, sphalerite, chalcopyrite, arsenopyrite, and pyrite are present.

Economic Features: Assays of the three best samples from d.d. core were (File SSM-13):

- (1) 11.8% Pb, 9.3% Zn, 1.48 oz./ton Ag over 1.0 foot.
 - (2) 2.50% Pb, 9.00% Zn, 2.46 oz./ton Ag over 4.0 feet.
 - (3) 0.41% Pb, 12.70% Zn, 1.70 oz./ton Ag, 0.08% Cu over 3.0 feet.
- Most of d.d. samples assayed contained less than 1% combined Pb and Zn, with Ag values ranging from nil to a fraction of an oz./ton.

History: Date unknown: Adit, minimum length 32 feet on Kerr-Scott Prospect.

1928 2978 feet of d.d. in 15 holes by Sudbury Crater Mining Co. Ltd.

1939 Geophysical survey, and mining operations by Algoma Galena Co. Two small open-pits, 15 feet wide and 50 feet long. Approximately 80 tons of high-grade galena-bearing material and 1750 tons of low-grade material were mined. About 62 tons of high-grade material were shipped to smelter at Trail, B.C. (ODM 1940). Another account of this operation (File SSM-13) states that 21 tons of hand-cobbed material, assaying 47.50% Pb, 7.50% Zn, 7.15 oz./ton Ag, and 0.03 oz./ton Au, were shipped to Trail. In addition, it is stated that approximately 8 tons of galena-rich material were shipped to Northern Foundry, Sault Ste. Marie, from which about 5 tons of pig lead were obtained.

1951-52 19,485.9 feet of d.d. in 49 holes by Teck Exploration Co. Ltd.

References: ODM, 1928, Vol. 37, pt. 3, p.72-73.

ODM, 1940, Vol. 49, pt. 1, p.223.

ODM, Sault Ste. Marie files, SSM-13,-20,-1136,-1139,-1140.

Wierenga Prospect

Main Metals: Pb, Zn, Ag.

Location: Deroche Tp.; N 1/2, lot 8, con. III; 1000 feet S of Goulais River, 3 miles NE of Bellevue.

Reference: ODM map 2108.

Geology: A shear zone in mafic metavolcanics contains galena, sphalerite, pyrite, quartz, carbonate, graphite, and hematite.

Economic Features: The shear zone cut in d.d. over core lengths ranging from 2.5 to 25.1 feet. Assay of d.d. sample: 0.04 oz./ton Ag over 1.0 foot (File SSM-1141). A grab sample assayed 11.60% Pb, 0.58% Zn, 0.60 oz./ton Ag; and a grab sample of well-oxidized material assayed 1.50% Pb, 0.40% Zn, and 0.26 oz./ton Ag (File SSM-911).

History: About 1952 Trenching.

Date unknown: 240.4 feet of d.d. in 4 holes.

References: ODM, Sault Ste. Marie files SSM-911,-1141.

ESTEN TOWNSHIP

Twin Lakes Prospect

Main Metals: Cu.

Location: Esten Tp.; 1/2 mile NW of Twin Lakes, S-central part of township.

References: ODM maps 2108 and P.130.

Geology: A shear zone strikes N75W, but dip is not recorded. It cuts granitic rocks with mafic inclusions. Rocks within the zone are talc and chloritic schists, and diabase. Chalcopyrite, pyrite, and quartz occur as stringers and disseminations in the shear zone.

Economic Features: The zone has been tested by drilling over a strike length of about 2400 feet, with most of the work concentrated over a length of 1100 feet. Drill-indicated reserves have been estimated at 76,900 tons grading 1.73% Cu over an average width of 8.04 feet (ODM 1957)

History: 1956 9777 feet of d.d. in 29 holes by Federal Kirkland Mining Co. Ltd.

1958 Property acquired by Cadamet Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.91.

ODM, Sault Ste. Marie files SSM-1292,-1298.

GALBRAITH TOWNSHIP

Wilmot Prospect

Main Metals: Cu.

Location: Galbraith Tp.; S 1/2, lot 11, con. V.

Reference: ODM map 2108.

Geology: Five parallel veins striking EW and dipping 60-90°, (direction not given) occur within an area of 700 feet by 400 feet, with the main vein having a width of 1-5 feet and a length of 300 feet; the others being shorter and narrower. The veins cut greywacke and conglomerate which has been intruded by diabase. Minerals present are chalcopyrite, chalcocite and pyrite.

History: 1916 Shafts were sunk 60 and 18 feet on the principal vein with one carload shipped for smelting; trenching; geol. mapping by Hudson Copper Co.

References: GSC, Summ. Rept. 1917, pt. E, p.7-8.
ODM, 1918, Vol. 27, pt. 1, p.24,97.

GAUDETTE TOWNSHIP

Consolidated New Pacific Prospect

Main Metals: Cu.

Location: Gaudette Tp.; 1 mile SW of Fitzpatrick prospect.
Reference: ODM map 2108.

Geology: Chalcopyrite, pyrite, and quartz occur in mafic metavolcanics.

Economic Features: Assays from drill core samples ranged from 0.03 to 0.10% Cu over widths ranging from 2.5 to 5.0 feet.

History: 1966 MAG, EM surveys; 362.5 feet of d.d. in 2 holes by Consolidated New Pacific Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-965.

Fitzpatrick Prospect

Main Metals: Ni, Cu.

Location: Gaudette Tp.; N-central part of township.
Reference: ODM map 2108.

Geology: A mafic dike, about 100 feet wide, intrudes granitic rocks. Chalcopyrite, pyrite, and an unidentified nickeliferous mineral occur as irregular stringers in fractures within the mafic dike.

Economic Features: Grab samples from pits assayed 0.07 to 0.99% Ni; only reported Cu assay was 6.96% Cu. Best assay from drill core was 0.52% Ni over 2.0 feet (File SSM-685).

History: 1965 Trenching; 1662 feet of d.d. in 5 holes by Band-Ore Gold Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-685.

Janose Prospect

Main Metals: Cu.

Location: Gaudette Tp.; E-central part of township.

Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein occurs along the contact of a mafic dike and granitic rocks. The vein strikes N55W, and dips 70N.

Economic Features: The vein has been traced along strike for 50 feet, and mineralized float found on strike for 400 feet W. Channel samples across 5 feet of the vein are reported to have averaged 2.1% Cu (File SSM-30). Subsequent drilling encountered only sparse chalcopyrite.

History: 1952 Trenching by J. Reynolds.

1963 307 feet of d.d. in 3 holes by B.R. Idziak.

References: ODM, Sault Ste. Marie files SSM-30,-516.

GLADSTONE TOWNSHIP

Glagoma Mine (Past Producer)

Main Metals: Cu.

Location: Gladstone Tp.; N 1/2, lot 1, con. II, 1 mile NE of Iron Bridge.

Reference: ODM maps 2012, 2108.

Geology: A quartz-carbonate-chalcopyrite vein cuts granophyric to dioritic gabbro. The vein strikes N80E, the dip is not recorded but is probably near 90.

Economic Features: West section of the vein is 250 feet long; east section is 400 feet long; the sections are separated by a covered interval 500 feet long. The vein is up to 7 feet wide. In 1917, produced 1785 lbs. Cu from 28.8 tons of ore (ODM 1957). In 1962, produced 22.2 tons with average grade of 1.40% Cu; and 138.1 tons with average grade of 0.96% Cu (ODM 1963).

History: 1916-17 Two shafts sunk by Sudbury Copper Co. Ltd. Main shaft is 250 feet deep, levels at 150 and 250 feet, with a minor amount of drifting. In 1917, produced 1785 lbs. of Cu, valued at \$468., from 28.8 tons of ore.

1951 723 feet of d.d. in 6 holes by Glagoma Copper Mines Ltd.

1956 2068 feet of d.d. in 6 holes by International Cobalt and Silver Mining Co. Ltd.

1962 Adit, crosscutting, stoping by R.F. Fry and Associates Ltd.

Produced 22.2 tons with average grade of 1.40% Cu; and 138.1 tons with average grade of 0.96% Cu.

References: ODM, 1957, M.R.C. 2, p.77.

ODM, 1963, G.R. 17, p.52-55.

ODM, Sault Ste. Marie files SSM-57,-58.

Principle Strategic Minerals Prospect

Main Metals: Cu.

Location: Gladstone Tp.; N 1/2, lot 1, con. III; 1 mile NNE of Iron Bridge.

Reference: ODM maps 2012, 2108.

Geology: Quartz-carbonate-chalcopyrite veins occur in syenitic to dioritic gabbro. Veins strike E, and dip 90.

Economic Features: Main vein traced for a length of 940 feet. Assays from drill core samples ranged from 0.02 to 4.76% Cu over widths ranging from 1.0 to 7.9 feet (ODM 1963). Reserves reported as 112,300 tons containing 3,128,196 lbs. of copper (Northern Miner, Oct. 13, 1966).

History: Pre-1957 Surface work; 3 shafts up to 40 feet deep.
1957 Trenching; 2607 feet of d.d. in 14 holes by Principle Strategic Minerals Ltd.

References: ODM, 1963, G.R. 17, p.50-51.
ODM, Sault Ste. Marie file SSM-60.
Northern Miner, 1966, Oct. 13.

GOULD TOWNSHIP

Cheney Mine (Past Producer)

Main Metals: Cu.

Location: Gould Tp.; lot 7, con. V; 1/2 mile S of Chub Lake on Hwy. 129.

Reference: ODM map 2108.

Geology: A quartz vein system cuts Gowganda sediments and Nipissing diabase, and is cut by later diabase dikes. The vein zone strikes E, and dips 45-60S. Calcite, siderite or ankerite, barite, chalcopyrite, pyrite, and specularite occur in the veins.

Economic Features: The zone has been traced for 4000 feet on strike, and by drilling to depth of 460 feet. The width ranges from a few inches to 17 feet, and averages about 5 feet in width. Reserves estimated at 39,405 tons averaging 3.97% Cu, contained in two shoots. The main shoot near the shaft contains 30,570 tons, grading 3.9% Cu for length of 192 feet and for an average width of 5.8 feet. A smaller lens W of main shoot contains 8835 tons grading 4.2% Cu

for a length of 60 feet and an average width of 4.5 feet (Northern Miner, May 12, 1960). Approximately 3500 tons were mined in 1967.

History: 1916 Numerous trenches; a few small open-pits; inclined shaft sunk 70 feet with a few feet of drifting on the 50-foot level; 7 carloads of ore shipped from which 33,468 lbs. of copper having a value of \$8,564, were recovered. Work was carried out by Timmins Interests, under option from Cheney Copper Mines Ltd. 1928-29 Shaft sunk to 150 feet; 1625 feet of drifting and 860 feet of crosscutting on 150-foot level. 2514 feet of surface d.d. in 7 holes by Sudbury Basin Mines Ltd. 1955-56 4723 feet of surface d.d. in 8 holes by Sudbury Basin Mines Ltd. 1960 MAG, EM surveys by Rothsay Mines Ltd. 1966-67 Mine rehabilitated, approximately 3500 tons of material shipped to mill of Copper Concentrators Ltd. in Tp. 168.

References: ODM, 1954, M.R.C. 1, p.39.
ODM, 1929, Vol. 38, pt. 7, p.10-15.
ODM, Sault Ste. Marie files SSM-62,-504.

Copper Range Prospect

Main Metals: Cu.

Location: Gould Tp.; W part of lot 4, con. V, 1/4 mile S of E end of Chub Lake.
Reference: ODM map 2108.

Geology: A quartz-carbonate-chalcopyrite vein cuts Gowganda argillites, strikes E, and dips 60S. The vein has been traced by pits for a length of 140 feet, and is about 4 feet thick.

History: Pre-1915 Inclined shaft sunk 45 feet; 45 feet of drifting at 45-foot level.
1955 622 feet of d.d. in 3 holes by Headvue Mines Ltd.

References: OBM, 1915, Vol. 24, pt. 1, p.235.
ODM, 1929, Vol. 28, pt. 7, p.14.
ODM, Sault Ste. Marie file SSM-63.

Grand Portage Mine (Past Producer)

Main Metals: Cu.

Location: Gould Tp.; Mining Location No. 1, SW part of Township, near S shore of Tunnel Lake.
Reference: ODM map 2108.

Geology: A quartz vein contains chalcocite, bornite, and chalcopyrite.

Economic Features: In 1899 it was reported that the mine had been for some time an active producer, shipping its output to New York. No production data are available.

History: About 1899 Vertical shaft sunk 150 feet; 125 feet of drifting on the 100-foot level, 75 feet of drifting on 150-foot level, minor stoping on 100-foot level, and a winze of unrecorded depth from 100-foot level.

Reference: OBM, 1899, Vol. 8, pt. 1, p.37-38.

Huston Lake Prospect

Main Metals: Cu.

Location: Gould Tp.; S 1/2, lot 11, con. VI; about 0.1 mile NE of W end of Huston Lake.

Reference: ODM map 2108.

Geology: A quartz-chalcocite-specularite vein cuts Gowganda sediments. The vein strikes E, and dips 70S to 90.

Economic Features: A test pit in 1967 exposed the vein for a length of about 10 feet, a width of 3 1/2 feet, of which 1 foot was massive chalcocite and specularite.

History: 1966-67 Trenching; 80 feet of d.d. in 1 hole by G. Poirier. 1968 Trenching by Gould Coppermine Ltd.

References: ODM, Sault Ste. Marie files SSM-971,-934,-1329.

Lord Prospect

Main Metals: Cu.

Location: Gould Tp.; NW corner of lot 10, con. VI; 0.1 mile SW of Hwy. 129.

Reference: ODM map 2108.

Geology: Quartz-carbonate veins, carrying chalcocite, minor chalcopyrite and specularite, cut Gowganda pebble conglomerate. The veins strike N45W, and dip 60S.

Economic Features: The vein system was traced by trenches for a length of 400 feet. Copper mineralization was apparently confined to the westernmost 300 feet. The vein system consists of 2 or 3 sub-parallel veins, each 2 to 8 inches thick, separated by 2 to 3 feet of barren wallrock.

History: 1967-68 Trenching; 325 feet of d.d. in 1 hole by A. Lebel.

References: ODM, Sault Ste. Marie files SSM-1099,-1149.

Rockwin Prospect

Main Metals: Cu.

Location: Gould Tp.; N 1/2, lot 5, con. III, NE shore of Tunnel Lake.

Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins cut Gowganda sediments.

History: 1955 1940 feet of d.d. in 2 holes by Rockwin Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-64.

GRASSETT TOWNSHIP

Kynoch Prospect

Main Metals: Cu.

Location: Grasett Tp.; N 1/2, lot 8, con. I, 100 yds. N of Hwy. 554 at Kynoch.

Reference: ODM map 2108.

Geology: Quartz-carbonate veins, carrying minor chalcopyrite, specularite, and pyrite, cut Gowganda argillite and chert. The veins strike N65-75W, dips are variable, but are most commonly 70W to 90.

Economic Features: The veins exposed in the adit, as of December, 1968, range in thickness from fraction of an inch to 6 inches. Veins constitute less than 5% of the rock exposed in adit. A quartz-carbonate-chalcopyrite vein is reputed to occur in an old pit 500 feet NW of the adit portal.

History: About 1910 Pit.

1968 Adit, 200 feet long as of December, by Dondol Mines Ltd.

References: ODM, 1969, M.P. 24, p.4.

Little Pickerel Lake Prospect

Main Metals: Cu.

Location: Grasett Tp.; lots 10 and 11, con. IV, on S shore of Little Pickereel Lake.

Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein cuts Gowganda sediments, strikes E, dip not recorded but is probably to S.

Economic Features: Assays from drill core samples ranged from 0.22% Cu over 0.5 feet to 3.25% Cu over 5.0 feet. Majority of assays were less than 0.75% Cu.

History: 1957 937 feet of d.d. in 6 holes by R. Gareau.

References: ODM, Sault Ste. Marie file SSM-66.

HOME TOWNSHIP

Hall Prospect

Main Metals: Cu.

Location: Home Tp.; 1 mile SW of Montreal Falls.

Reference: ODM map 2108.

Geology: A silicified zone in pegmatitic granite carries pyrite, pyrrhotite, and chalcopyrite. It strikes N20W, but dip is uncertain.

Economic Features: The zone has been traced by drilling for length of 350 feet; has an apparent maximum thickness of 25 feet, and an average thickness of about 10 feet. Only one assay of drill core samples exceeded 1% Cu: this was 1.38% Cu over 1.0 foot. Remainder ranged from nil to 0.57% Cu, over widths ranging from 5.7 to 11.0 feet (File SSM-1017).

History: About 1926 Trenching by T. Hall.

1929 Electrical survey by Montreal River Syndicate.

1966 1506 feet of d.d. in 9 holes by New Senator-Rouyn Ltd.

References: ODM, Sault Ste. Marie files SSM-775,-1017.

INDIAN RESERVE NO. 14

(GARDEN RIVER INDIAN RESERVE)

Boss Lake Prospect

Main Metals: Pb, Zn.

Location: Indian Reserve No. 14 (Garden River Indian Reserve); 1/4 mile S of W end of Boss Lake.

References: ODM map 2108, GSC maps 26-1961, 1181A.

Geology: A fault zone striking N70W, and dipping N at an undetermined angle, brings Bruce limestone into contact with Gowganda argillite. Galena, sphalerite, minor specularite and pyrite occur mainly as fracture fillings in brecciated limestone in and near the fault zone, and to a lesser extent as replacements of the limestone.

History: Pre-1926 Shaft reported to be 100 or more feet deep, several pits.

References: ODM, 1926, Vol. 35, pt. 2, p.46.

Hay, R.E. 1963. The geology of the Sault Ste. Marie map-area. Unpub. Ph.D. thesis, McGill Univ. p.297.

JARVIS TOWNSHIP

Doyle Mine (Past Producer)

Main Metals: Cu.

Location: Jarvis Tp.; NE part of township, 1/2 mile SW of S end of Northland Lake.

Reference: ODM map 2108.

Geology: Quartz-carbonate veins, carrying chalcocite, chalcopyrite, pyrite, galena, and specularite occur in a sheared diabase dike. The veins strike N05W, and dip 90.

Economic Features: Four parallel veins, ranging in width from 4 inches to 1 foot, occur within a zone about 10 feet wide; and have been traced for length of 55 feet and to a depth of 12 feet.

History: 1963 Pit, 55 by 10 feet, 4 to 12 feet deep, excavated by Hi-Tension Mining Co. Ltd. Company hand-cobbed and shipped 27 tons of material to Pronto mill of Rio Algom Mines Ltd., Spragge, Ont.

References: ODM, Sault Ste. Marie file SSM-C-7.

Indumin Prospect

Main Metals: Pb, Zn.

Location: Jarvis Tp.; 1/4 mile S and 1 mile E of NW corner of township.

Geology: Quartz-calcite veins, carrying galena, sphalerite, and

chalcopyrite occur in shear zones in diabase and granite. The zones strike N, NW, and E.

History: About 1930 Numerous pits and trenches.
1951-52 Geol. survey by Indumin Assets Ltd.

References: ODM, 1926, Vol. 35, pt. 2, p.46.
ODM, Sault Ste. Marie file SSM-17.

Jardun Mine (Past Producer)

Main Metals: Pb, Zn, Ag, Cu, Au.

Location: Jarvis Tp.; S-central part of township.
Reference: ODM map 2108, GSC map 1181A.

Geology: Replacement and fissure-filling sulphide deposits occur in shear zones in granite and diabase. Galena, sphalerite, chalcopyrite, pyrite, magnetite, quartz, carbonate, are principal minerals in the ore zones. Arsenopyrite, specularite, native silver, argentite, barite, fluorite, and epidote are also present.

Economic Features: Four major ore zones known, all occurring in or near a fault zone striking N15W, between, Weashkog Lake and the S border of the township, a distance of 1 mile. Most recent mining operations were carried out from No. 4 and No. 5 shafts, located on the S shore Weashkog Lake and the S border of township, respectively. No. 4 zone, at the site of No. 4 shaft, strikes N60W, and dips 70S. It was 600 feet long on surface, had an average width of 3 to 6 feet, and was mined to a depth of 350 feet. No. 1 zone, at the site of No. 5 and the old Victoria Mine shafts, strikes N15W, and dips 70W. It was 700 feet long on surface; mining widths ranged from 10 to 40 feet, and was mined to a depth of 380 feet. No. 2 zone occurs mid-way between No. 1 and No. 4 zones, at the site of the old Cascade Mine, and lies within the same fault zone. The zone is about 100 feet long, 10 to 15 feet wide, and was traced by drilling to a depth of 190 feet. It contains 20,000 tons averaging 7.25% combined Pb and Zn, and 1.52 oz./ton Ag (ODM 1957; File SSM-910). No. 3 zone lies 1/2 mile W of No. 1 zone; strikes N45W, and dips 80N. It has been traced for length of 700 feet, and is 6 to 8 feet wide. Reserves are reported as 19,367 tons averaging 9.56% combined Pb and Zn, and 1.10 oz./ton Ag (ODM 1957).

History: 1875-1885 At old Victoria Mine, inclined shaft sunk 410 feet; total of 1057 feet of lateral development at 50, 100, 150, 210, 237, 265, and 410-foot levels; connected with a 100-foot deep vertical shaft at 100-foot level.
At Cascade Mine, inclined shaft sunk 460 feet with levels at 190 and 460-foot levels. On 190-foot level, stoped to maximum height of 80 feet above level back, for length of 280 feet. Forty-foot adit to shaft.
Adit on No. 3 zone.

Estimated 900 tons of ore shipped.

Work by Victoria Consolidated Silver Mining Co. Ltd., and Cascade Mines Ltd.

1951 Rehabilitation of Victoria Mine workings started by Corena Ores Ltd.

1951-1957 Property acquired and operated by Jardun Mines Ltd.

No. 4 shaft (vertical) sunk to a depth of 374 feet, total of 2128 feet of lateral development and raising; 3 levels, at depths of 125, 225, and 350 feet. No. 5 shaft (vertical) sunk to a depth of 415 feet; total of 4005 feet of lateral development and raising; 3 levels, at depths of 131, 258, and 383 feet. At Victoria No. 1 shaft, 817 feet of drifting, apparently on 50-foot level. Adit on No. 3 zone extended 270 feet with 26 feet of crosscutting. Adit has a total length of 530 feet; and the back has been stoped over most of its length to a maximum height of 80 feet above adit back. In 1954 company built a 250 tons/day mill, which operated 1954-1957. Tonnage milled variously reported as 130,536 tons, or 145,029 tons. Total production valued at \$2,634,476. Details below:

Pb:	9,977,453 lbs.,	value	\$1,437,566
Zn:	7,105,452 lbs.,	value	973,273
Cu:	69,501 lbs.,	value	28,367
Ag:	217,539 oz.,	value	191,611
Au:	106 oz.,	value	3,659

References: ODM, Sault Ste. Marie files SSM-10,-910.

ODM, 1957, M.R.C. 2, p.78.

ODM, 1958, Vol. 67, pt. 2, p.108-109.

Jarvis Deep Prospect

Main Metals: Pb, Zn, Ag.

Location: Jarvis Tp.; N-central part of township 1/4 mile N of Jarvis Lake.

Reference: ODM map 2108.

Geology: Galena, sphalerite, and pyrite occur in a shear zone in a diabase dike. The zone strikes N25W, and dips 75W to 90.

Economic Features: Chip samples from trenches give average grade of 2.06% Pb, 3.80% Zn, 0.70 oz./ton Ag, over an average width of 3.7 feet, and over length of 230 feet (File SSM-11).

Mineralized sections sampled from drill core ranged in width from 1.2 to 5.7 feet, most were less than 2.5 feet. Assays from core samples ranged from 0.25% Pb, 1.15% Zn, 0.08 oz./ton Ag over 2.0 feet to 4.1% Pb, 4.75% Zn, 0.6 oz./ton Ag over 2.3 feet.

History: 1950 Trenching, sampling, MAG survey by Jarvis Deep Syndicate.

1952 3001 feet of d.d. in 14 holes by Base Metals Mining Corp. Ltd.

1957 1027 feet of d.d. in 6 holes by Deville Copper Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-8,-11,-1142,-1195.

Jarviston Prospect

Main Metals: Pb, Zn, Cu.

Location: Jarvis Tp.; near NW shore of Weashkog Lake, 1/2 mile NW of Jardun Mines shaft no. 4.

Reference: ODM map 2108.

Geology: Quartz veins occur in shear zones striking N to NW and dipping 60-75W. Galena, sphalerite, and chalcopyrite occur in the quartz veins.

Economic Features: Two veins exposed over lengths of 20 feet; width of one vein is 10 to 15 inches.
Only assay reported is 0.48% Pb, 0.65% Zn, 0.80 oz./ton Ag over 5.0 feet.

History: 1952-55 Trenching; geol. survey; 2693 feet of d.d. in 9 holes by Jarviston Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-12.

JOHNSON TOWNSHIP

Stobie (Rainbow) Copper Mine (Past Producer)

Main Metals: Cu.

Location: Johnson Tp.; lot 0, 1 mile N of Portlock Station and Hwy. 17.

Reference: ODM map 2108.

Geology: Fissure-filling quartz-carbonate vein, carrying chalcopyrite, chalcocite, bornite, and pyrite, cuts Lorrain quartzite. The vein strikes N80E, and dips 90.

Economic Features: Vein exposed on surface for a length of 80 feet is up to 3 feet wide, and contains quartzite inclusions. On the 100-foot level there are 2 veins: the S vein is about 1 foot thick, the N vein is 2 to 3 feet thick, and they are separated by 4 feet of country rock.

History: About 1899-1901 Vertical shaft 160 feet deep, with 280 feet of lateral work on 100-foot level by J. Stobie and the Stobie Mining Co. Shipped about 9 tons of material.

About 1940 1 d.d. hole, no data available.

1951 4 d.d. holes by Chipman Lake Mines Ltd.
1965 MAG survey by I. Carter.

References: ODM, 1957, M.R.C. 2, p.74.
ODM, Sault Ste. Marie files SSM-22,-990,-1230.

KEHOE TOWNSHIP

Austin Prospect

Main Metals: Cu.

Location: Kehoe Tp.; Location 3E, 1 mile N of Echo Lake.
Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins occur in Gowganda Formation quartzite.
The veins strike N60W, and dip 30S.

Economic Features: The vein system has been traced for a length of 1200 feet, and the width is up to 7 feet. Assays of samples from trenches ranged from 0.05% Cu over 7 feet to 2.50% Cu over 10 feet. Of 19 samples, only 4 assayed more than 1% Cu (File SSM-117).

History: 1877-82 Two shafts, 42 and 30 feet deep, and an adit 85 feet long, by Austin Mining Co.
1955 Unknown footage of d.d. in 15 holes, trenching, by Lock City Copper Mines Ltd.
1961-62 41 feet of d.d. in 1 hole, EM, SP, geol. surveys, sampling, by Denison Mines Ltd.

References: 1890 Royal Commission on Mineral Resources of Ontario, p.91-92.
ODM, 1957, M.R.C. 2, p.79.
ODM, Sault Ste. Marie file SSM-117.

Dolan Prospect

Main Metals: Cu.

Location: Kehoe Tp.; 2 1/2 miles NE of Echo Lake, on border between Secs. 25 and 36.
Reference: ODM map 2108.

Geology: Quartz-carbonate-chalcopyrite veins occur in diabase. The veins strike N70W, and apparently dip N.

Economic Features: Veins traced for a strike length of 300 feet, and the maximum length of core intersections is 2 feet. No assays are reported.

History: 1956 1022 feet of d.d. in 5 holes by A. Dolan.

References: ODM, Sault Ste. Marie file SSM-118.

Gimby Prospect

Main Metals: Cu, Co.

Location: Kehoe Tp.; S-central part of township, 1 mile S of Echo Lake.

Geology: Chalcopyrite, pyrite, and an unidentified cobalt mineral occur in diabase.

Economic Features: Two grab samples assayed (a) 3.14% Cu, 7.10% Co, trace Ag. (b) nil Cu, 2.26% Co, trace Ag (File SSM-119). Only Cu assay from drill core was 0.05%. Core samples assayed for Co. yielded nil.

History: About 1954 Trenching by J.E. Gimby.
1955 627 feet of d.d. in 6 holes by Pitch-Ore Uranium Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-119,-122.

KINCAID LOCATIONS 7 AND 8

Baseline D Prospect

Main Metals: Cu.

Location: Kincaid Locations 7 and 8; on common border, 3600 feet NE of NW corner of Location 8.

References: ODM maps 2108 and Kincaid Township claim map.

Geology: Chalcocite and chalcopyrite occur in pink, very fine-grained quartz veins which cut Middle Keweenawan basalts. Two sub-parallel veins strike N20W, and dip 45-70E.

Economic Features: The western vein has a strike length of 380 feet, and an average width about 4-6 feet. The eastern vein ties 120 feet E of western vein, has strike length of 500 feet, and an average width about 4-6 feet. Channel samples from one vein (vein not specified) averaged 0.9% Cu over 6 feet (File SSM-1090). Drill results showed copper distribution in veins to be very erratic. At N and S extremities veins extended into generally barren felsite-breccia dikes.

History: 1962 Cu-bearing float discovered; stripping; MAG, SP and

geochemical surveys; 1485 feet of d.d. in 7 holes by C.C. Huston and Associates; 2018.5 feet of d.d. in 8 holes by Coppercorp Ltd.

References: ODM, Sault Ste. Marie files SSM-1090,-1371.

KINCAID TOWNSHIP

Highway Prospect

Main Metals: Cu.

Location: Kincaid Tp.; near N end of roadcut on Hwy. 17, 1 1/4 mile N of Mica Bay.

Reference: ODM map 2108.

Geology: At N end of roadcut on E side of highway, a quartz-carbonate vein breccia is exposed. The breccia has an exposed thickness of 10 feet, a length of 50 feet, strikes N10-20E, dips 50E, and is overlain by diabase 6 feet thick. Above the dike is more breccia, up to 6 inches thick, which grades by lessening of fracturing into granite. Minor chalcopryrite and laumontite occur in the breccia. On the W side of highway breccia has an exposed width of 40 feet, the S edge being drift-covered, the N edge grades into granite. About 120 feet N of N edge of breccia, on W side of highway, a few quartz-carbonate veins carrying galena and chalcopryrite cut sheared, altered, granitic rock. The veins strike N70E, dip 90 and are 1/2-1 inch thick.

Economic Features: Drill hole on W side of highway cut a brecciated, altered zone in granite. Assay of core sample gave 0.37% Cu and 0.18 oz./ton Ag over 3.0 feet.

History: 1968 57 feet of d.d. in 1 hole by New Senator-Rouyn Ltd.

References: ODM, Sault Ste. Marie file SSM-1320.

Malachite Creek Prospect

Main Metals: Cu.

Location: Kincaid Tp.; 1 mile NE of SE corner of Kincaid Location 8.

References: ODM maps 2108 and Kincaid Township claim map.

Geology: Quartz-chalcopryrite-pyrite veins occur in a fault zone in granite. The zone strikes N55E, and dips 30S to 90.

Economic Features: Zone traced intermittently for a strike length of 600

feet, sampled widths ranged from 4.0 to 5.2 feet. Core sample assays ranged from 0.19% Cu over 4.0 feet to 0.28% Cu over 5.2 feet. Grab samples from surface assayed 0.36 and 0.90% Cu (File SSM-481).

History: 1962 Geol. and geochemical surveys, stripping, 402 feet of d.d. in 1 hole by C.C. Huston & Associates.

References: ODM, Sault Ste. Marie file SSM-481.

Raytomic Prospect

Main Metals: Cu.

Location: Kincaid Tp.; 1/2 mile NE of SE corner of Kincaid Location 8, 400 feet S of small lake ('Kincaid' Lake).

References: ODM maps 2108 and Kincaid Township claim map.

Geology: A pink, very fine-grained quartz vein cuts Middle Keweenaw basalt and carries minor chalcocite. The zone strikes NW, and dip is unknown.

Economic Features: Zone drilled over a strike length of 300 feet. Maximum core width about 40 feet. No assays are reported.

History: 1956 2526 feet of d.d. in 5 holes by Raytomic Uranium Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-72.

Richards Prospect

Main Metals: Cu.

Location: Kincaid Tp.; 1/2 mile S of Pancake Lake.

Reference: ODM map 2108.

Geology: Fault zone in Archean metabasalts strikes N40W, and dips 90. Quartz-chalcopyrite-pyrite veins occur in, and generally parallel to the attitude of, the fault zone. A minor amount of chalcopyrite occurs both disseminated in metabasalt and along tiny fractures in metabasalt near the veins.

Economic Features: The mineralized zone has been traced for a length of 400 feet, and has been drilled over a length of 310 feet. Within the length drilled, average width is 21.5 feet, and average assay is 0.76% Cu (File SSM-655).

History: 1952 Showing discovered by E. T. Richards.

1956 Trenching by Jalore Mining Co. Ltd.
1958 SP survey by Farwest Tungston Copper Mines Ltd.
1961 Trenching by Rio Tinto Canadian Exploration Ltd.
1963 EM survey by Croinor Pershing Mines Ltd.
1964 1712 feet of d.d. in 5 holes by McKinney Gold Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-522,-655.

Upton-Doughty Prospect

Main Metals: Cu.

Location: Kincaid Tp.; 3/4 mile NE of Mica Bay, 1/8 mile W of Hwy 17.
Reference: ODM map 2108.

Geology: A quartz-carbonate vein breccia, with minor chalcopyrite, occurs in altered Archean granite and metabasalt. The mineralized zone appears to strike N65W to W, and to dip 80S.

Economic Features: The zone has been traced by trenching for a length of 200 feet, is 2-3 feet wide, and has been intersected in drilling to a depth of 145 feet. The core has not been sampled. Only sparse chalcopyrite is present in surface exposures.

History: 1965 Trenching, 508 feet of d.d. in 5 holes by Coppercorp Ltd.

References: ODM, Sault Ste. Marie file SSM-888.

Whitmell Prospect

Main Metals: Cu, Ag.

Location: Kincaid Tp.; 1 mile NE of Mica Bay, 1/4 mile W of Hwy. 17.
Reference: ODM map 2108.

Geology: A calcite-quartz vein occurs in a brecciated, much altered, diabase dike and Archean granite near a diabase-granite contact. Chalcopyrite, native copper, cuprite, malachite, hematite, and laumontite occur in the vein. The vein strikes N40E, and dips 50E near surface, but in one section the dip appears to flatten at a depth of 20 feet to 30E.

Economic Features: The vein has been traced for a length of 150 feet, and the width ranges from 1 to 6 feet.
Assays ranged from 0.14% Cu and 0.12 oz. Ag over 1.5 feet to 0.60% Cu and 0.30 oz./ton Ag over 3.3 feet.

History: 1967 Trenching by W. Whitmell.
1968 Trenching, sampling, and 178.5 feet of d.d. in 3 holes by

New Senator-Rouyn Ltd.

References: ODM, Sault Ste. Marie file SSM-1320.
Resident Geologist's field notes.

KIRKWOOD TOWNSHIP

Anthony Prospect

Main Metals: Cu.

Location: Kirkwood Tp.; SW 1/4 of lot 2, con. VI.
Reference: ODM map 2108.

Geology: An east-striking quartz-chalcopyrite vein occurs in gabbro.

Economic Features: Core samples from 2 holes averaged 0.46% Cu over 2.0 feet, and 0.30% Cu over 10.0 feet.

History: 1967 255.5 feet of d.d. in 2 holes by H.W. Anthony.

References: ODM, Sault Ste. Marie file SSM-1191.

Jayco Prospect

Main Metals: Cu, U.

Location: Kirkwood Tp.; NW 1/4 of S 1/2 of lot 3, con. VI, 20 feet W of Hwy. 129.
Reference: ODM map 2108.

Geology: A quartz-chalcopyrite-pyrite-hematite vein cuts Gowganda sediments, strikes E, and dips 90.

Economic Features: The vein has been traced for a length of 400 feet, and the width ranges from 2 inches to 2.5 feet. Core samples from 2 holes assayed 8.7% Cu over 2.5 feet and 1.80% Cu over 1.5 feet (File SSM-732). Two grab samples from a trench 420 feet W of Hwy. 129 were reported to assay 0.042 and 0.148% U₃O₈ (Files SSM-67,68).

History: About 1958 Trenching, geol. and scintillometer surveys; 56 feet of d.d. in 1 hole by Abconore Uranium Mines Ltd.
1960 203 feet of d.d. in 2 holes by S. Stercho.
1966 MAG, EM, geochemical surveys by Jayco Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-67,-68,-69,-70,-732.

MACK TOWNSHIP

Accra Prospect

Main Metals: Cu.

Location: Mack Tp.; 1/2 mile S of S-central shore of Emerald Lake.

Reference: ODM maps 2028 and 2108.

Geology: Two occurrences known, one 500 feet N of the other, in Mississagi sediments. North showing consists of parallel quartz-chalcopyrite veins striking NW, that have been traced for length of 1000 feet. They range in width from a few inches to 3 feet. A 150-lb. sample from a test pit assayed 0.4% Cu and nil Au (File SSM-1031). South showing consists of a 4-foot quartz-chalcopyrite vein, striking W which has been traced for length of 25 feet. A 150-lb. sample from a test pit assayed 0.10% Cu and nil Au (File SSM-1031).

History: 1954 Trenching; geol. survey, 37.5 feet of d.d. in 2 holes by Harico Mining and Development Co. Ltd.

1966 MAG, SP, geol. surveys; test pitting, sampling, by Accra Explorations Ltd.

References: ODM, Sault Ste. Marie files SSM-88,-1031.

Emerald Lake Prospect

Main Metals: Cu, Ag, Ni.

Location: Mack Tp.; on a small peninsula at E end of Emerald Lake.

Reference: ODM map 2108.

Geology: Disseminated pyrite, pyrrhotite, and chalcopyrite occur in a chlorite-rich shear zone along the margin of a diabase dike. The zone strikes N70W, and dips N.

Economic Features: The mineralized area is exposed for a length of 25 feet, a width of 15 feet, and was tested by drilling over a strike length of 300 feet. A grab sample assayed 1.25% Cu and 0.72 oz./ton Ag. Assays of core samples ranged from nil to 0.35% Cu; nil to 0.11 oz./ton Ag; and nil to 0.15% Ni, over widths ranging from 1.0 to 5.0 feet.

History: 1965-66 Trenching; MAG, EM, and SP surveys; 547.5 feet of d.d. in 18 holes by Emerald Lake Mines Ltd.

References: ODM, 1964, G.R. 20.

ODM, Sault Ste. Marie file SSM-741.

MCMAHON TOWNSHIP

Patten Lake East Prospect

Main Metals: Cu.

Location: McMahon Tp.; on E-central shore of Patten Lake.

References: ODM map 2108, GSC map 23-1959.

Geology: Two parallel quartz veins, 25 feet apart, cut Gowganda sediments. The veins strike E, dip 80N to 90, and are mineralized with chalcopyrite, pyrite, and rarely tetrahedrite.

Economic Features: The vein zone has been traced for a length of 150 feet, the mineralized portion for 60 feet. The veins are from 2 to 6 feet wide. A chip sample of the better mineralized material assayed 1.34% Cu over 8 inches (File SSM-693).

History: 1901-02 Trenching; shaft 50 feet deep, by Sault Gray Copper Co.

References: OBM, 1902, Vol. 11, p.273-4.

GSC, 1925, Mem. 143, p.128.

ODM, Sault Ste. Marie file SSM-693.

Romar Prospect

Main Metals: Cu.

Location: McMahon Tp.; near E border, on S 1/2 of lot 1, con. III.

Reference: ODM map 2108.

Geology: Quartz-carbonate-chalcopyrite veins occur in sheared diabase. The mineralized zone strikes N60W, and dips 90.

Economic Features: The zone has been traced for a length of about 300 feet. Assays of core samples ranged from nil to 0.18% Cu over widths ranging from 1.0 to 5.0 feet.

History: 1956 Trenching; MAG and SP surveys; 2207 feet of d.d. in 7 holes by Romar Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-84.

MONTGOMERY TOWNSHIP

Cobden River Prospect

Main Metals: Cu.

Location: Montgomery Tp.; on Cobden River, 1 mile W of Corbold Lake.

Reference: ODM map 2108; GSC map 6-1961.

Geology: Chalcopyrite and pyrite occur as disseminations and as narrow lenticular bands in altered Bruce limestone; sulphide bands are commonly parallel to bedding in the limestone. Better grade Cu mineralization tends to occur in chlorite-rich portions of limestone, where sulphides are often relatively coarse-grained and bedding of the limestone is obscured.

Minor quartz-chalcopyrite-pyrite veins cut across the bedding of the limestone. The limestone strikes N, dips 10-20W, and is underlain by a Nipissing diabase sill.

Economic Features: The deposit has been drilled over area 900 by 650 feet. The copper mineralization is mainly concentrated in 2 layers: an upper, very low grade zone about 4 feet thick, and a lower, higher grade zone 6 to 7 feet thick. The best section assayed 1.94% Cu over 7.0 feet, the remainder averaged 0.25% to 0.75% Cu across thicknesses of 2 to 5 feet (File SSM-124).

History: About 1918 Shaft about 35 feet deep on lean iron formation at base of Bruce limestone.

1962 Copper discovered near old shaft by W. Stanger and M. Johnson. Trenching; 221 feet of d.d. in 4 holes by Bridgeland Explorations Ltd. 1962-63 MAG and geol. surveys; 1597.5 feet of d.d. in 15 holes by Copper Reef Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-123,-124,-487.

North Montgomery Prospects

Main Metals: Cu.

Location: Montgomery Tp.; zone striking NW across N part of township.

Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins, with carbonate and specularite, striking N75W, and dipping 60S to 90, cut Gowganda sediments.

Economic Features: Copper-bearing veins that occur along a NW-striking fracture zone, have been traced intermittently over a total length of 5 miles. The prospects investigated are discussed below in 3 sections: (1) those in the NE 1/4 of the township, and (2) those

in the NW 1/4, N of the E end of Williamson Lake, and (3) those in NW 1/4, N of W end of Williamson Lake.

(1) Two parallel veins traced intermittently over a length of 12,600 feet. Both veins are up to 20 feet wide, and are 500-600 feet apart. The main prospect is at E end of the known occurrences, on a north vein system, on claims S.S.M. 22634 and 22642, where 2 shoots having a combined length of 960 feet, average 2.65% Cu across 5.6 feet. The 730-foot interval between shoots has been explored by 2 d.d. holes with low Cu values (ODM 1957). Drill-indicated reserves are estimated at about 50,000 tons grading between 2.5% and 3% Cu (Northern Miner, Feb. 21, 1963).

(2) Two zones, outlined by drilling, are estimated to contain: (i) 135,150 tons grading 2.32% Cu across 7.0 feet in a length of 1068 feet and (ii) 75,000 tons grading 1.0% Cu across 20 feet in a length of 300 feet (Northern Miner, Oct. 2, 1952).

(3) Two occurrences; main one traced by drilling over length of 1400 feet. Best intersection was 1.56% Cu over 10.0 feet (File SSM-129).

History: (1) Pre-1942 Adit, 2 shafts. Details unknown.

1946 409 feet of d.d. in 4 holes by Hoyle Mining Co. Ltd.

1953 2089.6 feet of d.d. in 5 holes by Hoyle Mining Co. Ltd.

1952-53 8032 feet of d.d. in 41 holes by Sudbury Contact Mines Ltd.

1963 2973 feet of d.d. in 1 hole by Sudbury Contact Mines Ltd.

(2) About 1930 Work by The Consolidated Mining and Smelting Co. of Canada Ltd. Details unknown.

1952 6212 feet of d.d. in 23 holes by Destorado Mines Ltd.

About 1961 669 feet d.d. in 4 holes by O. Manzutti.

1962-63 621.5 feet of d.d. in 3 holes by Virginia Mining Corp. Ltd.

1964 3546 feet of d.d. in 10 holes by Consolidated Sannorm Mines Ltd.

(3) 1955 2046 feet of d.d. in 11 holes by Werner Lake Nickel Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.81.

Northern Miner, 1952, Oct. 2.

ODM, Sault Ste. Marie files SSM-125,-126,-127,-129,-461 and -631.

MONTREAL MINING COMPANY PANCAKE POINT LOCATION

Coppermine Point Prospect

Main Metals: Cu.

Location: Montreal Mining Company Pancake Point Location: W of Ryan Township, 1/4 mile NE of Coppermine Point, 1 1/4 mile N of Whiskey Point, Lake Superior.

Reference: ODM map 2108.

Geology: Sparse copper mineralization occurs in small fissure-filling carbonate-quartz veins; and in Middle Keweenaw basalts and sediments.

Economic Features: Average of drill sludge samples was 0.04% Cu (ODM 1953).

History: 1882-84 Two shallow prospecting shafts by Silver Islet Consolidated Mining and Lands Co.
1906-08 7735 feet of d.d. in 17 holes by Calumet and Hecla Mining Co.

References: ODM, 1953, Vol. 62, pt. 4, p.20.
Can. Dept. Mines, 1911, Bull. No. 6.

MONTREAL MINING COMPANY SAND BAY LOCATION

Coppercorp Mine (Producer)

Main Metals: Cu.

Location: Montreal Mining Company Sand Bay Location: W of Ryan Township, 1 mile E of Hibbard Bay, Lake Superior.
Reference: ODM maps 2108 and 1953-1.

Geology: Fissure-filling quartz-carbonate veins, mineralized with chalcocite, bornite, chalcopyrite, specularite, and rarely, native copper, occur in fault zones in Middle Keweenawan basalts and sediments. The veins strike N20W to N10E, and dip 55-70E.

Economic Features: Principal ore zones are the C, C-2, SB, Silver Creek North and Silver Creek South zones. Most of production has come from C zone, which had a strike length of 5400 feet, an average width of 8 feet, and was mined to the 500-foot level. Pre-production ore reserves were estimated at 1,540,000 tons averaging 2.1% Cu, above the 500-foot level (Northern Miner, Nov. 18, 1965).

History: Pre-historic Old pits dug by Indians for native copper.
About 1620's-about 1800 Intermittent mining operations by early white settlers and Indians.
1856-57 Five shafts sunk for prospecting purposes by Montreal Mining Co.
1890-91 Drilling; inclined shaft to 308 feet on Copper Creek vein, drifting on 80-foot level by Canada Lands Purchase Co.
1948-49 2568 feet of d.d. in 19 holes in C zone area by Macassa Mines Ltd.
1951-52 About 35,000 feet of d.d. by C.C. Huston and Associates.
1955-57 Shaft sunk to 550 feet, 3 levels at 250,375, and 500 feet; 11,012 feet of lateral development; bulk sampling plant built; 60,000 tons stockpiled, by Coppercorp Ltd.
1964-68 Part of property leased by Vauze Mines Ltd., subsequently by North Canadian Enterprises Ltd., production commenced 1965, at rate of approximately 440 tons/day; derived largely from C and C-2 zones; some from SB and Silver Creek zones. Adit on Silver Creek zone, small open-pit on part of SB zone.
Total production to end of July, 1968 (exclusive of month of Dec. 1967) was 10,551,269 lbs. Cu from 384,268 tons milled (Northern Miner, Jan. 25, July 18).

References: ODM, 1953, Vol. 62, pt 4.
ODM, Sault Ste. Marie file SSM-159.

MORIN TOWNSHIP

Copper Queen Prospect

Main Metals: Cu.

Location: Morin Tp.; lots 3-6, con. IV, W of Shelden Lake.
Reference: ODM map 2108.

Geology: Quartz-chalcopyrite-specularite veins occur in a fault zone which cuts Gowganda conglomerate and Archean granite, and follows the southern border of a diabase dike. The veins strike E, and dip 90. Several parallel veins occur in the fault zone over a total width of 50 feet, and have been traced for a length of 2160 feet. The main vein is 4-20 feet wide, and is sparsely mineralized with chalcopyrite.

History: About 1903-04 Two shafts: No. 1 shaft is 140 feet deep; No. 2 is 85 feet deep; adit 135 feet long with a 30-foot crosscut, by Copper Queen Mining Co. Ltd.

References: OBM, 1904, Vol. 13, pt. 1, p.80-81.
ODM, Sault Ste. Marie file SSM-82.

Rising Sun Prospect

Main Metals: Cu.

Location: Morin Tp.; lot 9, con. II,
Reference: ODM map 2108.

Geology: A quartz-carbonate-chalcopyrite vein cuts brecciated diabase and granite.

History: 1903 Shaft 53 feet deep.

References: OBM, 1904, Vol. 13, pt. 1, p.79-80.

OTTER TOWNSHIP

Fano Prospect

Main Metals: Cu.

Location: Otter Tp.; 1/4 mile N of small lake in SW part of township.
Reference: ODM map 2108.

Geology: Quartz-carbonate-chalcopyrite-pyrite veins occur in a shear zone which cuts granite and greenstone (or diabase). The zone strikes E, the dip is not recorded, but is probably 90.

Economic Features: Zone has been traced by drilling for length of 2900 feet. The 2 best assays from core samples were 1.71% Cu over 2.0 feet, and 3.51% Cu over 5.0 feet. All other assays were less than 0.40% Cu over widths ranging from 3.0 to 5.0 feet (File SSM-140).

History: 1956 1002.5 feet of d.d. in 6 holes by Fano Mining and Exploration Inc.

References: ODM, Sault Ste. Marie file SSM-140.

PALMER TOWNSHIP

Gimby Lake Prospect

Main Metals: Cu.

Location: Palmer Tp.; 1800 feet E of NE end of Mamainse Lake, 800 feet S of Gimby Lake.
Reference: ODM map 2108.

Geology: Sparse chalcopyrite occurs with pyrite and pyrrhotite in a silicified zone in Archean mafic metavolcanics. The zone appears to strike E and dip N or vertically.

Economic Features: The zone is reflected in an IP anomaly traced over a length of 1600 feet, and tested by 2 d.d. holes over a length of 800 feet. The anomaly is evidently due largely to pyrite and pyrrhotite. Greatest core width of zone is 38 feet. Assays of core samples ranged from 0.03% Cu to 0.15% Cu over widths ranging from 8 to 10 feet (File SSM-1167).

History: 1966 IP survey; 1297 feet of d.d. in 2 holes by Phelps-Dodge Corp. of Canada, Ltd.

References: ODM, Sault Ste. Marie file SSM-1167 (Jogran Mines Ltd.).

Palmer Breccia Zone Prospect

Main Metals: Cu.

Location: Palmer Tp.; N-central part of township, 4 miles N of Carp Lake.
Reference: ODM map 2108.

Geology: A breccia pipe cuts mafic metavolcanics. The pipe is 900 by 900 feet across at surface, extends to a depth of at least 800 feet, and appears to plunge N at 55°. It consists of fragments of granite, diabase, and metavolcanics, in a vuggy carbonate-quartz-barite matrix. Sparse chalcopyrite and pyrite occur in the matrix.

Economic Features: In general, grade is very low. The best assays are reported from depths of 206, 475, 727 feet where core samples assayed 3.47% Cu over 2.0 feet; 6.09% Cu over 3.0 feet; and 1.38% Cu over 2.0 feet, respectively. All other assays were less than 0.75% Cu; most were less than 0.10% Cu; over widths ranging from 1.0 to 11.5 feet (File SSM-627).

History: 1963 Discovered by G.J. Westner; 1056 feet of d.d. in 3 holes by Allied Pitch-Ore Mines Ltd.
1964 Geol. survey; 784 feet of d.d. in 1 hole by Consolidated Marbenor Mines Ltd. Geol. survey; 2178 feet of d.d. in 3 holes by United Reef Petroleum Ltd.

References: ODM, Sault Ste. Marie files SSM-627,-674.

PARKINSON TOWNSHIP

Cleland Lake Prospect

Main Metals: Cu.

Location: Parkinson Tp.; N 1/2, lot 4, con. IV, 1/2 mile W of Cleland Lake.
Reference: ODM map 2108.

Geology: Quartz-chalcopyrite-pyrite veins occur in a fracture zone in quartzite. The zone strikes E, and dips 80N.

Economic Features: The zone has been traced for a length of 50 feet. Chip samples from trenches assayed 0.22% Cu over 6.0 feet; 1.05% Cu over 8.0 feet; 0.40% Cu over 9.0 feet; and 0.20% Cu over 3.0 feet; nil Au in all cases (File SSM-141).

History: 1955-56 Trenching; 823 feet of d.d. in 2 holes by Bancroft Uranium Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-141.

Little White River Prospect

Main Metals: Cu.

Location: Parkinson Tp.; lot 11, con. III, on N shore of Little White River.

Reference: ODM map 2108.

Geology: Quartz-chalcopyrite-pyrite veins occur in a shear zone in Nipissing diabase. The zone strikes N70W, dips 90.

Economic Features: Six parallel veins occur across a total width of 120 feet. The principal occurrence consists of 2 parallel veins, each 2 to 6 feet wide, separated by 2 to 3 feet of diabase. This occurrence has been traced by drilling for a length of 1200 feet. Best assay from core samples was 3.36% Cu over 2.0 feet. Most assays were less than 1% Cu (File SSM-670).

History: Pre-1956 Pits.

1956 EM and geol. surveys by Consolidated Negus Mines Ltd.

1965 2911.5 feet of d.d. in 12 holes by Pere Marquette Petroleums Ltd.

References: ODM, Sault Ste. Marie files SSM-142,-200,-670.

PATTON TOWNSHIP

Bilton Mine (Past Producer)

Main Metals: Cu.

Location: Patton Tp.; 1/2 mile S of Patton.

Reference: ODM maps 2108, 2012.

Geology: Quartz-chalcopyrite veins occur in Gowganda sediments, strike E, and dip is not reported, but apparently is steeply N.

Economic Features: Veins have been traced by drilling for a length of 2600 feet to a depth of 425 feet. Two principal zones: West body indicated for length of 450 feet; East body indicated for length of 400 feet, and is separated from West body along strike by 200 feet of almost barren material. Reserves estimated as 95,160 tons averaging 1.72% Cu over average (true) width of 7.3 feet to depth of 200 feet, and alternatively, as between 25,000 and 30,000 tons with an average grade of 2.0% Cu (ODM 1963).

History: Pre-1956 3 pits, shaft.

1956 EM survey; 7650 feet of d.d. in 31 holes by Mogul Mining Corp. Ltd.

1962 Sampling by Rio Tinto Canadian Exploration Ltd.

1968 Mining by W. Doughty, Sault Ste. Marie, Ont. Two shipments to Pronto mill of Rio Algom Mines Ltd. First shipment of 8.96 tons had a grade of 1.81% Cu, from which 317 lbs. of Cu were recovered. Second shipment, of 51 tons, had a grade of 0.62% Cu. No recovery reported from second shipment.

References: ODM, 1963, G.R. 17, p.55-58.
ODM, 1968, M.P. 24; p.7.
ODM, Sault Ste. Marie file SSM-152.

Brady Prospect

Main Metals: Cu.

Location: Patton Tp.; Sec. 36 and E 1/2 of Sec. 35; SE corner of township.
Reference: ODM maps 2108, 2012.

Geology: Quartz-chalcopyrite veins cut Nipissing diabase, strike N80E to E, and dip 75N-90.

Economic Features: Several veins are known. The two largest, known as No. 1 and No. 2 veins, are (i) 700 feet long, 1 to 6 feet wide, and (ii) 140 feet long, 8 feet wide, respectively. Three chip samples assayed 0.60% Cu over 16 feet; 4.52% Cu over 3.0 feet; and 0.10% Cu over 8.7 feet; one grab sample from old stockpile assayed 0.40% Cu (File SSM-150).

History: Early 1900's Several pits; shafts to depths of 125, 60, and 45 feet.
1957-1959 Geol. survey; 32 short d.d. holes, total footage unknown, by Horlac Mines Ltd.

References: ODM, 1963, G.R. 17, p.60-61.
ODM, Sault Ste. Marie file SSM-150.

Copper Float Prospect

Main Metals: Cu.

Location: Patton Tp.; 3/4 mile SE of NW corner of township, S 1/2, lot 11, con. VI.
Reference: ODM maps 2108, 2012.

Geology: Chalcopyrite and pyrite occur disseminated in angular boulders of quartzite. A drill hole failed to encounter mineralized quartzite.

History: 1963 Discovery by W. Stanger and M. Johnson. MAG and geol. surveys; 121.5 feet of d.d. in 1 hole by Copper Reef Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-124,-487.

Jury Mine (Past Producer)

Main Metals: Cu.

Location: Patton Tp.; SW 1/4, Sec. 27, 2 1/2 miles SE of Patton.
Reference: ODM maps 2108, 2012.

Geology: Quartz-chalcopyrite veins cut Gowganda sediments, strike N70-85W, but dip is not recorded.

History: 1906 Minor production, no details available.
1956 857 feet of d.d. in 3 holes by Abila Mines Ltd.

References: ODM, 1963, G.R. 17, p.60.
ODM, Sault Ste. Marie file SSM-148.

Kennedy Prospect

Main Metals: Cu.

Location: Patton Tp.; NE 1/4, Sec. 36, 3/4 mile N of SE corner of township.
Reference: ODM maps 2108, 2012.

Geology: Quartz-chalcopyrite veins cut diabase.

History: 1957-60 721 feet of d.d. in 11 holes by W. Kennedy.

References: ODM, Sault Ste. Marie file SSM-151.

Martin Prospect

Main Metals: Cu.

Location: Patton Tp.; 1 1/4 miles NE of Patton, S 1/2, lot 8, con. III.
Reference: ODM maps 2108, 2012.

Geology: Quartz-chalcopyrite vein cuts gabbro, strikes N85W, and dips 75-80N.

Economic Features: The vein has been traced for a length of 700 feet, and ranges from 4 to 10 feet in width. Best assays from core samples were 1.33% Cu over 3.0 feet; and 2.39% Cu over 4.6 feet. All other

assays were less than 1% Cu (File SSM-60). Chip sampling indicated an average grade of 1.4% Cu over 4.5 feet for a strike length of 150 feet (ODM 1963).

History: 1957 711 feet of d.d. in 4 holes by Principle Strategic Minerals Ltd.
1960 Sampling by Rio Algom Mines Ltd.

References: ODM, 1963, G.R. 17, p.59.
ODM, Sault Ste. Marie file SSM-60.

PLUMMER ADDITIONAL TOWNSHIP

Bald Dome Prospect

Main Metals: Cu.

Location: Plummer Additional Tp.; Cuthbertson Location, 4 1/4 miles NE of Bruce Mines.
Reference: ODM map 2108.

Geology: A breccia zone consisting of fragments of quartzite, diabase, and greywacke, in a matrix of quartz, carbonate, chalcopyrite, and pyrite.

Economic Features: The zone is exposed intermittently over an area of 160 by 40 feet, and has been tested by drilling over a length of 500 feet. Drilling showed that the breccia zone strikes NE, dips steeply S; and is from 80 to 100 feet in true width, with average grade of 0.25% Cu (File SSM-1232).

History: About 1949 Trenching, 2 d.d. holes by R.N. Bond.
1955-56 7126 feet of d.d. in 21 holes; geol. and geochemical surveys; airborne EM and MAG surveys; by Bruce-Presto Mines Ltd.
About 1962 EM survey by Bannockburn Exploration & Mining Co. Ltd.

References: ODM, 1957, M.R.C. 2, p.73.
ODM, Sault Ste. Marie files SSM-1232, ~1233.

Bondarenko Prospect

Main Metals: Cu.

Location: Plummer Additional Tp.; Keating Location, 4 1/4 miles NW of Bruce Mines.
Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein cuts a diabase sill and underlying sediments. The vein strikes N65W, and dips 85S.

Economic Features: Vein tested over length of 800 feet, to a depth of 300 feet. Average width is 6 to 8 feet. Continuity of vein between holes described is doubtful, and copper values considered to be sub-marginal (File SSM-1232). Best assay from core samples was 2.07% Cu over 3 feet; most assay results were less than 1% Cu (File SSM-1236).

History: About 1949 2 d.d. holes by R.N. Bond.
1955-56 2793 feet of d.d. in 9 holes; geol. and geochemical surveys; airborne EM and MAG surveys, by Bruce-Presto Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-1232,-1236.

Bruce Mines (Past Producers)

(Copper Bay, Wellington, Taylor, Bruce Sections)

Main Metals: Cu.

Location: Plummer Additional Tp.; in village of Bruce Mines.
Reference: ODM map 2108.

Geology: Quartz-carbonate-chalcopyrite veins cut Nipissing diabase, strike N30-65W, and dip 90.

Economic Features: Four principal veins occur. The largest (No. 1 vein) has a known length of 8000 feet; was stoped continuously for a length of 2000 feet on the Copper Bay and Wellington sections; average width was 4 to 5.5 feet. The vein was mined to a maximum depth of 350 feet. The deepest shaft in area is 527 feet deep. Grade of ore mined is not recorded, but is said to have been about 4 1/2% Cu (OBM 1915, p.231-32). Sampling in 1898 indicated that the No. 1 vein on Copper Bay and Wellington sections carried an average of 3.3% Cu over an average width of 5 1/2 feet for a length of 1800 feet. No. 2 vein averaged 2.67% Cu over an average width of 4.1 feet, with an average Ag content of 0.16 oz./ton, and trace Au (OBM 1915, p.233-35). At Taylor section, reserves stated to be about 40,000 tons, averaging 1.8% Cu, above the 155-foot level (ODM 1957).

History: 1846-65 Production from Bruce Mine by Montreal Mining Co.
1853-75 Production from Copper Bay and Wellington Mines; and from Bruce Mine purchased in 1865; by West Canada Mining Co. Total production to end of 1875 estimated at 47,593 tons of concentrates having an average grade of about 20% Cu, derived from an estimated 400,000 tons mined, of which about 300,000 tons milled, with 60% recovery (OBM 1915, p.231-32).
1915-21 Production by Mond Nickel Co., Ltd. Siliceous ore shipped to Coniston smelter for fluxing. Total recorded shipments were 131,683 tons, exclusive of 1916 production which was not recorded. Production in 1916 probably about 30,000 tons (File SSM-143).

Production from Taylor section, vein mined to maximum depth of 427 feet. Total value of production, to end of 1916 only, estimated to be between \$3,500,000 and \$7,000,000 (GSC 1925).

References: OBM, 1915, Vol. 24, pt. 1, p.231-35.

ODM, 1957, M.R.C. 2, p.72-73.

GSC, 1925, Mem. 143, p.125-26.

ODM, Sault Ste. Marie files SSM-143,-1224.

Campbell-Dukes Prospect

Main Metals: Cu.

Location: Plummer Additional Tp.; Keating Location, 1 1/4 miles S of Caribou Lake, 3 1/2 miles NW of Bruce Mines.

Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins occur in a fracture zone striking N80W, dipping 70-75S, along a diabase-quartzite contact.

Economic Features: The zone has been traced by drilling for a length of 1200 feet. Reserves are estimated at 33,000 tons in a block 230 feet long, and 8 feet wide, to a depth of 220 feet, having an average grade of 1.2% Cu (File SSM-1232).

History: Pre-1949 Old shaft said to be 60 feet deep, with a crosscut driven 25 feet N to the vein on the 50-foot level.
1955-56 4622 feet of d.d. in 13 holes; geol. and geochemical surveys, airborne EM and MAG surveys, by Bruce-Presto Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-1232,-1324.

Centre Line Prospect

Main Metals: Cu.

Location: Plummer Additional Tp.; Keating Location, 1/2 mile N of Steinberg Prospect, 3 1/2 miles NW of Bruce Mines.

Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins occur in quartzite, strike N80W, and dip steeply S.

Economic Features: The zone has been traced for a length of 2000 feet with a maximum width of 11 feet. Negligible copper was found in drilling (File SSM-1232).

History: 1955-56 832 feet of d.d. in 4 holes; geol. and geochemical surveys; airborne EM and MAG surveys; by Bruce-Presto Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-1232,-1236.

500 Lode Prospect

Main Metals: Cu.

Location: Plummer Additional Tp.; Cuthbertson Location; 1/2 mile SW of Bald Dome Prospect, 4 miles N of Bruce Mines.
Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein cuts Gowganda greywacke, strikes E, and dips 35 S.

Economic Features: The vein has been traced for a length of 150 feet and has an average width of 5 to 6 feet. Copper values reported as low and erratically distributed (File SSM-1232).

History: About 1954 Pits, 1 d.d. hole by R.N. Bond.
1955-56 498 feet of d.d. in 3 holes; geol. and geochemical surveys; airborne EM and MAG surveys, by Bruce-Presto Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-1232,-1236.

Little Bald Dome Prospect

Main Metals: Cu.

Location: Plummer Additional Tp.; Cuthbertson Location, 4 miles NE of Bruce Mines, 700 feet SW of Bald Dome Prospect.
Reference: ODM map 2108.

Geology: Brecciated quartzite is sparsely mineralized with chalcopyrite.

History: 1955-56 Geol. and geochemical surveys; airborne EM and MAG surveys; 1177 feet of d.d. in 3 holes by Bruce-Presto Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-1232,-1234.

North Prospect

Main Metals: Cu.

Location: Plummer Additional Tp.; Cuthbertson Location, 2 miles NE of Bruce Mines.
Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins.

History: 1941 7 d.d. holes by Frobisher Exploration Co. Ltd.

References: ODM, Sault Ste. Marie file SSM-143.

North Steinberg Prospect

Main Metals: Cu.

Location: Plummer Additional Tp.; Keating Location, 1/2 mile S of Bondarenko Prospect, 3 3/4 miles N of Bruce Mines.

Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein, striking E, and dipping S, cuts Gowganda greywacke.

Economic Features: The vein has been traced for a length of 2000 feet.

History: 1955-56 533 feet of d.d. in 2 holes; geol. and geochemical surveys; airborne EM and MAG surveys; by Bruce-Presto Mines, Ltd.

References: ODM, Sault Ste. Marie files SSM-1232, -1236.

Steinberg Prospect

Main Metals: Cu.

Location: Plummer Additional Tp.; Keating Location 3 miles NW of Bruce Mines.

Reference: ODM map 2108.

Geology: A breccia zone in Gowganda quartzite with quartz-carbonate-chalcopyrite matrix. Fragments tend to be aligned N-S and dip 55W.

Economic Features: The zone is exposed for a length of 40 feet, and is 20 feet wide. It has been drilled over a length of 600 feet along a line striking N40E, to depth of 400 feet. Reserves are estimated at 124,000 tons grading 1.1% Cu, over length of 200 feet, to a depth of 200 feet. Drill results suggested grade decreases with depth (File SSM-1232).

History: 1919 139 tons, having an average grade of 1.59% Cu, were mined and shipped to Sudbury; 1 d.d. hole by Mond Nickel Co. Ltd.
1941 792 feet of d.d. in 3 holes by Frobisher Exploration Co. Ltd.
1955-56 3342 feet of d.d. in 12 holes; geol. and geochemical surveys; airborne EM and MAG surveys, by Bruce-Presto Mines Ltd.
1962 IP survey by Bannockburn Exploration & Mining Co. Ltd.
1967 3 d.d. holes, footage unknown, by Bannockburn Exploration & Mining Co. Ltd.

References: ODM, 1957, M.R.C. 2, p.73.
ODM, Sault Ste. Marie files SSM-1232,-1235.

QUEBEC AND LAKE SUPERIOR MINING ASSOCIATION MCDONELL LOCATION

Mamainse Mine (Past Producer)

Main Metals: Cu.

Location: Quebec and Lake Superior Mining Association McDonell Location:
W of Ryan Township, coast of Lake Superior 2 miles N of Mamainse
Point.

Reference: ODM maps 2108 and 1953-1.

Geology: A fissure-filling carbonate vein, sparsely mineralized with
native copper, cuts Middle Keweenawan basalt. The vein strikes
N25W, and dips 50E.

Economic Features: The vein has been traced for a length of 1500 feet,
and the width ranges from 1.5 to 13 feet.

History: 1882-84 Three shafts sunk to depths of 60, 280, and 320 feet;
4 levels established; stamp mill, service facilities, and village
constructed by Lake Superior Native Copper Company. No production
recorded.
1948-53 9 drill holes were put down by Macassa Mines, Ltd. and (or)
by C.C. Huston and Associates.

References: ODM, 1953, Vol. 62, pt. 4, p.23.
Report of the Royal Commission on the Mineral Resources of Ontario,
1890, p.102.

RANKIN LOCATION

(KINCAID TOWNSHIP AND TOWNSHIP 29, RANGE 14)

Hathaway Prospect

Main Metals: Cu.

Location: Kincaid Tp.; Rankin Location, 1/4 mile SE of Cozens Cove,
Lake Superior.

Reference: ODM map 2108.

Geology: Very sparse chalcocite and native copper occur in shear and fracture zones in Archean granite and Middle Keweenawan quartz porphyry. No assays are reported.

History: 1965 MAG, EM, and geochemical surveys; 958.5 feet of d.d. in 2 holes by Hathaway Metal Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-664.

Maricona Prospect

Main Metals: Cu.

Location: Township 29, Range 14, Rankin Location, Pointe Aux Mines, 1 mile W of Hwy. 17.

Geology: Chalcocite, chalcopyrite, and native copper occur in fissure-filling vein breccias in Keweenawan basalts that overlie a granite complex.

Economic Features: In the old mine area, 295,405 tons, averaging 1.17% Cu within a length of 1098 feet, and to a depth of 345 feet. The average width is 8.1 feet (ODM 1957).

History: 1865-66 Mining operations by Quebec and Lake Superior Mining Association.
1955-56 17,564.8 feet of d.d. in 52 holes by Maricona Minerals, Ltd.
1962-64 981 feet of d.d. in 9 holes by D.L. McKinnon.

References: ODM, 1957, M.R.C. 2, p.79.
ODM, Sault Ste. Marie files SSM-292,-294.

ROSE TOWNSHIP

Algomont Prospect

Main Metals: Cu.

Location: Rose Tp.; S 1/2, Sec. 6, NW part of township.
Reference: ODM map 2108.

Geology: A quartz-carbonate-chalcopyrite vein, cutting diabase, strikes E, and dips 75N.

Economic Features: The vein, known as the Asam vein, was traced intermittently for a length of about 900 feet, and the width was from 2 to 6 feet. About 1/4 mile E another vein, known as No. 1 vein of McPhee property, occurs. There is no data available concerning

the copper content of the veins.

History: Pre-1920 Shaft sunk 60 feet on McPhee property.

1921-22 Shaft, inclined 72N, sunk on Asam vein to inclined depth of 215 feet; with a station cut at the 100-foot level; 331 feet of drifting, mostly to E of shaft, on the 175-foot level, by Algomont Mines Ltd.

References: ODM, 1922, Vol. 31, pt. 10, p.22-23.

ODM, 1923, Vol. 32, pt. 6, p.26.

Canada Verde Prospect

Main Metals: Cu.

Location: Rose Tp.; W 1/2, Sec. 24; E-central part of township near Bridgland River.

Reference: ODM map 2108.

Geology: Quartz-carbonate-chalcopyrite veins cut Gowganda argillite and greywacke, strike N50W, and dip 80S.

Economic Features: The vein system is exposed intermittently for a length of 300 feet, and the width ranges from 2 to 8 feet. Chalcopyrite is sparsely and erratically distributed, except at the SE end of the exposure, where considerable chalcopyrite is present over a width of 2 feet. The best assay from core samples was 5.05% Cu over 2 feet; all others were less than 1% Cu over widths ranging from 2.3 to 5 feet (File SSM-153).

History: About 1900 Old shaft, minimum depth 18 feet, several trenches.

1955 859 feet of d.d. in 7 holes by H.E. Bounsall.

1965 D.d. by A.W. Piche.

1967-68 Trenching; 100 feet of d.d. in 2 holes by J.G. Pollard.

References: OBM, 1915, Vol. 24, pt. 1, p.236-37.

ODM, Sault Ste. Marie files SSM-153,-1154.

RYAN TOWNSHIP

Denison Prospect

Main Metals: Cu.

Location: Ryan Tp.; 3/4 mile E of W border of township, 2 miles NW of Pancake Bay.

Reference: ODM map 2108.

Geology: Middle Keweenawan basalts, conglomerates, and felsites strike N25W, and dip 30-40W. Minor chalcocite occurs in conglomerate; carbonate-chalcocite veinlets occur in basalt.

Economic Features: Assays of core samples ranged from 0.03% Cu to 0.09% Cu over widths ranging from 2.0 to 3.0 feet in conglomerate; and from 0.04% Cu to 0.22% Cu over widths of 3.0 feet in basalt.

History: 1962 1142.3 feet of d.d. in 23 holes by Denison Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-160.

Gimlet Lake Prospect

Main Metals: Cu.

Location: Ryan Tp.; 1/2 mile SW of S end of Mamainse Lake, 1/2 mile E of Gimlet Lake.

Reference: ODM map 2108.

Geology: A quartz porphyry intrudes Archean mafic metavolcanics. The porphyry is mineralized with disseminated chalcopyrite. Chalcopyrite also occurs in thin quartz-carbonate seams in the metavolcanics.

Economic Features: The porphyry has been traced by drilling for a length of 600 feet and ranges from 20 to 140 feet in width. Assays of core samples ranged from 0.09% Cu to 0.12% Cu over widths of 5 to 10 feet in porphyry; and from 0.09% Cu to 0.27% Cu over widths of 6 to 10 feet in metavolcanics.

History: 1955-56 EM survey; 2334.5 feet of d.d. in 7 holes by Consolidated Negus Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-157.

Jogran Prospect

Main Metals: Cu, Mo.

Location: Ryan Tp.; 700 feet NW of NW end of Mamainse Lake.

Reference: ODM map 2108.

Geology: A quartz-feldspar porphyry contains disseminated chalcopyrite, pyrite, rare chalcocite. Molybdenite, minor chalcopyrite and pyrite, occur in narrow quartz veins cutting the porphyry.

Economic Features: The porphyry body has a minimum area of 600 by 400 feet and extends to a minimum depth of 680 feet. Mineralization is quite uniform throughout drill cores. Drill results indicate that the porphyry mass has an average grade of 0.19% Cu and 0.053% MoS₂ (File SSM-639).

History: 1965 Discovered in drilling of nearby Cu prospect; 5198 feet of d.d. in 9 holes by Jogran Mines Ltd.
1966 IP survey; 523 feet of d.d. in 1 hole by Phelps-Dodge Corp. of Canada Ltd.

References: ODM, Sault Ste. Marie files SSM-595,-639,-944,-1073,-1167.
Can. Mining Jour., 1966, April, Vol, 87, No. 4, p.77-80.

McKinney Prospect

Main Metals: Cu.

Location: Ryan Tp.; 1500 feet NW of NW end of Mamainse Lake.

Reference: ODM map 2108.

Geology: A fault zone in Archean mafic metavolcanics, striking N70W, and dipping 90, is filled by carbonate-quartz veins which carry chalcopryrite, pyrite, and hematite.

Economic Features: The zone has been traced by drilling for a length of 400 feet. The best assays from individual drill holes ranged from 0.36% Cu over 2 feet to 4.03% Cu over 5.5 feet; most assay results were less than 1% Cu (File SSM-639).

History: 1964 EM and MAG surveys; 4208 feet of d.d. on McKinney Prospect; 1641 feet in 4 holes drilled on other anomalies, by Jogran Mines Ltd.
1966 IP survey by Phelps-Dodge Corp. of Canada Ltd.

References: ODM, Sault Ste. Marie files SSM-639,-1167.

Pall-Mall Prospect

Main Metals: Cu.

Location: Ryan Tp.; 1/4 mile E of W border of township, 2 1/4 miles NW of Pancake Bay.

Reference: ODM map 2108.

Geology: Sparse chalcocite occurs in quartz-carbonate veins cutting Middle Keweenawan basalts.

History: Date unknown Old pit, extensive dump.

1964-65 663 feet of d.d. in 1 hole; IP and geol. surveys by Pall-Mall Copper Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-682,-764.

Phelps Prospect

Main Metals: Cu.

Location: Ryan Tp.; 500 feet N of NW bay of Mamainse Lake, 400 feet E of Jogan Prospect.

Reference: ODM map 2108.

Geology: Narrow fractures in Archean mafic metavolcanics are filled by chalcopryrite and pyrite, and some narrow quartz veins with chalcopryrite and molybdenite.

Economic Features: Drilling and IP survey results suggest that the mineralization is confined to a zone striking N77W, dipping steeply, which has a length of less than 450 feet, a width of less than 100 feet, and which probably does not extend below a depth of 600 feet. The best assays from individual holes ranged from nil to 3.00% Cu over 6 feet. Most assay results were less than 1% Cu (File SSM-1167).

History: 1966 IP survey; 6225 feet of d.d. in 9 holes by Phelps-Dodge Corp. of Canada Ltd.

References: ODM, Sault Ste. Marie file SSM-1167.

West Creek Prospect

Main Metals: Cu.

Location: Ryan Tp.; 1/4 mile W of Mamainse Lake, on a creek entering lake 1/4 mile S of NW end.

Reference: ODM map 2108.

Geology: Chalcopryrite, pyrrhotite, quartz, carbonate, and chlorite, occur in veins filling fractures in Archean mafic metavolcanics. The principal fracture strikes N30W, and dips 90.

History: 1964-65 Discovered; trenching; a few short d.d. holes by W.J. Richards.

1968 106 feet of d.d. in 1 hole by W.J. Richards.

References: ODM, Sault Ste. Marie file SSM-1352.

SCARFE TOWNSHIP

Chiblow Prospect

Main Metals: Cu.

Location: Scarfe Tp.; on Blind River at SW end of Chiblow Lake.

Reference: ODM maps 2028 and 2108.

Geology: Quartz veins, with lenses of massive pyrite, pyrrhotite, and chalcopyrite, cut quartzites of the Bruce Formation.

Economic Features: Two principal lenses are 95 feet apart along strike.

The South lens is 6 to 8 feet long, 3 to 4 feet wide, 1 to 2 feet thick, strikes N, and dips flatly. Six holes drilled under, or along the strike of the lens, located only traces of pyrite and pyrrhotite. The only assays recorded were 0.03% Cu over widths of 2 feet and 2 feet 2 inches (File SSM-597).

The North lens is 2 to 3 feet long, 10 to 12 inches wide, 1 to 2 feet thick, strikes E, and dips 90. Two holes designed to cut this lens at depths of 5 to 10 feet intersected only scattered pyrite.

History: 1961 293.3 feet of d.d. in 8 holes, by McIntyre Porcupine Mines Ltd.

1965 EM survey; 528 feet of d.d. in 1 hole by Snow Goose Mines Ltd.

References: ODM, 1964, G.R. 20, p.74-77.

ODM, Sault Ste. Marie files SSM-597,-767.

Plump Lake Prospect

Main Metals: Cu.

Location: Scarfe Tp.; on E shore of NW arm of Plump Lake, 1/4 mile S of Chiblow Lake.

Reference: ODM maps 2028 and 2108.

Geology: Chalcopyrite and pyrite occur in a shear zone in Bruce Conglomerate. The zone strikes E, and dips 90.

Economic Features: Assays of core samples ranged from trace to 0.14% Cu over widths ranging from 2 to 3 feet (File SSM-597).

History: 1961 106.5 feet of d.d. in 3 holes by McIntyre Porcupine Mines Ltd.

1965 EM survey by Snow Goose Mines Ltd.

References: ODM, 1964, G.R. 20, p.74-77.

ODM, Sault Ste. Marie files SSM-597,-767.

SHEDDEN TOWNSHIP

Black Lake Prospect

Main Metals: Cu.

Location: Shedden Tp.; W-central part of township, 1/2 mile E of Black Lake.

Reference: ODM maps 2108 and P.318.

Geology: Quartz-chalcopyrite veins occur in diabase. Attitudes are not recorded, but veins probably strike NW.

Economic Features: The mineralized zone was drilled over length of 500 feet. Best intersections were 1.47% Cu over 5.0 feet, and 0.78% Cu over 10 feet and 1.82% Cu over 2.0 feet. Most assay results were less than 0.5% Cu (File SSM-1061).

History: 1908 119 feet of d.d. in 2 holes by Ontario Bur. of Mines, probably on this occurrence.

About 1916 2 shafts, 80 and 20 feet deep.

1956 209 feet of d.d. in 4 holes by S. Linton.

1966 3154 feet of d.d. in 9 holes by Gradore Mines Ltd.

References: OBM, 1909, Vol. 18, pt. 1, p.51.

ODM, 1969, Open File Rept. 5026, p.106-07.

ODM, Sault Ste. Marie files SSM-71,-527,-1061.

SHIELDS TOWNSHIP

Achigan Creek Prospect

Main Metals: Cu.

Location: Shields Tp.; N-central part of township, 1/2 mile W of Achigan Creek.

Reference: ODM map 2108.

Geology: A shear zone in Archean mafic metavolcanics and granite strikes NW, and dips 70E to 70W. Quartz, chalcopyrite, pyrite, and magnetite occur in the shear zone.

Economic Features: The mineralized portion of the shear zone is from 6 to 12 feet in width; the length of the zone has not been determined. Grab samples of quartz-sulphide material assayed over 2% Cu; grab samples of metavolcanic material from the shear zone assayed 0.67% Cu to 1.01% Cu. A channel sample across the shear zone assayed 0.67% Cu

over 15 feet. A sample of syenite adjacent to the shear zone assayed 2.01% Cu over 3 feet (File SSM-621).

History: 1964-67 Trenching; MAG and geol. surveys; 437 feet of d.d. in 4 holes by B.R. Idziak.

References: ODM, Sault Ste. Marie file SSM-621.

SPRAGGE TOWNSHIP

Pater Mine (Producer)

Main Metals: Cu.

Location: Spragge Tp.; 1/4 mile E of the village of Spragge.
Reference: ODM map 2108.

Geology: A shear zone in mafic metavolcanics strikes E, and dips 80-85S. The zone is replaced in part by quartz, pyrrhotite, chalcopyrite, and pyrite.

Economic Features: The ore zone ranged in length from 315 to 1400 feet. It was 600 feet long at surface, 1400 feet long at the 1200-foot level, 450 feet long at the 3000-foot level and 315 feet long at the 4010-foot level. Between surface and the 3000-foot level the width ranged from 7 to 14 feet; from the 3000 to 4010-foot level the width averaged 18 feet. The deepest mining level is at 4010 feet. The production rate from 1960 to the end of 1968 has been approximately 250,000 tons per year. To the end of 1968, total production has been 70,460,264 lbs. copper from 2,000,621 tons of ore milled (Northern Miner, April 25, 1968; March 13, 1969).

History: About 1900 Old pits.
1954-57 d.d. and underground development by Pater Uranium Mines Ltd.
1959 Property acquired by Pronto Uranium Mines Ltd.
1960 Property acquired by Rio Algom Mines Ltd.
1960-69 Underground development and production by Rio Algom Mines Ltd.

References: Northern Miner, 1968, April 25; 1969, March 13.
ODM, 1967, Open File Rept. 5010, p.150-57.
ODM, Sault Ste. Marie file, SSM-900.

TARBUTT TOWNSHIP

Adit Prospect

Main Metals: Cu, U.

Location: Tarbutt Tp.; lot 1, con. III, 1/2 mile SW of NW end of Desbarats Lake.

Reference: ODM map 2108.

Geology: Two fissure-filling carbonate veins occur in diabase, 1 1/2 feet apart; and 80 feet long. The veins strike N60W, dip 87N, and contain pitchblende and copper mineralization. Radioactivity is twice background.

History: Pre-1955 Adit, 80 feet long; 2 crosscuts, 5 and 10 feet long.
1955 Examination by Tarbutt Mines Ltd.

References: GSC, 1962, Econ. Geol. Ser. No. 16, p.279.
ODM, Sault Ste. Marie file SSM-5.

TARBUTT TOWNSHIP, AND TARBUTT ADDITIONAL TOWNSHIP

Desbarats Prospect

Main Metals: Cu.

Location: Tarbutt Tp.; lot 1, con. I; and Tarbutt Additional Tp.; N 1/2, lot 1, con. VI; 2 miles NW of Desbarats.

Reference: ODM map 2108.

Geology: Sparse chalcopyrite and pyrite are disseminated in pink and purple quartzites of the Lorrain Formation. Mineralized sediments occur on the crest of anticline which plunges 10-30W.

Economic Features: "Drilling suggests the possibility of widespread mineralization, but the average copper content is well below commercial limits. Some samples contain up to 3 percent copper" (ODM 1957). No details are available concerning grade and thickness of mineralized sediments. The mineralized area was tested by drilling over a strike length of 3/4 mile.

History: 1955 Trenching, d.d. by Aberdoon Mines Ltd.
1956 Geol. survey, 15 d.d. holes by Kennco Explorations (Canada) Ltd.

References: ODM, 1957, M.R.C. 2, p.76.
ODM, Sault Ste. Marie files SSM-1,-2,-3.

THOMPSON TOWNSHIP

Bar-Fin Mine (Past Producer)

Main Metals: Cu.

Location: Thompson Tp.; N 1/2 of Sec. 13, 7 miles NW of Blind River.

Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins striking N75E, and dipping 75S, cut Gowganda sediments.

Economic Features: Total production was 120,000 lbs. copper, valued at \$12,000, from 1500 tons of ore (ODM 1957). Two parallel veins are known, 600 feet apart. Mining operations were conducted on the S vein. Near the shaft the vein was exposed for a length of 150 feet, and may extend for a total length of 850 feet E of shaft. The vein width ranges from 1 to 20 feet, and the average width is about 10 feet. Assay results from core samples ranged from 1.82% Cu over 3.2 feet to 9.27% Cu over 1.9 feet. Sampled sections ranged in width from 0.6 to 4.8 feet (File SSM-188).

History: 1906 Shaft 130 feet deep, about 250 feet of lateral work at 117-foot level. Production of 120,000 lbs. copper from 1500 tons of ore by Northern Ontario Consolidated Copper Co.
1951-52 3 d.d. holes by Strathallan Enterprises.
1954 283 feet of d.d. in 10 holes by Parkway Mines Ltd.
1956 D.d. and underground examination of old workings by Bar-Fin Mining Corp. Ltd.

References: ODM, 1957, M.R.C. 2, p.71.

ODM, 1963, G.R. 17, p.62-63.

ODM, Sault Ste. Marie files SSM-188,-189,-191.

Knoblauch Prospect

Main Metals: Cu.

Location: Thompson Tp.; NW 1/4 of Sec. 1, 8 miles NW of Blind River.

Reference: ODM map 2108.

Geology: Two parallel quartz-chalcopyrite veins striking N75E, and dipping 70N, cut diabase.

Economic Features: At the shaft, the N vein is 1.5 feet wide; S vein is 0.7 feet wide, and they are separated by 4.5 feet of sparsely mineralized diabase. The N vein was traced intermittently for 1000 feet along strike, is generally less than 1.0 foot wide, and is sparsely mineralized with chalcopyrite.

History: About 1905 Old shaft about 30 feet deep.
1955 Geol. and geochemical surveys by W.D. Sutherland.

References: ODM, Sault Ste. Marie file SSM-190.

TILLEY TOWNSHIP

Begley Prospect

Main Metals: Cu.

Location: Tilley Tp.; SE part of township, 1 1/4 mile E of Lake Superior, on Begley Location.
Reference: ODM map 2108.

Geology: A stockwork of large quartz veins in granite. In general, the veins strike N75W, and dip 90. Chalcopyrite, pyrite, chalcocite, and specularite occur in the quartz veins.

Economic Features: The stockwork apparently ranges from about 3 to 50 feet in width.

History: Pre-1947 Old adits, one about 75 feet long, another about 8 feet long; trenching.
1960 EM survey by Algoma Central Railway.

References: GSC, 1863, Geology of Canada, p.700.
ODM, 1926, Vol. 35, pt. 2, p.84-85.
ODM, Sault Ste. Marie files SSM-678,-1104.

TUPPER TOWNSHIP

Bone Lake South Prospect

Main Metals: Cu.

Location: Tupper Tp.; 1/2 mile SE of Bone Lake.
Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins occur in sheared diabase dikes; several occurrences.

History: 1955 MAG, EM and geol. surveys; 1480 feet of d.d. in 4 holes by Ontario Rare Metals Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-26.

Wolfe Lake Prospect

Main Metals: Cu.

Location: Tupper and Shields Tps.; S shore of Wolfe Lake.
Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins, with pyrite, hematite, and carbonate, occur in diabase and granite. The zone evidently strikes N80W, and dips steeply N to 90.

Economic Features: The zone was tested by drilling over a strike length of 2000 feet. The mineralized portion is about 460 feet long; total core widths range from about 1 to 30 feet. Assay results from core samples ranged from trace to 1.52% Cu over widths ranging from 1.5 to 10.0 feet; most assay results were less than 1% Cu (File SSM-27). Slight radioactivity in drill core, but assays for uranium returned nil to trace U₃O₈.

History: 1955 MAG, scintillometer surveys; 6133.3 feet of d.d. in 25 holes, by Pitch-Ore Uranium Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-27.

WELLS TOWNSHIP

East Paynter Prospect

Main Metals: Cu.

Location: Wells Tp.; N 1/2, lot 12, con. V; 2 1/4 miles NW of Wharncliffe.
Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein, striking E, cuts Gowganda sediments.

Economic Features: The vein has been traced for a length of 200 feet; the width ranges from 8 to 10 feet. Assay results from core averaged 1.26% Cu over 13.2 feet.

History: Pre-1967 Old trenches.
1967 159 feet of d.d. in 1 hole by R. Paynter.

References: ODM, Sault Ste. Marie file SSM-1245.

Wharncliffe Prospect

Main Metals: Cu.

Location: Wells Tp.; S 1/2, lot 12, con. V; 2 1/2 miles SW of Wharncliffe on W border of township.
Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein, striking E, cuts Gowganda sediments.

Economic Features: The vein was tested by drilling over a strike length of 1050 feet. Core widths of the vein ranged from 2.7 to 27.5 feet; most intersections were from 2.7 to 10.4 feet wide. Assay results from core samples ranged from 0.06% Cu to 1.40% Cu over widths ranging from 1.5 to 3.0 feet. Most assay results were less than 1% Cu (File SSM-199).

History: 1959 1706.5 feet of d.d. in 7 holes by Roaring River Mines Ltd.

References: ODM, Sault Ste. Marie file, SSM-199.

WICKSTEED TOWNSHIP

Church Prospect

Main Metals: Cu.

Location: Wicksteed Tp.; SE 1/4, lot 12, con. XI; 6 miles N of Hornepayne.
Reference: ODM map P.476.

Geology: Pyrite, pyrrhotite, minor chalcopyrite, and quartz, occur in metasediments. Sulphides comprise approximately 25% of the core over a width of 65 feet. Two bands of massive pyrrhotite, each about 2 feet thick, were encountered. The core was not assayed.

History: 1959 544 feet of d.d. in 2 holes by T.M. Church.

References: ODM, 1968, M.P. 20, p.18-19.
ODM, Sault Ste. Marie file SSM-201.

TOWNSHIP 1A

Bi-Ore Mine (Past Producer)

Main Metals: Cu.

Location: Township 1A; S shore of Cobra Lake.

Reference: ODM map 2108.

Geology: Fissure-filling quartz-carbonate veins containing chalcopyrite and specularite cut sediments of the Gordon Lake Formation.

Economic Features: Two principal veins, are known as the East and West veins. East vein strikes N80W, dips 90, has a known length of 850 feet, and an average width of from 2.5 to 5.0 feet. It was developed by an adit 1040 feet long. West vein strikes N70E, dips 90, and is developed by an adit 1368 feet long. Crosscuts and some stoping from the West adit.

History: 1929-31 Two adits, as noted above, and trenching, by White Lake Mines Ltd.
1947-49 Mill installed; produced 2726 tons of concentrates, containing 1,647,079 lbs. of copper, having a total value of \$335,998, by Bi-Ore Mines Ltd.
1956 Smelter installed by Consolidated Bi-Ore Mines Ltd. No production reported.

References: ODM, Sault Ste. Marie file SSM-204.

ODM, 1957, M.R.C. 2, p.74.

Harvard Prospect

Main Metals: Cu, U.

Location: Township 1A, 1/2 mile S of Bluesky Lake.

Reference: ODM map 2108.

Geology: Altered zones in a diabase sill contain numerous small quartz veins. Chalcopyrite, minor pyrite, and an unidentified uranium mineral occur in altered diabase and quartz veins. The principal alteration zones strike E, appear to dip vertically, have widths ranging from 10 to 100 feet, and have been traced by drilling over strike lengths of up to 600 feet.

Economic Features: Copper assays were generally less than 0.5% Cu; best assay 2.21% Cu over a core length of 2.5 feet.

History: 1955-56 11,688 feet of d.d. in 24 holes; exploration adit; by Harvard Uranium Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-206.

Canadian Mines Handbook, 1959.

TOWNSHIP 1D

Winston Prospect

Main Metals: Cu.

Location: Township 1D, W-central part.

Reference: ODM map 2108.

Geology: A quartz vein, carrying chalcopyrite and pyrite, occurs in granite.

Economic Features: The vein is traceable over a length of 600 feet., but the width was not defined. Low copper values were obtained in drilling operations.

History: 1965 MAG and EM surveys by Winston Mines Ltd.

1966 2145 feet of d.d. in 5 holes by Winston Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-773.

TOWNSHIP 2E

McClasky Prospect

Main Metals: Cu.

Location: Township 2E, W-central part.

Reference: ODM map 2108.

Geology: A NE-striking fault zone in granite has been filled with quartz-carbonate vein material, which contains local concentrations of chalcopyrite, pyrite, and specularite.

Economic Features: The fault zone has a known length of 2 miles. Three principal copper showings are found within a strike length of 1 mile. The width of the mineralized zone ranges from 11 to 50 feet. Low values (less than 1% Cu) were obtained in drilling operations.

History: 1962 Trenching; MAG and EM surveys; 973 feet of d.d. in 6 holes by C.C. Huston and Associates.

1966-67 Trenching by G.F. Lambert.

References: ODM, Sault Ste. Marie file SSM-606.

TOWNSHIP 3H

Bussineau Prospect

Main Metals: Pb, Zn, Ag, Cu.

Location: Township 3H, 4 miles SW of Ranger Lake.

Reference: ODM map 2108.

Geology: A NW-trending diabase dike cuts granite. Dike is sheared. Sulphide-bearing quartz veins, up to 7 feet in width, occur in the shear zone. Argentiferous galena, sphalerite, minor amounts of pyrite, arsenopyrite, and chalcopyrite occur in the quartz veins.

Economic Features: The mineralized zone strikes N45W, dips 75S, and has been traced over a strike length of 1600 feet. Drilling results indicate mineralized zones are short, discontinuous, and generally less than 2 feet in width.

History: 1927 Trenching; shaft 30 feet deep by Ranger Lake Mines Ltd.
1951 1505 feet of d.d. in 8 holes by Crowshore Patricia Gold Mines Ltd.
1965 305 feet of d.d. in 3 holes by W.G. Warren.
1966 4009.5 feet of d.d. in 19 holes, MAG survey, by Briar Court Mines Ltd.
1968 1502 feet of d.d. in 4 holes by S. Taylor.

References: ODM, 1928, Vol. 37, pt. 3, p.62-65.

ODM, Sault Ste. Marie files SSM-219,-780,-897,-1291.

TOWNSHIP 22, RANGE 10

Conway Prospect

Main Metals: Pb, Ag, Zn.

Location: Township 22, Range 10, NE 1/4, 7 miles W of S end of Ranger Lake.

Reference: ODM map 2108.

Geology: A shear zone which strikes N55W and follows a contact between chlorite schist and a lamprophyre dike, contains argentiferous galena, sphalerite, pyrite, quartz, and calcite.

Economic Features: The zone was traced for a length of 150 feet, and is 2 to 12 inches wide. A selected sample, consisting largely of galena, assayed 2.25 oz./ton Ag and 40.20% Pb (ODM 1928).

History: 1927 Stripping, trenching and 2 test pits by St. Regis Lead Mines Ltd.

1949 1000 feet of d.d. by St. Regis Lead Mines Ltd.
1955 Sampling and surface exploration by Argoma Uranium Mines Ltd.

References: ODM, 1928, Vol. 37, pt. 3, p.65-67.
ODM, Sault Ste. Marie file SSM-229.

TOWNSHIP 23, RANGE 10

Golf Lake Prospect

Main Metals: Cu, Mo, Zn.

Location: Township 23, Range 10, NW 1/4, 1/2 mile SW of Golf Lake.
Reference: ODM maps 2108, P.302,

Geology: Disseminated to massive sulphides occur in fractures and veinlets in granitized quartzite. Mineralization consists of chalcopyrite, pyrite, pyrrhotite and molybdenite.

Economic Features: Assay results of 1.84% MoS₂ over 2.0 feet; 1.06% Cu over 2.7 feet; and 1.09% Zn over 16.0 feet have been reported (Northern Miner, Sept. 21, 1961; Mar. 15, 1962).

History: 1955 1676.5 feet of d.d. and trenching by D.R. Martin.
1961-62 2095 feet of d.d., surface exploration and SP survey by Marbois Mines Ltd., and McMarmac Red Lake Mines Ltd.

References: Northern Miner, 1961, Sept. 21, 28; 1962, Mar. 8, 15.
Canadian Mines Handbook, 1962-63.
ODM, Sault Ste. Marie files SSM-230,-34.

Vacheresse Prospect

Main Metals: Zn, Cu, Pb.

Location: Township 23, Range 10, W central part, 8 miles NE of Searchmont.
Reference: ODM map 2108; ODM map P.302.

Geology: A shear zone which cuts granite and diabase, strikes N50-55W, and carries galena, sphalerite, chalcopyrite and pyrite in quartz-carbonate veins.

Economic Features: The vein system was traced intermittently for a length of about 900 feet; width ranges from 15 inches to 7 feet. Four channel samples across 6 feet assayed from 2 to 4% Zn, contained lesser amounts of Pb, from 1 to 3 oz./ton Ag, and no Au (ODM 1926).

History: 1926 Surface exploration by F. Vacheresse,
1927 1000 feet of d.d. in 2 holes by National Lead Co.
1964 610 feet of d.d. in 4 holes by B.R. Idziak.

References: ODM, 1926, Vol. 35, pt. 2, p.51-52.
ODM, 1928, Vol. 37, pt. 3, p.69-72.
ODM, Sault Ste. Marie file SSM-602.

TOWNSHIP 24, RANGE 11

Kristina (Supercrest) Mine (Past Producer)

Main Metals: Cu.

Location: Township 24, Range 11; SW 1/4 of township.

Geology: Quartz veins in granite, striking N70W, and dipping 65S,
carry chalcopyrite, minor pyrite and galena.

Economic Features: Principal mineralized zones, known as No. 4 and No. 6
shaft zones, are estimated to contain a total of 369,390 tons of
probable and possible ore, having an average grade of 1.95% Cu
(File SSM-672).

History: 1901-1907 6 shafts sunk, principal development and mining
operations No. 6 shaft area. This shaft is 400 feet deep, with 3
levels, and about 875 feet of lateral development. Copper produced
in 1903, and 1905-1907. Total production was 652,000 lbs. of copper
valued at \$38,698, all by Superior Copper Co. Ltd.
1952-1955 10,636 feet of d.d. in 31 holes; geol. survey, by
Kristina Copper Mines Ltd.
1956-1957 11,382 feet of d.d. in 34 holes; SP and geol. surveys,
by Supercrest Copper Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-36,-37,-38,-39,-40,-672.

TOWNSHIP 25, RANGES 21 AND 22

Lost Lake - Dave Lake Prospect

Main Metals: Cu.

Location: Township 25, Ranges 21 and 22, Lost and Dave Lakes area.

Reference: A.C.R. map 41N 1 and 8.

Geology: Schistose and banded metavolcanics ranging from intermediate in the N to mafic in the S, underlie the Lost Lake area. Minor pyrite, pyrrhotite, and chalcopyrite occur in chlorite schist, graphite schist, and in the massive and banded metavolcanics.

Economic Features: Highest assays from Lost Lake area gave values of 0.02% Cu over 5 feet; best values in the Dave Lake area were 0.03% Cu over 8 feet (File SSM-736, 1966).

History: 1960-63 Airborne MAG and EM surveys by Algoma Central Railway.
1964 Geol., ground MAG and EM surveys by Algoma Central Railway.
1965 Geochemical and EM surveys, 1483 feet of d.d. in 5 holes by Cominco Ltd.

References: ODM, Sault Ste. Marie files SSM-736,-650,-661,-663.

TOWNSHIP 25, RANGE 25

Dalton - Frobisher Prospect

Main Metals: Cu.

Location: Township 25, Range 25, N 1/2, Noranda Lake area and central part of township.

Reference: A.C.R. map 41N 1 and 8.

Geology: In the Noranda Lake area d.d. revealed minor chalcopyrite, pyrite and pyrrhotite in quartz stringers in gneissic greenstone. In S claim group, minor chalcopyrite with heavy pyrite and pyrrhotite occurs in felsic to intermediate volcanic tuff.

Economic Features: Assays obtained of 0.05% Cu (File SSM-238); 0.07% Cu over 7 feet (File SSM-239); and from core samples of 0.06% Cu over 3.5 feet (File SSM-1130).

History: 1953 Airborne geophysical survey by Hopkins Exploration.
1955 920.7 feet of d.d. in 5 holes by Macfie Exploration Ltd.
Airborne geophysical survey by Hopkins Exploration.
1956 1021 feet of d.d. in 2 holes by Hopkins Exploration. Geol. mapping, ground geophysics, sampling and 2995 feet of d.d. in 7 holes by Frobisher Ltd.
1957 153.8 feet of d.d. in 4 holes by Hopkins Exploration.
1966 468 feet of d.d. in 4 holes by Multi-Minerals Ltd.

References: ODM, Sault Ste. Marie files SSM-237,-238,-239,-1130,-926.

Matchinameigus Lake Prospect

Main Metals: Cu.

Location: Township 25, Range 25, SE 1/4, 1 mile W of Matchinameigus Lake.

Reference: A.C.R. map 42C 1 and 8.

Geology: Minor pyrite, pyrrhotite and chalcopyrite occur disseminated and in quartz veinlets in volcanic sediments.

History: 1955 Aerial geophysical survey by Hopkins Exploration.

1956 397 feet of d.d. in 1 hole by Hopkins Exploration.

1962 1638.9 feet of d.d. in 4 holes by Belmine Exploration Ltd.

1965 EM survey by Belmine Exploration Ltd.

References: ODM, Sault Ste. Marie file SSM-236.

TOWNSHIP 26, RANGE 13

McGovern and McCollough Lakes Prospect

Main Metals: Cu.

Location: Township 26, Range 13, W 1/2, central trending N, 5 claim groups.

Reference: ODM map 2108.

Geology: The area is underlain by felsic to mafic metavolcanics and sediments. Sulphides occur in scattered locations mainly as minor pyrite, pyrrhotite and chalcopyrite disseminated in a fine-grained, grey schist with graphitic sections.

Economic Features: Core samples gave assay values up to 0.10% Cu over 5.5 feet (File SSM-482).

History: 1953 General surface exploration and airborne geophysical surveys by Jalore Mining Co. Ltd.

1960 Sampling, dip needle survey and local geol. mapping in McGovern Lake area, by Algoma Central Railway.

1962-63 Geophysical surveys, geol. mapping and 2950.5 feet of d.d. in 11 holes by Algoma Central Railway.

References: ODM, Sault Ste. Marie files SSM-482,-793,-806,-1044,-1269.

TOWNSHIP 27, RANGE 12

Caputo - Just (Past Producer)

Main Metals: Cu.

Location: Township 27, Range 12, 1 1/4 mile E of Tilley Lakes.

Geology: A quartz-carbonate vein, carrying chalcocite, bornite, chalcopyrite, and pyrite, cuts diabase. The vein strikes N70W, appears to dip vertically, and has an exposed length of 250 feet, and an average width of about 3 feet.

Economic Features: In 1968, 475 tons of material were shipped from the property to the mill of Coppercorp Ltd., for custom milling. Average grade of the shipment was 1.18% Cu. Mill recovery was 79.14%.

History: 1967 Trenching by K. Just.
1968 Stripping, trenching, open-cut and adit, shipment of 475 tons as noted above, by J. Caputo and K. Just. Operations ceased autumn of 1968.

References: ODM, 1969, M.P. 24, p.6.
ODM, Sault Ste. Marie files SSM-1116,-1337.

TOWNSHIP 27, RANGE 13

Alcourt Prospect

Main Metals: Cu.

Location: Township 27, Range 13; 1 1/2 mile W of Griffin Lake.
Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein occurs in mafic metavolcanics near a granite-metavolcanic contact, and strikes N65E.

Economic Features: Vein traced for length of 400 feet. Samples assayed 2.1% Cu over 2 feet; 0.3% Cu over 5 feet; 0.8% Cu over 6 feet; and 0.5% Cu over 5 feet.

History: 1956 MAG, resistivity and geol. surveys; trenching, by Alcourt Mines Ltd.

References: ODM, 1966, map P.359.
ODM, Sault Ste. Marie file SSM-241.

Tribag Mining Co. Ltd.

East Breccia Prospect

(See under Township 28, Range 13)

TOWNSHIP 28, RANGE 13

New Senator East Prospect

Main Metals: Cu, Ag.

Location: Township 28, Range 13; 1 mile S of Tribag Mine.

Reference: ODM maps 2108 and P.361.

Geology: A silicified zone in brecciated mafic metavolcanics carries chalcopyrite, pyrite, sphalerite, and galena.

Economic Features: The extent of the zone has not been determined, but appears to be at least 250 feet long. All assay results gave less than 1% Cu (Files SSM-520,-633).

History: 1963-68 MAG and geol. surveys; 4285.5 feet of d.d. in 6 holes by New Senator-Rouyn Ltd.

References: ODM, 1966, map P.361.

ODM, Sault Ste. Marie files SSM-520,-633.

New Senator West Prospect

Main Metals: Pb, Zn, Ag.

Location: Township 28, Range 13; S-central part of township.

Reference: ODM maps 2108 and P.361.

Geology: An E-striking fault zone occurs along a granite-metavolcanic contact. Quartz-carbonate stringers carry galena and sphalerite.

Economic Features: A core sample assayed 7.01% Pb, 1.0% Zn, and 3.08 oz./ton Ag over 1.0 foot.

History: 1963-64 MAG and geol. surveys; 2292.5 feet of d.d. in 3 holes by New Senator-Rouyn Ltd.

References: Northern Miner, 1963, Dec. 5.

ODM, 1966, map P.361.
ODM, Sault Ste. Marie files SSM-520,-633.

Tribag Mine (Producer)

Main Metals: Cu, Ag.

Location: Township 28, Range 13; 2 miles N, 4 3/4 miles E of SW corner of township.

Reference: ODM maps 2108, P.361.

Geology: Breccia pipes occur in Archean mafic metavolcanics and granite near granite-metavolcanic contact. Five pipes known to date. Production has been from Breton pipe (see map P.361). Breccias consist of sharply angular rock fragments set in coarsely-crystalline vuggy matrix of quartz, carbonate, and minor fluorite. Chalcopyrite, pyrite, minor galena and sphalerite occur in the breccia matrix. Ore zones in the Breton pipe form saddle-shaped bodies within the breccia. Narrow post-ore fault zones carry minor molybdenite.

Economic Features: The Breton breccia pipe is 1300 feet long and 400 feet wide at surface. Its walls dip steeply. The pipe widens slightly with depth, and is 900 feet wide at the 1200-foot level. Breccia extends to a depth of at least 2175 feet. Mining has been from above the 1200-foot level. The pre-production ore reserve estimate was 600,000 tons grading 2.2% Cu (Northern Miner, March 30, 1967). Most recent estimate is 745,522 tons grading 1.75% Cu and 0.35 oz./ton Ag (Northern Miner, June 6, 1968). West breccia occurs 1/2 mile S of the Breton zone, and is 2000 feet long and 700 feet wide at surface. Production is planned for 1969 from an adit. No ore reserve estimate has been published to date. East breccia occurs 1 mile E of the Breton zone, and is 2000 feet long and 1000 feet wide at surface. Low values in Cu and Mo obtained from d.d. and the adit (Northern Miner, Dec. 5, 1963; Dec. 23, 1965; July 13, 1967).

History: 1954 Property staked by K. Gunterman.

1955 8331 feet of d.d. in 22 holes by Sylvanite Gold Mines Ltd.

1962-69 IP, SP, EM, MAG, geol. surveys; 160,000 feet of d.d. in numerous holes to end 1965; several thousand feet additional d.d. to end 1968; adit 294 feet long on East breccia; shaft to 1247 feet with development on 7 levels on Breton breccia, by Tribag Mining Co. Ltd.

Production from Breton zone commenced 1967 at rate of approximately 450 tons/day, with mill heads averaging 1.7% Cu (Northern Miner, Oct. 3, 1968).

References: CIMM, 1965, Trans., Vol. 68, p.321-26.

Can. Min. Jour., 1966, April, p.77-80.

ODM map P.361.

ODM, Sault Ste. Marie files SSM-247 to 253,-635,-894.

TOWNSHIP 28, RANGE 24

Lakemount Prospect

Main Metals: Cu, Ni.

Location: Township 28, Range 24, W-central part of township; Sunrise and Elbow Lakes area.

Reference: ODM map P.184.

Geology: Nickel-copper deposits occur in a body of serpentized peridotite-pyroxenite which is 6900 feet long and up to 2000 feet wide. Pyrrhotite, chalcopyrite, very minor pyrite, occur disseminated in the ultramafic rocks.

Economic Features: Several zones of sulphide concentration are known. The principal one is the 'F' zone, north of Elbow Lake. Indicated reserves are reported as 2,000,000 tons averaging 0.4% Cu and 0.6% Ni, plus unstated values in Pt metals (Canadian Mines Handbook, 1968-1969, p.194).

History: Pre-1943 Stripping and trenching, some d.d. by Engineers Holding Co. Ltd., Engineers Holdings Contributors Syndicate, Corinth Mines Ltd., and Lakemount Prospecting Syndicate.
1943 Approx. 10,000 feet of d.d. by Lakemount Mines Ltd.
1944-45 Optioned by N.A. Timmins Explorations (Ontario) Ltd. Approx. 30,000 feet of d.d.
1952-53 D.d. by Kelore Mines Ltd.
1956 D.d. by New Kelore Mines Ltd.
1962 Geol. and EM surveys by Algoma Central Railway.

References: ODM, 1946, Vol. 55, pt. 4, p.119-121.

ODM, map P.184.

ODM, Sault Ste. Marie file SSM-274.

TOWNSHIP 28, RANGE 26

Ego Prospect

Main Metals: Cu, Au, Ag.

Location: Township 28, Range 26, W-central part of township, 5.5 miles SW of Goudreau.

Reference: ODM map P.184.

Geology: Four sulphide lenses, striking easterly, have been outlined in a zone of sheared mafic metavolcanics. Mineralization consists of chalcopyrite, pyrrhotite, pyrite, and sphalerite, with values in Au, Ag, and Co.

Economic Features: Results of d.d. gave the following average for all zones: 1.78% Cu; 0.21 oz./ton Au; average width 4.4 feet (Ego Mines Ltd., 1964). From subsequent additional d.d. results, the company estimated a total of 500,000 tons in the 4 zones, with an average grade of 1.84% Cu, 0.135 oz./ton Au, approx. 1 oz./ton Ag, and a minor amount of Co (Northern Miner, Oct. 26, 1967).

History: 1958-59 EM and MAG surveys by Ego Mines Ltd.
1960-65 33,022 feet of d.d. in 65 holes, geol. mapping, by Ego Mines Ltd.
1966-67 12,785 feet of d.d. in 34 holes by Ego Mines Ltd.

Ownership: Ego Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-700.
Northern Miner, 1967, Oct. 26.
Ego Mines Ltd., 1964, Annual Rept.

TOWNSHIP 29, RANGE 22

Carleton Prospect

Main Metals: Cu, Zn.

Location: Township 29, Range 22; NW 1/4, 12 miles N of High Falls on the Michipicoten River.
Reference: ODM map P. 184.

Geology: D.d. revealed altered quartz diorite cut by quartz stringers carrying pyrrhotite, pyrite, chalcopyrite and minor sphalerite.

History: 1966 2085.5 feet of d.d. in 8 holes by B. Carleton.

References: ODM, Sault Ste. Marie file SSM-950.

TOWNSHIP 30, RANGE 19

Renner Prospect

Main Metals: Cu, Ni.

Location: Township 30, Range 19; 2 1/2 miles E of Hwy. 17, 2 miles N of S border of township.
Reference: ODM map 2138.

Geology: Three zones of disseminated sulphide mineralization occur in pyroxene gabbro and diorite, within an area 900 feet long by 200 feet wide. Zones are sparsely mineralized with 5 to 20% pyrrhotite, pentlandite, and chalcopyrite. The largest zone is highly mineralized and contains an area with 20 to 75% sulphide minerals. The zones strike N60-70W, and dip 80N-90; the highly mineralized zone appears to plunge 80SE.

Economic Features: The sparsely mineralized zones range in length from 260 to 460 feet, have a maximum width of 75 feet, have been tested by drilling to a depth of 300 feet, and contain about 0.4% Ni and 0.3% Cu. The highly mineralized zone is 400 feet long, has a maximum width of 60 feet, and extends to a depth of 200 feet over most of its length. The zone has an average content of 0.9% Ni and 0.6% Cu, but 10 to 15-foot wide sections contain 1 to 2% Ni and 0.5 to 1.5% Cu. Zone contains trace amounts of Au, Ag, and Pt-group metals (ODM 1969, G.R.69, p.70-72). The total drill-indicated tonnage available to a depth of 350-400 feet is 2,888,000 tons averaging 0.29% Ni and 0.26% Cu. Drill-indicated tonnage of high-grade material is 161,400 tons averaging 1.08% Ni and 0.71% Cu (File SSM-323).

History: 1954-55 Trenching by L. Renner and G. Renner.
1955-56 MAG, EM, geol. surveys; 7580 feet of d.d. in 16 holes by Falconbridge Nickel Mines Ltd.
1959-66 EM, SP, MAG, resistivity, geol., and topographic surveys; trenching; 4267 feet of d.d. in 15 holes by Empire Explorations Ltd.

References: ODM, 1969, G.R. 69, p.69-73.
ODM, Sault Ste. Marie files SSM-323,-324,-692.

TOWNSHIP 32, RANGE 26

Heart Lake Prospect

Main Metals: Cu.

Location: Township 32, Range 26, SW end of Heart Lake.
Reference: A.C.R. map 42C 3 and 6.

Geology: Chalcopyrite mineralization occurs along an ill-defined belt 5000 feet long, striking N65-70E. Mineralization is disseminated to massive and is confined to shear zones in lava-tuff units.

Economic Features: Prospecting outlined a zone 900 feet long, averaging 0.25% Cu to 0.5% Cu (File SSM-970). Core samples assayed 0.34% Cu over 12 feet, 0.21% Cu over 57.4 feet, and 0.78% Zn over 6 feet (File SSM-976).

History: 1961 Trenching and sampling by Jonsmith Mines Ltd. EM survey by Falconbridge Nickel Mines Ltd.

1962 229 feet of d.d. in 3 holes, trenching, EM survey, and geol. mapping by Jonsmith Mines Ltd. 2211.0 feet of d.d. in 6 holes, geol. mapping by Falconbridge Nickel Mines Ltd.
1966 Sampling by Acme Gas and Oil Co. Ltd.

References: ODM, Sault Ste. Marie files SSM-976,-496,-970,-994B .

TOWNSHIP 33, RANGE 23

Sutherland Prospect

Main Metals: Cu, Pb, Zn, Ag, Au.

Location: Township 33, Range 23; W border of township, 1 1/2 miles N of Lake Superior.

Reference: ODM map P.507.

Geology: Chalcopyrite, pyrite, sphalerite, and galena occur in quartz veins within migmatite.

Economic Features: The mineralized zone strikes N10E to N45E, with a dip apparently to the E. The zone has been traced by d.d. for a length of 1900 feet; sampled widths range from 3.5 to 38.0 feet. Assays from d.d. core ranged from 0.07% Cu over 17.5 feet to 1.14% Cu over 5.0 feet. The latter was the only Cu assay greater than 1.0%. Highest assays for other metals obtained from d.d. core are: 0.24% Pb over 2.5 feet; 0.54% Zn over 2.5 feet; 0.23 oz./ton Ag over 3.0 feet; 0.05 oz./ton Au over 3.0 feet (File SSM-733). Grab samples assayed 0.62% and 0.45% Cu; a chip sample assayed 0.31% Cu over 20 feet (ODM map P.507).

History: 1965 5148.7 feet of d.d. in 14 holes by Sutherland and Associates.

References: ODM, 1969, map P.507.

ODM, Sault Ste. Marie file SSM-733.

TOWNSHIP 46

Mud Lake Prospect

Main Metals: Cu.

Location: Township 46; NE corner, 3 miles NE of Missanabie.

Reference: A.C.R. map 42C 1 and 8.

Geology: Shear zones in granite gneiss and mafic metavolcanics contain quartz-calcite veins, mineralized with chalcopyrite, bornite, pyrite, and magnetite. No. 1 vein strikes N65W, dips 75N, has a known length of 850 feet, and ranges in width from 1.5 to 5 feet. No. 2 vein strikes N35W, dips 75S, has a known length of 560 feet, and ranges in width from 2 to 6 feet.

Economic Features: Assay values from No. 1 vein range from 1.19% Cu to 7.14% Cu over widths ranging from 1.6 feet to 4.5 feet. Those from No. 2 vein range from 0.26% Cu to 1.71% Cu over widths ranging from 1 foot to 6 feet. Cu values are very low in the shear zones (File SSM-341).

History: 1951-53 Surface work, trenching and sampling by S. Pileggi.
1954 MAG survey by Guarnaccio Gold Mines Ltd.
1956 SP and gravity survey by Kent Mines Ltd.
1959 2824.5 feet of d.d. in 12 holes by Milmar-Island Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-341,-340,-470.

TOWNSHIP 48

Strobus Lake Prospect

Main Metals: Cu, Pb, Zn, Ag.

Location: Township 48; SW 1/4 of township; 1/4 mile S of S bay of Strobus Lake.

Geology: Silicified shear zone in andesite, near andesite-granodiorite contact, carries chalcopyrite, pyrite, pyrrhotite, arsenopyrite, sphalerite and galena. The zone strikes E, dips about 70N, has been traced along strike for about 400 feet, and ranges in width from 4 to 12 feet.

Economic Features: Results of d.d. indicated best Cu values were 0.91% Cu over 9.8 feet, others were less than 0.5% Cu. Pb and Zn values are less than 1%; Ag values ranged from nil to 0.16 oz./ton; Au values were nil.

History: 1966 Geol. mapping by Texron Explorations Ltd.
1967 EM and MAG surveys by Texron Explorations Ltd.
1968 1896 feet of d.d. in 11 holes by Texron Explorations Ltd.

References: ODM, Sault Ste. Marie file SSM-967.

TOWNSHIP 123

East Bull Lake Prospects

Main Metals: Cu, Ni.

Location: Township 123; 1 mile E of East Bull Lake.

Reference: ODM maps 2108, 52d.

Geology: Numerous small replacement bodies of massive and disseminated sulphides, largely pyrrhotite with minor chalcopyrite occur in gabbro.

Economic Features: Most assays range from 0.10 to 1.60% Cu and 0.10 to 1.50% Ni (ODM 1957). Assays of 2.61% Cu and 0.36% Ni were reported (ODM 1943).

History: 1952 3011 feet of d.d. in 9 holes, MAG survey by Silcross Copper Mines Ltd.

1958 Geol. mapping and EM survey by Noranda Mines Ltd.

1962 401 feet of d.d. in 1 hole, geol. mapping, EM and MAG survey by Mining Corp. of Canada Ltd.

References: ODM, 1943, Vol. 52, pt. 6, p.14-16.

ODM, 1957, M.R.C. 2, p.100.

ODM, Sault Ste. Marie files SSM-357,-503,-356.

TOWNSHIP 130

El Pen-Rey Prospect

Main Metals: Cu, Ni.

Location: Township 130; 1/2 mile SW of East Bull Lake.

Reference: ODM maps 2108, 52d.

Geology: Disseminated sulphides consisting of chalcopyrite and nickeliferous pyrrhotite occur associated with zones of alteration in the East Bull Lake gabbro mass.

Economic Features: No concentration of sulphides was found. The best assay obtained in d.d. was 0.49% Cu and 3.93% Ni over 1.5 feet (File SSM-526).

History: 1955 Sampling by Sylvanite Gold Mines Ltd.

1956 Surface work, d.d., EM survey, and 7819 feet of d.d. in 14 holes by El Pen-Rey Oil and Mines Ltd.

1957 EM survey over the W part of the property by Daering Explorers Ltd.

References: ODM, 1957, M.R.C. 2, p.88.

ODM, Sault Ste. Marie files SSM-359,-526,-358.

TOWNSHIP 137

Batty Lake Prospect

Main Metals: Cu.

Location: Township 137; N end of Batty Lake.

Reference: ODM maps 2003, 2108.

Geology: Chalcopyrite occurs as a replacement in cherty sediments along the footwall of a diabase sill. Strike is N10W.

Economic Features: Mapping in 1951 by Teck Exploration Co. Ltd., (SSM-478) traced the mineralized zone for a length of 300 feet, and a width of 12 feet. D.d. samples by Teck Exploration Co. Ltd. assayed 1.70% Cu over 12.0 feet.

History: 1951-52 3732.7 feet of d.d. in 28 holes; geol. survey and surface work by Teck Exploration Co. Ltd.

References: ODM, 1962, G.R. 10, p.87.

ODM, Sault Ste. Marie files SSM-476,-478.

East Pecors Prospect

Main Metals: Cu, Zn, Ni.

Location: Township 137; SW corner of the township on the E shore of Pecors Lake.

Reference: ODM maps 2003, 2108.

Geology: Lean iron formation, which strikes NW, and dips 70N, occurs in zones up to 100 feet wide in metavolcanics and metasediments. Fractures in iron formation carry pyrite, pyrrhotite, and chalcopyrite.

Economic Features: Grab samples assayed less than 1% Cu, less than 1% Ni and up to 4.5% Zn (File SSM-362).

History: 1951-54 Dip needle survey, geol. survey, stripping, and trenching by Teck Exploration Co. Ltd.

1958 Geol. mapping by Vite Uranium Mines Ltd.

References: ODM, 1962, G.R. 10, p.83,84.
ODM, Sault Ste. Marie file SSM-362.

McCool Lake Prospect

Main Metals: Cu.

Location: Township 137; NW shore of McCool Lake.
Reference: ODM maps 2003, 2108.

Geology: A quartz-chalcopyrite vein occurs in a fracture zone of the Corner Lake Fault; most interesting section occurs over a length of 1 mile at W end of McCool Lake.

Economic Features: Samples from the area at the W end of McCool Lake, taken at intervals of 25 to 50 feet along the vein for several hundred feet, yielded average values of 1 1/2% Cu, and from 0.02 to 0.04 oz./ton of Au and Ag (ODM 1962). Samples from d.d. by Teck Exploration Co. Ltd., ranged from 0.13% Cu over 20.0 feet to 2.29% Cu over 6.1 feet. Weighted average of d.d. samples was 0.66% Cu over average width of 9.4 feet. Vite Uranium Mines Ltd. reported assay of 1.20% Cu, 0.005 oz./ton Au, over width of 5.1 feet from d.d. sample.

History: 1927-28 Trenching and d.d. by Serpent Basin Mines Ltd.
1951-54 3226.2 feet of d.d. in 10 holes, geol. mapping, and trenching, by Teck Exploration Co. Ltd.
1955 337 feet of d.d. in 3 holes by Vite Uranium Mines Ltd.

References: ODM, 1962, G.R. 10, p.85-86.
ODM, Sault Ste. Marie files SSM-362c,-364,-544.

Peyton Prospect

Main Metals: Cu, Au.

Location: Township 137; W shore of Whiskey Lake, 2 miles SW of Campbell Island.
Reference: ODM maps 2003, 2108.

Geology: Quartz-gold-sulphide veins cut Middle and Upper Mississagi sediments. The principal vein strikes N30W, dips 90°, and has traced over a length of 100 feet (mostly under Whiskey Lake). Gold, pyrite, arsenopyrite, and chalcopyrite occur in the vein material. No data concerning copper content are available. Gold assays are erratic, but in general, are low (ODM 1962).

History: 1898 Shaft reported to have been sunk.

1904-06 25-foot shaft and 24 feet of drifting under Whiskey Lake by Teasdale.
1912 Stripping, trenching and test pitting by J.S. Wilson.
1925 Sampling, and a 30-foot shaft put down.
1927 1 d.d. hole and shaft dewatered by Serpent Basin Mines Ltd.

References: ODM, 1962, G.R. 10, p.76-77.

Whitefish Prospect

Main Metals: Cu.

Location: Township 137; NW shore of Batty Lake.

Reference: ODM maps 2003, 2108.

Geology: Quartz-carbonate veins, carrying pyrite and chalcopyrite, occur in fracture zones in diabase. The veins strike N80W, and dip 45-50S. Three principal mineralized zones are known; the largest one being mineralized for a length of 25 feet and a width of 8 feet.

Economic Features: Assays of 1.01% Cu over 70 feet; 0.3% Cu over 190 feet; 0.60% Cu over 85 feet; and 0.35% Cu over 35 feet obtained from d.d. core.

History: 1905-06 Test pitting, stripping, d.d.

1927-28 Trenching and d.d. by Serpent Basin Mines Ltd.

1951-52 Geol. mapping; d.d., 10 holes, trenching, by Teck Exploration Co. Ltd.

References: ODM, 1962, G.R. 10, p.87-89.

ODM, Sault Ste. Marie files SSM-364,-478.

TOWNSHIP 138

Reynolds Prospect

Main Metals: Cu.

Location: Township 138; NW end of Whiskey Lake, between Whiskey and Kindle Lakes.

Reference: ODM maps 2004, 2108.

Geology: A quartz-chalcopyrite vein occurs in schistose contact zone between diabase and Bruce limestone. The vein strikes N45W, dips 45S, is up to 20 feet wide, and is exposed intermittently over a strike length of about 500 feet.

Economic Features: Low values in copper were obtained in d.d. Values, reported in dollars, ranged from \$0.16 over 11.0 feet to \$2.90 over 15 feet, at a time when average price of copper was 27.66 cents per lb. (ODM 1962).

History: 1910 50-foot shaft and surface exploration by Major Leckie.
1951 2 d.d. holes for 107 feet by Teck Exploration Co. Ltd.

References: ODM, 1962, G.R. 10, p.78-79.
ODM, Sault Ste. Marie files SSM-364,-477.

TOWNSHIP 143

Pecors Lake Prospect

Main Metals: Cu, Ni.

Location: Township 143; 3/4 mile SW of Vite Point on Pecors Lake.
Reference: ODM map 2108.

Geology: Quartz veins and stringers in dark carbonatized Archean metasediments are mineralized with pyrite and pyrrhotite, minor chalcopyrite, sphalerite, and galena.

Economic Features: Weighted average of core samples was 0.54% Ni, 0.15% Cu (File SSM-591).

History: 1951-53 8505.9 feet of d.d. in 29 holes, EM and dip needle surveys, sampling and surface work by Teck Exploration Co. Ltd.
1955 3518.8 feet of d.d. in 4 holes by Vite Uranium Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-372,-590,-591,-544.

TOWNSHIP 151

Stag Lake Prospect

Main Metals: Cu.

Location: Township 151; 1/2 mile SE of Stag Lake.
Reference: ODM map 2108.

Geology: Chalcopyrite, pyrite, bornite, and chalcocite occur disseminated in quartzites and argillites of the Huronian Gordon

Lake Formation.

Economic Features: In the first 8 d.d. holes completed, the highest assay value was 0.86% Cu and the lowest was 0.10% Cu, both over widths of 0.8 feet. In further d.d., the best intersection was 0.34% Cu over 9.1 feet. The copper intersections were reported to be continuous in many holes, and were encountered at depths from near surface to in excess of 1300 feet. (Northern Miner, Jan. 12, 1967).

History: 1964-65 8247 feet of d.d. in 12 holes by Sutherland and Associates.

References: ODM, Sault Ste. Marie file SSM-708.
Northern Miner, 1967, Jan. 12.

TOWNSHIP 163

Bruce-Presto Prospect

Main Metals: Cu, Co.

Location: Township 163; W-central part of township.
Reference: ODM map 2108.

Geology: Silicified shear zone in diabase carries chalcopyrite and cobalt arsenides. The zone strikes E, dips 45S, and has been traced for a length of 500 feet, with a width ranging from 9 to 25 feet.

Economic Features: Surface showings reported to grade from 2 to 3% Cu, with trace to 2% Co (File SSM-620). Assays from d.d. core gave 0.70% Cu over 12.3 feet; and 1.96% Cu over 11.5 feet (Northern Miner, 1964, Feb. 20, March 5).

History: 1952 Trenching; d.d., details unknown; by D.C. McKechnie.
1963-64 IP survey; unknown footage of d.d. in 6 holes by Bruce-Presto Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-620.

Copper Gulch Prospect

Main Metals: Cu.

Location: Township 163; on W border of township, 1 1/2 miles S of N border of township.
Reference: ODM map 2108.

Geology: Copper mineralization occurs in two parallel, sheared and

brecciated zones in quartzite, which lie N and S of a diabase dike. Chalcocite, chalcopyrite, magnetite and hematite occur in the zones. Both zones strike N30W and dip 85S.

Economic Features: South (Cliff) zone is about 40 feet wide and its length has not been recorded. Assays gave 0.46% Cu over 36 inches; 0.08% Cu over 12 inches; and 0.56% Cu over 30 inches (File SSM-446). North zone lies 260 feet NE of South zone. The length has not been recorded. A chip sample from the North zone assayed 0.88% Cu over 6 feet (File SSM-438). Highest assay obtained from d.d. core (hole evidently drilled between and subparallel to the zones) was 0.70% Cu over 1.3 feet (File SSM-737).

History: 1952 Sampling by D.C. McKechnie.
1954 Sampling by Sylvanite Gold Mines Ltd.
1965 MAG and EM surveys; 453 feet of d.d. in 1 hole, by International Mine Services Ltd.

References: ODM, Sault Ste. Marie files SSM-438,-446,-737.

Ezma Lake Prospect

Main Metals: Cu.

Location: Township 163; at SE end of Ezma Lake.
Reference: ODM map 2108.

Geology: Chalcopyrite and pyrite occur in brecciated limestone of the Bruce Limestone member; and in underlying conglomerate, argillite, quartzite, and greywacke (File SSM-1137). Mineralized zone strikes N70W; the dip was not reported but is probably gently S.

Economic Features: Mineralized zone traced by d.d. for a length of 700 feet. Best assay from d.d. was 1.14% Cu over 8 feet; the remainder of the assays were all less than 0.60% Cu over widths ranging from 1.0 to 10.0 feet (File SSM-1137).

History: 1954 Geol. survey by R.K. Mudford for God's Lake Gold Mines Ltd., presence of chalcopyrite noted (File SSM-440).
1966-67 IP and MAG surveys; 2471 feet of d.d. in 11 holes by Noranda Mines Ltd., and Jonsmith Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-440,-1137.
Northern Miner, 1966, Nov. 17; 1967, Jan. 12, Mar. 23, Aug. 3.

TOWNSHIP 168

Cannon Prospect

Main Metals: Cu.

Location: Township 168; W-central part of township, 1/2 mile S of main Crownbridge prospect.
Reference: ODM map 2108.

Geology: Quartz-chalcopyrite veins occur in an E-striking fault zone which cuts sediments of the Gowganda Formation.

Economic Features: Samples from d.d. gave one assay of 2.00% Cu over 5.0 feet; all other assays were less than 0.60% Cu over widths ranging from 4.5 to 7.5 feet. Zone was traced by d.d. over a length of 1500 feet.

History: 1968 MAG, EM, and geol. surveys; 2000.5 feet of d.d. in 4 holes, by Cannon Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-1223.

Copper Prince Prospect

Main Metals: Cu, Au.

Location: Township 168; 500 feet W of W end of Rockey Lake.

Geology: Quartz-chalcopyrite veins cut sediments of the Gowganda Formation. Veins strike E, and dip steeply N.

Economic Features: Principal vein has been traced for a length of 1000 feet, and ranges in width from 8 to 20 feet. There are four shoots on surface, as follows: (1) 310 feet long, 6.3 feet wide, averaging 3% Cu; (2) 60 feet long, 9.7 feet wide, averaging 1.9% Cu; (3) 45 feet long, 6.6 feet wide, averaging 2.3% Cu; (4) 110 feet long, 9.6 feet wide, averaging 0.9% Cu. Nine holes drilled in 1929 gave copper values ranging from 1 to 4.8% over core lengths of 2.5 to 14.5 feet (ODM 1957). Weighted average of trench samples taken from the zone 500 feet W of Rockey Lake was 4.1% Cu, 0.03 oz./ton Au, over 7.1 feet. Weighted average of 4 drill holes under trenches was 2.7% Cu, 0.03 oz./ton, over 9.1 feet (File SSM-451).

History: 1928-29 Trenching; 6557.5 feet of d.d. in 18 holes; 3 additional holes for which no records are available, by Consolidated Mining and Smelting Co. of Canada Ltd.
1947 Geol. survey by Consolidated Mining and Smelting Co. of Canada Ltd.

1951-52 1638 feet of d.d. in 4 holes; geol. survey, by Copper Prince Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.75.
ODM, Sault Ste. Marie file SSM-451.

Crownbridge Prospect

Main Metals: Cu.

Location: Township 168; W-central part of township; 23 miles N of Iron Bridge via Hwy. 546, 3 miles by bush road to the prospect.
Reference: ODM map 2108.

Geology: Sediments of the Gowganda Formation are cut by a fault zone which strikes N75W and appears to dip 70N. Fault zone has been filled by quartz veins, in which chalcopyrite occurs as small, irregularly disseminated blebs. Pyrite and carbonate also occur in the veins.

Economic Features: The mineralized portion of the vein system has a known strike length of 4200 feet; the width ranges from 1 to 30 feet, and averages 6.5 feet. It has been explored by drilling to a depth of 1000 feet, although most of drilling has been confined to depths of 500 feet or less. Drilling results show that copper mineralization is confined to a number of lenses within the vein system. To a depth of 1000 feet, total reserves, including 10% allowance for dilution, are stated to be 415,000 tons, grading 1.8% Cu, over an average width of 6.5 feet (Northern Miner, May 27, 1965).

Ownership: Cannon Mines Ltd.

History: 1942 Sampling and geol. report by Erie Canadian Mines Ltd.
1958-60 30,133 feet of d.d. in 75 holes by Andover Mining and Exploration Ltd.
1963-65 26,867 feet of d.d. in 46 holes plus minor further drilling for which records are not available by Crownbridge Copper Mines Ltd.
1966-67 250-ton per day mill constructed on property by Copper Concentrators Ltd., for custom milling of material from this and other, nearby, deposits. Copper Concentrators declared bankrupt 1967. Crownbridge sank 30-foot shaft.
1968 Property purchased by Cannon Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-450,-452,-518.
Northern Miner, 1965, May 27; 1966, Mar. 10, July 28; 1967, Nov. 16, Dec. 28.

North Summit Prospect

Main Metals: Cu.

Location: Township 168; N-central part of township; 1500 feet NE of
N end of Rockey Lake.

Geology: Chalcopyrite and pyrrhotite are reported to occur in
conglomerate, and to comprise 1 to 3% of the rock.

Economic Features: Assays of d.d. core from the first hole gave 0.22%
Cu over 2 feet; 1.07% Cu over 2 feet; 0.15% Cu over 2 feet; 0.07%
Cu over 6 feet; 1.85% Cu over 2.5 feet; and 2.40% Cu over 2 feet.
Assays for Au, Ag, Ni, gave nil in all cases (File SSM-747).
Results of further d.d. gave 1.37% Cu over 4.0 feet, at depths of
1105-1110 feet, and 2.04% Cu over 3 feet at depths of 1221-1224
feet (Northern Miner, 1968, March 7).

History: 1965 Trenching by North Summit Explorations Ltd.
1966 EM, MAG, SP, and geochem. surveys; 412.5 feet of d.d. in 1
hole by North Summit Explorations Ltd.
1967 1750 feet of d.d. in 2 holes by North Summit Explorations Ltd.

References: ODM, Sault Ste. Marie file SSM-747.
Northern Miner, 1968, Mar. 7.

Pathfinder Prospect

Main Metals: Cu.

Location: Township 168; NW 1/4 of township, 1/2 mile SE of Hwy. 546.
Reference: ODM map 2108.

Geology: A quartz-chalcopyrite vein strikes E and apparently dips N.
It has been traced for 1000 feet along strike, and has a maximum
exposed width of 27 feet.

Economic Features: Chip samples from vein assayed trace Cu, trace Au,
over 10 feet; 0.22% Cu, trace Au, over 10 feet; and 4.13% Cu,
0.01 oz./ton Au, over 3 feet. Assays from d.d. were generally less
than 0.70% Cu.

History: 1964-65 2282 feet of d.d. in 8 holes, MAG, geochemical, and IP
surveys, surface work by Pathfinder Copper Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-673.

TOWNSHIP 169

Canamiska Prospect

Main Metals: Cu.

Location: Township 169; 1 1/2 miles SE of S end of Endikai Lake.
Reference: ODM map 2108.

Geology: An E-striking, vertically-dipping fault zone cuts quartzite of the Lorrain Formation. Quartz-chalcopyrite-pyrite veins occur within the fault zone.

Economic Features: Mineralized zone traced by drilling for a length of about 2000 feet. Average of channel samples from trench was 0.8% Cu over a zone stated to be 9 feet 3 inches in width. Diamond-drilling results showed best assays to be: 2.51% Cu over 10.0 feet; 2.00% Cu over 5.0 feet; 1.40% Cu over 20 feet; 1.30% Cu over 2.5 feet; all others were less than 0.60% Cu.

History: 1965-66 Trenching; geochemical, MAG and EM surveys; 4748 feet of d.d. in 19 holes, by Canamiska Copper Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-634.

Endikai Lake Prospect

Main Metals: Cu.

Location: Township 169; W shore of Endikai Lake, 1/2 mile S of N end of lake.
Reference: ODM map 2108.

Geology: A stockwork of small quartz veins occur in an alteration zone at a diabase-quartzite contact. Veins carry chalcocite, chalcopyrite, and hematite.

Economic Features: Mineralized zone appears to strike E; the dip is unknown. It has been traced by drilling over an area of about 100 by 3000 feet. Assays from d.d. core and sludge samples were all less than 0.82% Cu; most were less than 0.50% Cu. All gave nil Au, Ag, and Ni.

History: 1952 726.5 feet of d.d. in 8 holes, geol. survey by Teck Exploration Co. Ltd.
1955 1947 feet of d.d. in 4 holes by W. Berry, M. Mitto, J. McDonald.

References: ODM, Sault Ste. Marie files SSM-454,-457.

White River Lead Prospect

Main Metals: Pb, Cu, Ag.

Location: Township 169; 2 1/2 miles E of the S end of Endikai Lake.
Reference: ODM map 2108.

Geology: Quartz veins in diabase; main vein was traced for a length of 500 feet on surface and is 3 to 6 feet wide. It is well mineralized with pyrrhotite, chalcopyrite and galena.

Economic Features: A shoot in an adit is 80 feet long, 7 feet wide and averages 7.6% Pb, 1% Cu and 2.3 oz./ton Ag (ODM 1957).

History: 1928-29 Surface work, adit 175 feet long, and 354 feet of crosscutting by Sudbury Basin Mines Ltd.

References: ODM, 1929, Vol. 38, pt. 7, p.15-19.
ODM, 1957, M.R.C. 2, p.83.

TOWNSHIP 175

Abbican Prospect

Main Metals: Cu.

Location: Township 175; central part, 2 1/2 and 3 miles E of W border of township.

Geology: Quartz-chalcopyrite veins, which strike E and dip steeply N occur in sediments of the Gowganda Formation.

Economic Features: Two main veins are exposed in three sections, referred to as the A, B, and C zones. The A zone has been traced for 1200 feet, the B zone for 800 feet, and the C zone for 300 feet. The A zone contains 105,750 tons, averaging 1.08% Cu, after dilution allowance, over a length of 600 feet, over a true width of 10 feet, and to a depth of 235 feet (ODM 1957).

History: 1935 Trenching by R.W. Montgomery.
1955-56 Trenching; bulk sampling; 5683.5 feet of d.d. in 25 holes, by Abbican Mines Ltd., Consolidated Orlac Mines Ltd., and Normingo Mines Ltd.
1966 1932.5 feet of d.d. in 11 holes; MAG, EM, SP, geol. and geochemical surveys, by Milgate Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.71.
ODM, Sault Ste. Marie files SSM-458,-459,-462,-819.

Ridgefield Prospect

Main Metals: Cu.

Location: Township 175; W-central part, 1 3/4 miles E of W border of township.

Geology: Quartz-carbonate-chalcopyrite stringers occur in sediments of the Gowganda Formation. Assays from d.d. core are: 1.02% Cu over 0.8 feet; 2.03% Cu over 1.0 feet; 0.05% Cu and 0.02 oz./ton Au over 2.0 feet.

History: 1955-56 Trenching; SP and geol. surveys; 3813 feet of d.d. in 11 holes, by Ridgefield Uranium Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-463.

Sheba Prospect

Main Metals: Cu.

Location: Township 175; E-central part, 1 1/2 miles W of E border of township.

Geology: A quartz-chalcopyrite vein cuts sediments of Gowganda Formation, and strikes N80W. The dip was not reported.

Economic Features: The vein was traced for a length of 1000 feet; the width ranges from less than 1 to 6 feet. Samples from trenches assayed 0.63%, 2.6%, 2.0% Cu, each over widths of 5 feet. The weighted average of d.d. sampling results is 0.59% Cu over an average width of 3.0 feet.

History: 1956-57 Trenching; geol. survey; 1718 feet of d.d. in 9 holes by Sheba Mines Ltd., and Cove Uranium Mines Ltd.
1958-59 Scintillometer survey; 1262 feet of d.d. in 1 hole by Sheba Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-460,-464.

TOWNSHIP 188

Bowles Prospect

Main Metals: Cu.

Location; Township 188; 400 feet N of Jobammageeshig Lake.
Reference: ODM map 2108.

Geology: Quartz-carbonate veins, carrying chalcopyrite, pyrite, and epidote, occur in diabase. The veins appear to strike easterly, and are generally flat-lying, although some dip vertically. They range in width from 1 to 30 inches, and have been exposed at intervals over a length of 150 feet. Copper content in the veins is less than 1%.

History: Pre-1965 Trenching.
1965 Trenching by R.H. Bowles.
1966 MAG and EM surveys by Mississagi Mining Co. Ltd.

References: ODM, Sault Ste. Marie file SSM-1185.

Frobel Lake Prospect

Main Metals: Cu.

Location: Township 188; NE 1/4, 400 feet W of Frobel Lake.
Reference: ODM map 2108.

Geology: Carbonate-chalcopyrite veins in a fault zone in diabase.

History: 1968 EM survey; 588 feet of d.d. in 1 hole, by F.H. Jowsey Ltd.

References: ODM, Sault Ste. Marie file SSM-1359.

Snowshoe Creek Prospect

Main Metals: Cu.

Location: Township 188; 1/4 mile W of Wakomata Lake.
Reference: ODM map 2108.

Geology: A shear zone in argillite strikes N55W and dips vertically.
The exposed width is 18 feet; length of the shear zone is unknown.
Malachite occurs in the sheared argillite.

Economic Features: One sample of d.d. core assayed 2.02% Cu, nil Au, nil Ag, over 9 feet. No copper mineralization was noted in either of two subsequent holes designed to test down-dip extension of this intersection.

History: Trenching: date unknown.
1956 546 feet of d.d. in 3 holes by Pluton Uranium Mines Ltd.
1966-67 MAG and EM surveys, and 1766 feet of d.d. in 5 holes, by Jubilant Creek Mines Ltd.

References: ODM, Sault Ste. Marie files SSM-466,-820.

ALGOMA DISTRICT

OCCURRENCES

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Aberdeen Tp.; S½ lot 4, con. II.	ODM map 2108. GSC map 32-1962.	Cu	Quartz-chalcopyrite vein traced over length of 50 ft. In 1965, 243 ft. of d.d. in 1 hole by J. Krummen.
Aweres Tp.; NE¼, sec. 32.	ODM map 2108.	Cu	Quartz-chalcopyrite vein; 2 small pits.
Aweres Tp.; NW¼, sec. 35.	ODM map 2108. A.C.R. map 41K 9 and 16.	Pb, Zn	
Aweres Tp.; SE¼, sec. 35.	ODM map 2108. ODM, 1926, Vol. 35, pt.2, p.46.	Cu	Quartz-chalcopyrite veins.
Aweres Tp.; NW¼, sec. 34.	ODM map 2108. GSC map 1181A.	Cu, Fe	
Cobden Tp.; N½ lot 12, con. XI.	ODM maps 2108, 2032.	Cu	
Cobden Tp.; N½ lot 11, con. II.	ODM maps 2108, 2028.	Cu	
Cobden Tp.; N½ lot 10, con. II.	ODM maps 2108, 2028.	Cu	
Cobden Tp.; N½, lot 6, con. I.	ODM maps 2108, 2028.	Cu	
Cobden Tp.; lot 5, con. III.	ODM map 2108.	Cu	Quartz-chalcopyrite-pyrite vein.
Deroche Tp.; lot 8, con. IV; on S shore of Goulais River, 3 mi. NE of Bellevue.	ODM map 2108. ODM, Sault Ste. Marie file SSM-911, H. Melvan.	Pb	Galena in oxidized shear zone in greywacke near contact with diabase. No dimensions nor assays available.
Derry Tp.; NW part of tp., ¼ mi. NW of outlet of Kabinakagami Lake.	ODM map P.476. ODM, 1929, Vol. 38, pt.6, p.124. ODM, 1968, M.P. 20, p.3.	Cu, Pb	A 12-inch (wide?) quartz vein containing chalcopyrite and galena in mafic metavolcanics.
Derry Tp.; E of NE corner of Kabinakagami Lake, S of Pine Portage.	ODM, 1929, Vol. 38, pt.6, p.124. ODM map P.476.	Cu	Small lenses of chalcopyrite occur in area underlain by undifferentiated felsic igneous and metamorphic rocks.
Doucett Tp.; on NE shore of Anaharea Lake.	ODM map P.476. ODM, 1968, M.P. 20, p.3-4.	Cu	Chalcopyrite, pyrite, and pyrrhotite occur in pieces of metavolcanic-metasedimentary float, found S of the belt of metavolcanics and metasediments which trends NE across N end of Anaharea Lake.
Duncan Tp.; sec. 2.	ODM map 2108. ODM, 1926, Vol. 35, pt.2, p.46.	Cu	Copper occurs on Ranson Creek.
Ermine Tp.; NW corner of tp., on N side of large island in Kabinakagami Lake.	ODM map P.476. ODM, 1929, Vol. 38, pt.6, p.124. ODM, 1968, M.P. 20, p.4.	Cu, Pb	A 4-inch (wide?) quartz vein containing chalcopyrite and galena occurs in mafic metavolcanics.
Esten Tp.; NW corner of tp., ½ mi. N of E end of Esten Lake.	ODM maps 2108 and P.130. ODM, Sault Ste. Marie file SSM-366.	Cu	Chalcopyrite and pyrite occur in diabase.
Galbraith Tp.; S½, lot 7, con. II, 1½ mi. SW of Dunns Valley.	ODM map 2108. GSC map 32-1962.	Cu	
Galbraith Tp.; S½, lot 8, con. II, 2 mi. SW of Dunns Valley.	ODM map 2108. GSC map 32-1962.	Cu	
Gaudette Tp.; S-central part of tp., 1½ mi. N of Searchmont (Gratton occurrence).	ODM map 2108; M.R.C. 7, p.9-10. ODM, Sault Ste. Marie file SSM-1123.	Cu, Mo	Quartz-carbonate vein with chalcopyrite and pyrite, strikes N20E, dips 65N, ranges in width from 4 in. to 6 ft., and length is unknown. Another quartz vein, 800 ft. to the NE, strikes N25W, dips 35N and carries minor chalcopyrite and molybdenite.
Gaudette Tp.; NW corner of tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-33.	Cu	Quartz-chalcopyrite vein, on the projected strike of the Kristina Mine. Vein is 2 ft. wide and traced for a length of 50 ft.
Gaudette Tp.; on N border, 1 mi. W of NE corner of tp., claim S.S.M.1172.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1330.	Cu	Quartz-chalcopyrite vein; trenching about 1913.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Gaudette Tp.; S-central part of tp., 1½ mi. NE of Searchmont.	ODM map 2108; M.R.C. 7, p.10. ODM, Sault Ste. Marie files SSM-32, SSM-35.	Mo, Cu	Primarily a molybdenite prospect. Sparse molybdenite, chalcopyrite, pyrite, and magnetite occur in pegmatitic patches in granitic rocks. Trenching and 849.8 ft. of d.d. in 8 holes by B.R. Idziak, in 1960-62.
Gladstone Tp.; N½, lot 10, con. IV, W side of Mississagi River.	ODM maps 2012, 2108. ODM, 1963, G.R. 17, p.48.	Cu	Small masses of pyrite and chalcopyrite occur in gabbro.
Gladstone Tp.; NW part of lot 7, con. I.	ODM maps 2012, 2108. ODM, 1963, G.R. 17, p.50.	Cu	Quartz-chalcopyrite vein, with calcite and pyrite, occurs in syenitic gabbro. Vein traced for length of 100 ft., ranges in width up to 8 in. Test pit sunk on vein.
Gladstone Tp.; S½, lot 12, con. IV, N shore of easternmost bay of Wakwekobi Lake.	ODM maps 2012, 2108. ODM, 1963, G.R. 17, p.48.	Cu	Trench exposes series of quartz-carbonate-chalcopyrite veins in granophyric gabbro. Vein system traced for over 100 ft.
Gladstone Tp.; N½, lot 11, con. II; S side Hwy. 17. 4.4 mi. W of Iron Bridge.	ODM maps 2012, 2108. ODM, 1962, G.R. 17, p.49-50.	Cu	Vein breccia zone cuts Gowanda conglomerate and quartzite. Zone strikes N75W, dips 90, is 70 ft. wide, length unknown. Vein material is quartz, siderite, calcite, chalcopyrite, and specularite. Test pit on vein.
Gladstone Tp.; lot 12, con. III, ½ mi. W of Hagen Lake.	ODM maps 2012, 2108. ODM, 1963, G.R. 17, p.49.	Cu	E-striking system of quartz veins cuts Gowanda sediments. Zone is exposed over a length of 600 ft., and has a width of 15 ft., more than half of which consists of quartz veins, up to 8 in. thick. Chalcopyrite, pyrite, and specularite occur in the zone. Test pit on zone.
Glasgow Tp.; near S shore of Loch Lomond.	ODM map P.402. ODM, Sault Ste. Marie file SSM-61.	Cu	Sparse chalcopyrite with pyrite, pyrrhotite, and quartz, occurs in mafic metavolcanics and metasediments. Zone strikes E, is up to 50 ft. wide and is exposed intermittently by trenches over a length of 2100 ft. Numerous samples assayed all contained trace Au. No data on copper content.
Gould Tp.; lot 12, con. III, near W border of Tp., near N shore of Tunnel Lake.	ODM map 2108. ORM, 1915, Vol. 24, pt.1, p.235.	Cu	Quartz vein carrying chalcopyrite, pyrite hematite, and limonite, cuts Gowanda arkose or quartzite, strikes E, dips 75S.
Gould Tp.; lot 12, con. VI, W border of tp., ½ mi. S of NW corner of tp.	ODM, map 2108. ODM, Sault Ste. Marie file SSM-934.	Cu	Quartz-chalcopyrite veins, less than 1 ft. thick, cut in drilling. In 1966 50 ft. of d.d. by U. Pellerin.
Hawkins Tp.; 2 mi. E of Langdon.	ODM map P.476. ODM, 1968, M.P. 20, p.7.	Au, Cu, Pb	Primarily a gold occurrence. Gold, pyrite, chalcopyrite and galena occur in quartz veins.
Hodgins Tp.; S½, lot 2, con. IV, E-central part of tp.	ODM map 2108. ODM, Sault Ste. Marie files SSM-116, SSM-1128.	Cu, Au	Quartz-pyrite-chalcopyrite vein occurs along the contact of a greenstone inclusion in granite. Vein strikes N45W, dips 50N, ranges in width from few in. to 6 ft., has been traced 15 ft. along strike. Grab sample assays ranged from 0.22% Cu to 4.08% Cu, and trace to 0.06 oz./ton Au.
Hodgins Tp.; lot 2, con. I, SE corner of tp.	ODM map 2108. A.C.R. map 41K 9 and 16.	Cu	
Hodgins Tp.; S½ lot 7, con. VI, N-central part of tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1210.	Pb, Zn, Cu	One showing consists of a quartz vein, carrying galena, sphalerite, and chalcopyrite, which cuts granite. The vein strikes N30W, dips 90, and is exposed for a length of 12 ft., and widths of 2 to 4 ft. A second showing, 100 ft. SE of first, consists of a quartz-galena-sphalerite vein which follows the contact between a diabase dike and granite. Vein strikes N45W, and is exposed for a length of 10 ft. and a width of 1 to 3 ft.
Home Tp.; near Montreal River, ¼ mi. W of A.C.R. crossing.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1355.	Cu	Diabase dikes cut granite. The footwall zone of one dike carries pyrite, chalcopyrite, pyrrhotite, and is radioactive.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Indian Reserve No. 14 (Garden River Indian Reserve) 1½ mi. W of Echo Lake, 1½ mi. SW of Trotter Lake.	ODM, Sault Ste. Marie file SSM-1209. GSC map 1181A.	Ni	A few small Ni occurrences are reported to be located on the W shore of the easternmost of 2 small lakes at this location.
Indian Reserve No. 14 (Garden River Indian Reserve) SE shore of Trotter Lake.	ODM map 2108. GSC maps 26-1961, 1181A. Hay, R.E., 1963, Unpub. Ph.D. thesis, McGill Univ., p.308.	Cu	Quartz vein a few in. wide carries chalcopyrite and bornite.
Indian Reserve No. 15D; Clark (Rankin) Mineral Location, Tarentorus Tp.	ODM, 1926, Vol. 35, pt. 2, p.46. ODM map 2108.	Cu	Quartz-chalcopyrite veins occur in greenstone inclusions in granite. Old pits, pre-1926.
Indian Reserve No. 62, Tp. 46.	See under Tp. 46.	Cu	
Jarvis Tp.; SE¼ of tp., on S shore Reserve Lake.	ODM map 2108. GSC map 1181A.	Cu	
Jarvis Tp.; central part, on W border of tp.	ODM map 2108. GSC map 1181A. ODM, Sault Ste. Marie file SSM-1208.	Ni	Gabbroic dikes reported to contain nickel.
Jarvis Tp.; central part, ½ mi. SW of Jarvis Lake, on N shore of Kaufman Lake.	ODM map 2108.	Pb, Zn	
Jarvis Tp.; NE part of tp., near N shore of Crooked Lakes.	ODM map 2108.	Cu	Known as the Patterson property.
McMahon Tp.; N¼, lot 6, con. II, ½ mi. E of S end of Stuart Lake.	GSC map 23-1959. ODM map 2108. OBM, 1915, Vol. 24, pt.1, p.239.	Co, Cu	Carbonate-quartz vein carries cobalt bloom, chalcopyrite and pyrite. Vein cuts Nipissing diabase, and was traced for a length of 125 ft. with a maximum width of 5 ft.
McMahon Tp.; S¼, lot 7, con. I, on W shore Patten Lake.	GSC map 23-1959. ODM map 2108.	Cu	Quartz-chalcopyrite vein in Nipissing diabase.
Meath Tp.; SW part of tp., ¼ mi. SW of Pinny Lake.	ODM map P.403.	Cu, Au, Zn	Sulphides and Au occur in quartz veins in intermediate to felsic metavolcanics.
Meath Tp.; NW shore of Easey Lake.	ODM map P.403.	Cu	Chalcopyrite in carbonate stringers.
Meath Tp.; SW¼, ½ mi. SE of Pinny Lake.	ODM map P.403. ODM, Sault Ste. Marie file SSM-790.	Cu, Au	Chalcopyrite, pyrite, and Au in quartz veins in felsic metavolcanics. Trenching; d.d. by McIntyre Porcupine Mines Ltd., 1947-48; trenching about 1961-62 by H.G. Exploration. Chip sample assayed 0.05 oz./ton Au, trace Ag, over 25 ft.; Cu was not reported (File SSM-790).
Meath Tp.; ¼ mi. S of Meath Lake.	ODM map P.403.	Cu, Zn	Sparse chalcopyrite, sphalerite, and pyrite, occur in quartz veins in felsic tuff.
Meath Tp.; on W side of small lake 1 mi. N of N-central shore of Easey Lake.	ODM map P.403. ODM, Sault Ste. Marie file SSM-790.	Cu	Minor chalcopyrite, with a trace Au over 4 ft., occurs in quartz veins within an area of metasediments.
Montgomery Tp.; ½ mi. N of E end of Copp Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1060.	Cu	Vertical drill hole encountered 4 ft. of quartz-carbonate vein material at a depth of 3566.5 ft. in Lower Mississagi quartzite. Upper contact at 40 ⁰ to core axis. Vein estimated to carry 3% chalcopyrite.
Montgomery Tp.; 500 ft. NE of Peake Lake.	ODM maps 2012, 2108. ODM, 1963, G.R. 17, p.48.	Cu	Quartz-chalcopyrite-pyrite veins occur in shear zone which strikes N35W in Gowanda sediments. Veins, up to 6 ft. wide, were traced for a length of 990 ft.
Montgomery Tp.; 1 mi. SW of Corbold Lake, on Cobden River.	ODM map 2108. ODM, Sault Ste. Marie files SSM-124, SSM-487.	Cu, Au	Chalcopyrite disseminated on bedding planes in Bruce limestone over a known area of 1000 by 1600 ft. Apparently best assay was 0.24% Cu (File SSM-124) Other samples contained less Cu, but included Au values up to 70¢/ton.
Montgomery Tp.; 1½ mi. SW of Corbold Lake, ¼ mi. E of Cobden River.	ODM map 2108. ODM, Sault Ste. Marie file SSM-487.	Cu	Chalcopyrite disseminated in Bruce limestone.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Otter Tp.; on E border of tp., 1¼ mi. SE of Burden Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1309.	Cu	Chalcopyrite in narrow veinlets which cut diabase and granite. Several pits in 1968.
Otter Tp.; near W border of tp., 2½ mi. N of S border.	ODM map 2108. GSC, 1925, Mem. 143, p.128-9.	Cu	Chalcopyrite and pyrite occur in vein 3 ft. wide.
Otter Tp.; on E border of tp., ½ mi. E of Burden Lake.	ODM map 2108. ODM, 1913, Vol. 19, pt. 2, p.196.	Cu	Quartz-carbonate-chalcopyrite-pyrite vein, up to 12 ft. wide and striking N65W, cuts diabase.
Otter Tp.; SE end of Burden Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-810.	Co,Ni,Bi,Cu	Quartz-carbonate veins in diabase strike N70W and dip 65N to 90. Veins carry cobaltite, niccolite, native bismuth, and chalcopyrite. One vein was traced for a length of 370 ft., with widths of 1 to 2.5 ft.; a second vein is 3 to 5 ft. wide. Several pits about 1913-1942.
Palmer Tp.; W-central part of tp., 2 mi. NW of Carp Lake.	ODM map 2108. ODM, Sault Ste. Marie files SSM-146, SSM-1023.	Au,Co,Cu,Ag	Primarily a gold prospect. Minor chalcopyrite occurs with cobaltite and gold, in carbonate veins in shear zones which cut mafic metavolcanics. Most veins strike N65-70W, dip 70S-90. Main zone is 250 ft. long; average width is 3.5 ft. Some early pits; 139.6 ft. of d.d. in 2 holes by Conwest Exploration Co. Ltd. in 1952; 2365.8 ft. of d.d. in 11 holes by Glenrock Gold Mines Ltd. in 1953.
Palmer Tp.; NW¼ of tp.	ODM map 2108.	Cu	Thin seams of pyrite and chalcopyrite along schistosity surfaces in mafic metavolcanics. Seams are generally less than 1/50 in. across, and scattered erratically. To date, no significant concentration of such seams is known.
Patton Tp.; ½ mi. E of NW corner of tp., N½, lot 11, con. VI.	ODM maps 2108, 2012. ODM, Sault Ste. Marie file SSM-487.	Cu	Chalcopyrite disseminated in Bruce limestone.
Patton Tp.; ½ mi. E of Alma Lake, in lot 6 or 7, con. IV.	ODM maps 2108, 2012. ODM, 1963, G.R. 17, p.60.	Cu	Quartz-chalcopyrite veins in gabbro.
Patton Tp.; SE¼ of Sec. 28, 2 mi. SE of Patton.	ODM maps 2108, 2012. ODM, 1963, G.R. 17, p.60.	Cu	Quartz-chalcopyrite veins, with pyrite and specularite, occur over a width of 12 ft. in Gowganda sediments and strike N85W to W. Old trench.
Patton Tp.; NE¼ of Sec. 29, ¾ mi. SE of Patton.	ODM maps 2108, 2012. ODM, 1963, G.R. 17, p.59.	Cu	Quartz-chalcopyrite veins, strike E, dip 75N-90. One vein traced for 300 ft., with widths of 3-6 ft.; second vein traced for 100 ft., widths of 6-20 ft. Old shaft 27 ft. deep.
Patton Tp.; NW¼ of Sec. 28, 1½ mi. SE of Patton.	ODM maps 2108, 2012. ODM, 1963, G.R. 17, p.59-60.	Cu	Quartz-chalcopyrite veins, 4-10 ft. wide, cut Gowganda sediments, strike N80-85W, dip 90. Old pits.
Pearkes Tp.; near S side of C.P.R. track ¾ mi. W of Williams.	A.C.R. map 42C 1 & 8. ODM, Sault Ste. Marie, file SSM-785.	Cu	Small occurrence of chalcopyrite in chilled edge of diabase dike.
Plummer Tp.; NE edge of lot 12, con. II, 1/8 mi. N of Caribou Lake.	ODM map 2108. ODM, Sault Ste. Marie, file SSM-1237.	Cu	Sparse chalcopyrite occurs in carbonate-quartz veins in diabase. Total width of veins about 10 in. Veins strike N20E. Old shaft about 40 ft. deep, several old pits.
Prince Tp.; NE¼ of Sec. 31, ½ mi. NE of Gros Cap.	ODM map 2108. ODM, 1922, Vol. 31, pt.10, p.28.	Cu	Quartz-chalcopyrite vein strikes NE, dips 90. Pits by Gros Cap Mining and Exploration Co., Ltd., about 1920. Very sparse chalcopyrite.
Proctor Tp.; 500 ft. SW of Hwy. 108, 1½ mi. SE of NW corner of tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1152.	Cu	Sparse chalcopyrite in Archeon metavolcanics and metasediments. Best assay from core samples was 0.02% Cu over 5 ft. EM survey; 1208 ft. of d.d. in 2 holes, in 1967, by Kerr-McGee Corp.
Quebec and Lake Superior Mining Association McDonell Location: 7000 ft. SW of NE corner of Location, 1700 ft. S of N border of Location.	ODM maps 2108 and Ryan Tp. claim map. ODM, Sault Ste. Marie file SSM-1371.	Cu	Sparse chalcocite in quartz vein. Stripping and trenching.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Quebec and Lake Superior Mining Association McDonell Location: 8000 ft. SW of NE corner of Location, 3500 ft. S of N border of Location.	ODM maps 2108 and Ryan Ap. claim map. ODM, Sault Ste. Marie file SSM-1371. Resident Geologist's field notes.	Cu	Known as Trout Lake showing. Irregularly shaped area of breccia, about 800 ft. long N-S, average width of 300 ft., consists of silicified angular rock fragments in a matrix of quartz and sparse chalcocite. Some trenching; 205 ft. of d.d. in 1 hole by Coppercorp, Ltd., 1962. Core samples assayed 0.37% Cu over 1.5 ft., and 0.30% Cu over 2.0 ft.
Quebec and Lake Superior Mining Association McDonell Location: 1½ mi. NE of Maminse Point, Lake Superior.	ODM maps 2108 and 1953-1. ODM, 1953, Vol. 62, pt. 4, p.22.	Cu	NE-striking fissure-filling veins. Lutz vein 500 ft. long; L-zone 300 ft. long. Some drilling.
Rankin Location; Kincaid Tp. and Tp. 29, R. 14. On Lake Superior coast, SE corner of small bay 1000 ft. N of SW corner of Location.	ODM map 2108.	Cu	Quartz vein, about 1 in. wide, with sparse chalcocite, cuts migmatite. Vein strikes E, dips 90. Old pit.
Rankin Location; Kincaid Tp. and Tp. 29, R. 14. On W shore of Pointe aux Mines.	ODM map 2108. ODM, Sault Ste. Marie file SSM-290.	Pb, Zn, Cu	Carbonate vein carrying galena, minor sphalerite and chalcopyrite, occurs at contact of diabase dike and granite. Traced for length of 300 ft., average width is 6 in.
Rose Tp.; S½, Sec. 11, NE part of tp. (King Edward Occurrence).	ODM map 2108. ODM, 1915, Vol. 24, pt. 1, p.237.	Cu	Quartz-chalcopyrite vein strikes E, dip not recorded, cuts diabase. Vein about 10 ft. wide. Shaft about 50 ft. deep.
Ryan Tp.; NE¼ of tp.	ODM map 2108.	Cu	Thin seams of pyrite and chalcopyrite commonly occur on schistosity surfaces in the mafic metavolcanics. Seams are generally less than 1/50 in. across and scattered erratically. To date no significant concentration of such seams is known.
Ryan Tp.; 1½ mi. NW of NW end of Maminse Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1167.	Cu	Chalcopyrite occurs in Archean metavolcanics. Trenching.
Ryan Tp.; on W shore of Maminse Lake, 300 ft. S of NW corner of lake.	ODM map 2108. ODM, 1926, Vol. 35, pt. 2, p.60.	Cu	Narrow fractures in Archean mafic metavolcanics carry chalcopyrite, magnetite, quartz, and carbonate. Old pit, pre-1925 by D.J. Ranson. Chalcopyrite also reported in mafic metavolcanics on small peninsula on W side of lake 800 ft. S of pit.
St. Julien Tp.; NE corner of tp.	A.C.R. geological map "Part Sheets" occurrence #11.	Cu	Copper mineralization found at contact of granite and diabase dike.
Shedden Tp.; N shore of Shedden Lake.	ODM map 2108. ODM, 1969, Open File Rept. 5026, p.107.	Cu	Quartz-chalcopyrite veins.
Shields Tp.; 1 mi. N and 1½ mi. W of SE corner of tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1123.	Cu	Quartz-chalcopyrite veinlet in granite, ½ in. wide, a few feet long.
Shields Tp.; Wolfe Lake.	ODM map 2108.	Cu	See under Tupper Tp.; Wolfe Lake Prospect.
Simpson Tp.; 0.2 mi. N of S border, 0.5 mi. W of Wabatonigushi Lake.	ODM, Sault Ste. Marie file SSM-1102.	Cu	Minor chalcopyrite occurs in chilled margin of diabase dike. Grab sample assayed 0.03% Cu, nil Au.
Striker Tp.; S½, lot 2, con. II, on N shore of Lauzon Bay, Lauzon Lake.	ODM maps 2108, 2028.	Cu	Quartz vein carries copper mineralization. Old pit.
Striker Tp.; NE¼ of S½ lot 12, con. I, 1¼ mi. NE of Blind River.	ODM maps 2108, 2028. ODM, Sault Ste. Marie file SSM-1153.	Cu	Quartz-chalcopyrite veins cut Nipissing diabase over an area 1000 ft. by 75 ft., individual veins up to 3 ft. wide.
Tarbutt Tp.; N½, lot 4, con. II, 4¼ mi. NW of Desbarats.	ODM map 2108. ODM, 1922, Vol. 31, pt. 10, p.28.	Cu	Carbonate-chalcopyrite vein in diabase. Pit 12 ft. deep about 1921.
Tarbutt Tp.; S½, lot 2, con. III, 3½ mi. NW of Desbarats.	ODM map 2108. ODM, Sault Ste. Marie file SSM-5. GSC map 32-1962.	Cu, Co	Cobalt and copper mineralization occur in diabase. 5 short d.d. holes pre-1956; best intersection assayed 1.1% cobalt over 8.3 ft. of core length (File SSM-5).

Location	References	Metals	Remarks
Tarbutt Tp.; E-central part of lot 1, con. I, 2 mi. NW of Desbarats.	ODM map 2108.	Cu	Quartz-carbonate-chalcopyrite veins in E-striking fault zone. Old pit.
Tarbutt Additional Tp.; N½, lot 1, con. VI.	ODM map 2108. ODM, Sault Ste. Marie file SSM-3.	Cu	See under Tarbutt Tp., Desbarats Prospect.
Thompson Tp.; NW corner of tp.	ODM map 2108. ODM, 1963, G.R. 17, p.62.	Cu	Quartz-chalcopyrite veins; 3 occurrences are known. Old pits on 2 of the occurrences. At one occurrence, 2 veins, 1½-2 ft. wide, strike N80E.
Tupper Tp.; ½ mi. NE of Bone Lake.	ODM map 2108. ODM, 1926, Vol. 35, pt. 2, p. 46-47.	Cu	Silicified shear zone in mafic metavolcanic inclusion in granite. Zone is 10 ft. wide and carries chalcopyrite, bornite, pyrite over a width of 4 ft. Trenching about 1920.
Vankoughnet Tp.; E½ of NW¼ of Sec. 1; ½ mi. NE of Robertson Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-25.	Cu, Ag	Chip sample from vein assayed 2.30% Cu, 1.54 oz./ton Ag, 0.03 oz./ton Au over a width of 40 in.
Vankoughnet Tp.; SW¼ of Sec. 14; 1 mi. SE of Robertson Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1134.	Cu, Pb	Quartz-chalcopyrite vein strikes NW, dips 85N, and is about 7 ft. wide. Galena occurs in a parallel vein 150 ft. to the S. Shaft 70 ft. deep with 70 ft. of lateral work about 1902.
Vankoughnet Tp.; Secs. 10, 11, 12; SE side of Robertson Lake.	ODM map 2108. ODM, Sault Ste. Marie files SSM-23, SSM-964.	Cu	Copper mineralization near diabase-metavolcanic contact (File SSM-23). In 1966 345 ft. of d.d. in 2 holes by R. Dyck. No copper mineralization reported.
Vankoughnet Tp.; NW¼ of Sec. 36; 1½ mi. NW of Bellevue.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1124.	Pb, Zn, Ag	Shear zone strikes NW, dips steeply N, carries galena and sphalerite across 12 in. Two samples assayed 0.44% Pb, 4.25% Zn, 0.74 oz./ton Ag; and 9.18% Pb, 8.89% Zn, 3.72 oz./ton Ag (File SSM-1124). Geochemical survey and trenching by H.E. Feldstein, 1966.
Vankoughnet Tp.; NE¼ of Sec. 36; 1½ mi. N of Bellevue.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1124.	Cu	Quartz-chalcopyrite veins, up to 6 in. wide, strike N60W, dip 60N. Geochemical survey and trenching by H.E. Feldstein, 1966.
Victoria Tp.; SW¼ of Sec. 14; 1000 ft. N of N-central shore of Sugar Lake.	ODM maps P.377 and 2108.	Cu	Quartz-chalcopyrite vein.
Victoria Tp.; Sec. 15; N of W end of Sugar Lake.	ODM map 2108. GSC, 1925, Mem. 143, P.130.	Cu	Quartz-chalcopyrite vein.
Victoria Tp.; SE¼ of Sec. 16; ½ mi. SE of Tube Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-724.	Cu	Shear zone in quartzite carries sparse chalcopyrite over a length of 50 ft., and width of 3 ft.
Victoria Tp.; Sec. 17; on N shore of Tube Lake.	ODM maps P.377 and 2108.	Cu	Chalcopyrite and pyrite occur in diabase. Old pit.
Victoria Tp.; SE¼ of Sec. 19; ½ mi. S of Denvic Lake.	ODM maps P.377 and 2108.	Cu	Chalcopyrite and pyrite occurrence. Old pits.
Victoria Tp.; SW¼ of Sec. 24; 2 mi. NE of Walford Station.	ODM maps P.377 and 2108.	Cu	Chalcopyrite occurrence.
Victoria Tp.; NE¼ of Sec. 26; 1½ mi. NE of Walford Station.	ODM maps P.377 and 2108.	Zn	Quartz-sphalerite vein in epidiorite. Old pit.
Victoria Tp.; SE¼ of Sec. 36; 2 mi. SE of Walford Station.	ODM maps P.377 and 2108.	Cu	Chalcopyrite occurrence. Old pit.
Walls Tp.; 1½ mi. SW of Neswabin Station, on Culbert Creek.	ODM map 2116. ODM, Sault Ste. Marie file SSM-197.	Au, Cu, Pb	Primarily a gold prospect. Chalcopyrite, galena, pyrite and pyrrhotite occur in quartz veins in hornblende schist. 1501 ft. of d.d. in 13 holes by Erie Canadian Mines Ltd., 1934.
Wells Tp.; NW part of N½ lot 1, con. III, 3½ mi. SE of Wharnccliffe.	ODM map 2108. ODM, Sault Ste. Marie files SSM-200, SSM-651.	Au, Cu	Primarily a gold prospect. Quartz-chalcopyrite veins in diabase; sparse chalcopyrite. Best assay was 0.02 oz./ton Au (File SSM-200). 144.5 ft. of d.d. in 4 holes by Denison Mines Ltd., 1964.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Whitman Tp.; E side Paquette Lake, E-central part of tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1144.	Zn	Sphalerite occurrence. Trenching by R.H. Byrne, 1966-68.
Township U; S shore of Rawhide Lake.	ODM map 2108. ODM, 1968, M.R.C. 9, p.12-13. ODM, Sault Ste. Marie file SSM-202.	U, Cu	Primarily a uranium prospect. Chalcopyrite, specularite, uranium mineralization occur in granophyric phase of diabase sill. Pits; 3553 ft. of d.d. in 5 holes by Belfast Mines, Ltd., 1955.
Tp. 3B; central part of tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-218.	Cu	Narrow quartz-carbonate vein, striking N5W in granite, mineralized with minor chalcopyrite and bornite.
Tp. 3G, NE $\frac{1}{4}$, 1 $\frac{1}{2}$ mi. NW of Penelope Lake.	ODM map 2108. ODM, 1928, Vol. 37, pt. 3, map facing p.54, 61.	Cu	Disseminated pyrrhotite and chalcopyrite occur at contact of diabase dike cutting granite.
Tp. 6E; 2 mi. S, 1 $\frac{1}{2}$ mi. E of NW corner of tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-772.	Cu, Ag	Quartz vein in diabase dike. Vein is 10 ft. wide, has been traced over strike length of several hundred feet, and contains chalcocite, bornite, and calcite. Assays contain up to 3% Cu and 1.5 oz./ton Ag (File SSM-772).
Tp. 10D; SW corner of tp. near Hwy. 129.	ODM map 2108. ODM, 1950, P.R. 1950-6.	Zn	NE-striking greywacke is cut by quartz veins carrying minor pyrite, pyrrhotite, and sphalerite. Minor stripping and trenching.
Tp. 24, R. 15, NE $\frac{1}{4}$, along Batchawana River.	ODM map 2108. A.C.R. map 41N, 1 and 8.	Cu	Chalcopyrite in quartz veinlets.
Tp. 24, R. 15; SE $\frac{1}{4}$ of tp. on Quinn River.	ODM, Sault Ste. Marie file SSM-1005.	Cu, Ag	Sulphides reported in metasediments. Assays to 0.48% Cu and 0.31 oz./ton Ag (File SSM-1005).
Tp. 25, R. 15; Doyle Lake Area.	ODM map 2108. ODM, Sault Ste. Marie files SSM-804, -1011, -638, -668.	Cu	Minor pyrrhotite, pyrite and chalcopyrite in quartz veinlets in felsic volcanics and metasediments.
Tp. 25, R. 18; S end of McKean Lake.	A.C.R. map 41N, 9 and 16.	Cu, Mo	Cu-Mo associated with diabase dikes and granites.
Tp. 25, R. 21; SW $\frac{1}{4}$ of tp., 2 $\frac{1}{2}$ mi. SW of Dave Lake.	ODM, Sault Ste. Marie file SSM-863. A.C.R. map 41N, 9 and 16.	Cu, Mo	Minor pyrite, molybdenite and chalcopyrite occur in NE-striking, 4-ft. wide shear zone in greenstone.
Tp. 25, R. 26; Emily Bay Area.	ODM, Sault Ste. Marie file SSM-822. A.C.R. map 42C, 1 and 8.	Cu	Quartz veins to 4 inches in width carrying a few blebs of chalcopyrite and disseminated pyrite occur along the Emily Bay lineation in mafic metavolcanics.
Tp. 26, R. 13; NE Quintet Lakes Area.	ODM, maps 2108, 35b. ODM, Sault Ste. Marie file SSM-517. ODM, 1926, Vol. 35, pt. 2, p.85.	Cu	Chalcopyrite and pyrite in quartz vein cutting metasediments.
Tp. 26, R. 14; 1 $\frac{1}{2}$ mi. E of Patterson Lake.	ODM map 2108. A.C.R. map 41N, 1 and 8.	Cu	Chalcopyrite in felsic metavolcanics.
Tp. 26, R. 14; extreme SW corner of tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-805.	Cu	Mineralization occurs within fine-grained grey schist as small pyrite lenses. Assays from 1 d.d. hole (401 ft.) by Algoma Central Railway gave 0.04% Cu and trace Ni. Geophysical survey by Algoma Central Railway, in 1962.
Tp. 26, R. 23; 0.1 mi. N and 0.3 mi. E of SW corner of tp.	ODM, Sault Ste. Marie file SSM-857. A.C.R. map 41N, 9 and 16.	Cu	Small inclusion of greenstone in granite contains minor copper mineralization.
Tp. 26, R. 25; E boundary of tp., SE of Dingman Lake.	ODM, Sault Ste. Marie file SSM-829. A.C.R. map 42C, 1 and 8.	Cu	Float; chalcopyrite in diorite.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Tp. 26, R. 25; N shore of Manitowik Lake.	ODM, Sault Ste. Marie file SSM-829. A.C.R. map 42C, 1 and 8.	Cu	Four occurrences of chalcopyrite: 2 in narrow shear zones in mafic metavolcanics; 1 in mafic inclusions in granite; 1 in a granite dike.
Tp. 26, R. 25; 0.3 mi. E of W border of tp., 1.0 mi. N of Manitowik Lake.	ODM, Sault Ste. Marie file SSM-1253. A.C.R. map 42C, 1 and 8.	Cu	Minor chalcopyrite, disseminated through quartz stringers in a NE-striking band of carbonate rock in mafic metavolcanics.
Tp. 27, R. 13; E bank of Batchawana River, 2½ mi. S of N border of tp.	ODM maps 2108, P.359. ODM, Sault Ste. Marie file SSM-242.	Pb, Zn, Ag	Two quartz veins, each about 2 ft. wide, occur in sheared mafic metavolcanics, strike N85E, dip 85S. A grab sample of the best-mineralized material assayed 3.79% Zn, 2.06% Pb, trace Cu, 0.01 oz./ton Au, and 0.60 oz./ton Ag. Trenching in 1955 by Matinenda Uranium Mines Ltd.
Tp. 27, R. 13; ½ mi. NW of N end of Dick Lake.	ODM maps 2108, P.359. A.C.R. map 41N, 1 and 8.	Cu	Quartz-chalcopyrite vein.
Tp. 27, R. 26; 2.6 mi. N, 2.9 mi. E of SW corner of tp., on E shore of small pond.	ODM map 49g. ODM, Sault Ste. Marie file SSM-1072.	Cu	Chalcopyrite and pyrite occur in silicified felsic metavolcanics over an area 80 ft. by 10 ft. Trenching. Grab sample assayed 0.59% Cu; chip sample assayed 0.39% Cu over 10 ft.
Tp. 27, R. 26; ½ mi. S of W bay on Garbe Lake.	ODM map 49g. ODM, Sault Ste. Marie file SSM-817. A.C.R. map 42C, 2 and 7.	Cu	Minor chalcopyrite and pyrite irregularly distributed throughout a silicified breccia zone in mafic metavolcanics. Zone strikes N40W, dips 70W.
Tp. 27, R. 26; 1 mi. SW of Morrison Lake.	ODM map 49g. A.C.R. map 42C, 1 and 8.	Pb, Zn	
Tp. 28, R. 13; 1½ mi. S of Tribag Mine, N shore of island in Wiley Lake.	ODM maps P.361 and 2108.	Cu	Chalcopyrite occurs in breccia, similar to that of the Tribag Mine, in pieces of float on shore of island. Similar breccia float, but without chalcopyrite, occurs on S shore of lake. Drill hole from S shore of lake drilled beneath float, encountered mafic metavolcanics.
Tp. 28, R. 14; 2 mi. NE of Huff Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-256.	Cu	Minor pyrite and chalcopyrite reported near contact of diabase and granite.
Tp. 28, R. 23; NW corner of tp.	ODM map P.184. ODM, Sault Ste. Marie file SSM-270.	Pb	Galena occurs in calcite vein.
Tp. 28, R. 24; 500 ft. E of S end of Elbow Lake.	ODM map P.184. ODM, Sault Ste. Marie file SSM-274.	Cu, Zn, Ag	Shear zone, 3 ft. wide, strikes N, dips 70°W, along mafic metavolcanic-quartz porphyry contact. Chalcopyrite, sphalerite, pyrrhotite occur in shear zone and quartz porphyry. Sample from shear zone assayed trace Ni; 2.00% Cu; 4.08% Zn; 0.05 oz./ton Au; 2.80 oz./ton Ag, over 3 ft.
Tp. 29, R. 20, 1¼ mi. N and 1¼ mi. E of the SW corner of the tp.	ODM, Sault Ste. Marie file SSM-691. A.C.R. map 41N, 10 and 15.	Cu	Sulphides occur on a small reef 6 in. underwater in Mijinemingshing Lake. Assays gave 0.22% Cu.
Tp. 29, R. 22; NW¼ E shore of Oakley Lake.	ODM, Sault Ste. Marie file SSM-799. A.C.R. map 41N, 10 and 15.	Cu	Mineralized zone, 50 ft. wide and striking N, consists of pyrite, pyrrhotite, trace chalcopyrite and bornite. In 1963 MAG, EM, and geol. surveys by Algoma Central Railway.
Tp. 29, R. 23; Deep Lake Mine.	ODM map P.184. ODM, Sault Ste. Marie file SSM-744.	Cu, Au	A past producer of gold, and primarily a gold prospect. Quartz veins carry minor chalcopyrite, galena, sphalerite, pyrite, and pyrrhotite.
Tp. 29, R. 23; ½ mi. W of Lyre Lake.	A.C.R. map 41N, 10 and 15.	Cu	
Tp. 29, R. 24; 1 1/3 mi. N of NE end of Wawa Lake.	ODM map P.184. ODM, Sault Ste. Marie file SSM-982.	Pb, Zn, Ag	460 ft. of d.d. in 3 holes and trenching by Dome Mines Ltd., in 1928, revealed a 3-ft. wide vein with values in Pb, Zn, and Ag.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Tp. 29, R. 24; N shore of Ariss Lake.	A.C.R. map 42C, 2 and 7.	Cu	Disseminated chalcopyrite associated with diabase and sediments.
Tp. 29, R. 26; 1½ mi. E of Maggie Mine.	ODM Sault Ste. Marie file SSM-319. A.C.R. map 42C, 2 and 7.	Pb,Zn,Cu,Au,Ag	Primarily a gold prospect. Two separate zones consisting of carbonatized shears mineralized with chalcopyrite, galena, sphalerite, native copper and gold.
Tp. 29, R. 27; 0.8 mi. N of NW corner of Davies Lake.	ODM, Sault Ste. Marie file SSM-783. A.C.R. map 42C, 2 and 7.	Cu	Chalcopyrite with bornite and malachite occurs disseminated in a streak 8 in. wide and 5 ft. long in foliated granite. A grab sample assayed 2.40% Cu.
Tp. 30, R. 17.	ODM map 2108. A.C.R. map 41N, 2 and 7.	Cu	Grab sample assayed 0.42% Cu.
Tp. 30, R. 18; SE corner of tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-320.	Cu, Zn	A 4-ft. wide, E-striking mineralized zone in granite contains chalcopyrite. Samples by Sylvanite Gold Mines Ltd. in 1956, assayed 1.98% Cu; 0.49% Cu over 52 in.; and 0.88% Cu over 30 in.
Tp. 30, R. 20; on S border of tp.; 3500 ft. E of Hwy. 17.	ODM maps 2138, 2139. ODM, Sault Ste. Marie file SSM-C-5.	Cu	Quartz-chalcopyrite vein occurs in an E-striking fault zone in mafic metavolcanics and dips 70-75N. Vein was traced by pits and outcrops for length of 700 ft.; width ranges from 6 to 12 ft. Grab samples of vein material assayed 2.64%, 0.38%, 0.10%, 0.06% Cu; all assayed nil to trace Au.
Tp. 30, R. 22; on E boundary, on the N side of Michipicoten River.	ODM, Sault Ste. Marie files SSM-326, SSM-333, SSM-743. A.C.R. map 41N, 10 and 15.	Au, Cu	Primarily a gold prospect. A 3-ft. wide vein in a shear zone contains pyrrhotite, pyrite, chalcopyrite and free gold.
Tp. 30, R. 22; NE corner of the tp.	ODM, Sault Ste. Marie file SSM-502. A.C.R. map 41N, 10 and 15.	Au, Cu, Pb	Primarily a gold prospect. 3011.1 ft. of d.d. in 18 holes by Candore Explorations Ltd. in 1963 revealed chalcopyrite, pyrite, pyrrhotite, arsenopyrite and galena in granite, greywacke and graphitic slate.
Tp. 30, R. 22; NE¼, between Michipicoten River and Nezwa Lake.	ODM, Sault Ste. Marie file SSM-502. A.C.R. map 41N, 10 and 15.	Au, Cu, Pb	Primarily a gold prospect. 604 ft. of d.d. in 9 holes by Candore Explorations Ltd. in 1963 revealed quartz veins mineralized with chalcopyrite, pyrite, and galena in granite.
Tp. 30, R. 22; NE¼, ¾ of a mi. SW of N 2 mi. post on the N boundary.	ODM, Sault Ste. Marie file SSM-1354. A.C.R. map 41N, 10 and 15.	Zn, Cu	1033 ft. of d.d. in 4 holes by P. McLean, 1968, revealed chalcopyrite, pyrite, pyrrhotite and sphalerite mineralization associated with quartz veining in sheared sediments.
Tp. 30, R. 22; NW¼, Roller Lake area.	ODM, Sault Ste. Marie file SSM-329. A.C.R. map 41N, 10 and 15.	Au, Cu, Pb	Primarily a gold prospect. 2361.9 ft. of d.d. in 8 holes by W.D. Sutherland, 1961, revealed sheared chlorite schist, fractured quartz, and carbonate zones mineralized with chalcopyrite, pyrite, pyrrhotite and galena.
Tp. 30, R. 22; NW¼, E shore of Lake Superior.	ODM, Sault Ste. Marie file SSM-330. A.C.R. map 41N, 10 and 15.	Au,Cu,Pb,Zn	Primarily a gold prospect. Quartz veins mineralized with free gold, minor chalcopyrite, pyrite, galena and sphalerite, occur associated with granite porphyries and greenstone.
Tp. 30, R. 22; NE¼, ½ mi. SW of the 2 mi. post on the N boundary.	ODM, Sault Ste. Marie file SSM-332. A.C.R. map 41N, 10 and 15.	Cu	237 ft. of d.d. in 2 holes by W.D. Sutherland, 1962, revealed pyrrhotite, pyrite and chalcopyrite in greenstone.
Tp. 30, R. 23; 4 mi. SW of Wawa.	ODM, Sault Ste. Marie file SSM-337. A.C.R. map 41N, 10 and 15.	Au, Pb	Primarily a gold prospect. E-striking quartz vein is mineralized with pyrite and galena.
Tp. 30, R. 23; SE corner of tp.	ODM, Sault Marie file SSM-328. A.C.R. map 41N, 10 and 15.	Au, Cu, Pb	Primarily a gold prospect. Quartz veins with chalcopyrite, pyrite, pyrrhotite and galena. Assays of 0.05% Cu reported.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Tp. 31, R. 19; 1 mi. SE of Miron Lake.	ODM map 2138.	Cu	
Tp. 31, R. 19; Ryan Mineral Location, S side of Cape Gargantua.	ODM map 2138.	Cu	
Tp. 31, R. 23; 1½ mi. W of the Indian Reserve, ¼ mi. N of Lake Huron.	ODM, Sault Ste. Marie file SSM-846. A.C.R. map 41N, 10 and 15.	Cu	Chalcopyrite occurs in a 1/8 in. wide veinlet in felsic schists.
Tp. 31, R. 26; 1000 ft. S of NE end of Sage Lake, 1 mi. N of Bock Lake.	ODM, Sault Ste. Marie file SSM-887. A.C.R. map 42C, 3 and 6.	Cu	Quartz fissure veins in gabbro and greenstone are mineralized with pyrite and chalcopyrite.
Tp. 31, R. 26; 1 mi. W of Deacon Lake.	A.C.R. map 42C, 2 and 7.	Cu	Chalcopyrite in iron formation.
Tp. 32, R. 26; ¼ mi. N of N end Crayfish Lake.	A.C.R. map 42C, 3 and 6.	Cu	Quartz veins with chalcopyrite and pyrite.
Tp. 32, R. 26; 500 ft. S of E part of Paint Lake.	ODM, Sault Ste. Marie file SSM-887. A.C.R. map 42C, 3 and 6.	Cu	Quartz fissure veins in gabbro and greenstone are mineralized with pyrite and chalcopyrite.
Tp. 32, R. 26; ¼ mi. S of narrows on Lac a la Plonge.	ODM, Sault Ste. Marie file SSM-887. A.C.R. map 42C, 3 and 6.	Cu	Quartz fissure veins in gabbro are mineralized with pyrite and chalcopyrite.
Tp. 32, R. 26; N of Jimmy Kash Lake and S of Lac a la Plonge.	ODM, Sault Ste. Marie file SSM-887. A.C.R. map 42C, 3 and 6.	Cu	Quartz fissure vein in diorite is mineralized with pyrite and chalcopyrite.
Tp. 32, R. 26; NW of NE end of Crayfish Lake.	ODM, Sault Ste. Marie file SSM-887. A.C.R. map 42C, 3 and 6.	Cu	Narrow quartz veins in diabase are mineralized with chalcopyrite and pyrite.
Tp. 33, R. 26, 1000 ft. N of NW bay on Iron Lake.	ODM, Sault Ste. Marie file SSM-887. A.C.R. map 42C, 3 and 6.	Cu	Silicified zones along contact of greenstone and gabbro are mineralized with pyrite and chalcopyrite.
Tp. 33, R. 26; NE corner, 0.4 mi. and 0.7 mi. SW of Wilder Lake.	A.C.R. map 42C, 3 and 6.	Cu	Traces of chalcopyrite in diorite.
Tp. 33, R. 27; on S border, 1 mi. W of Wilder Lake.	A.C.R. map 42C, 3 and 6.	Cu	Trace of chalcopyrite in diorite.
Tp. 33, R. 27; on S border, 300 to 1100 ft. W of Wilder Lake.	ODM, Sault Ste. Marie file SSM-765. A.C.R. map 42C, 3 and 6.	Cu, Zn	Quartz vein, 8 ft. wide carries sparse pyrite and malachite. Narrow veinlets of pyrite occur in metasediments. Trenching, in 1964, by Algoma Central Railway. Best assays were 0.04% Cu; 0.02% Zn.
Tp. 43; NW corner of tp. S shore of Bullard Lake.	ODM, Sault Ste. Marie file SSM-852. A.C.R. map 42C, 1 and 8.	Au, Ag, Pb, Cu	Primarily a gold prospect. Galena and chalcopyrite occur in quartz vein, 1 to 2 ft. wide.
Tp. 43; NW shore of Sleith Lake.	A.C.R. map 42C, 1 and 8.	Cu	Cu in rusty shear with quartz veins.
Tp. 43; ½ mi. E of NE shore of Matchinamelgus Lake.	A.C.R. map 42C, 1 and 8.	Cu	Cu in metavolcanic-granite complex.
Tp. 45; E½ of the tp. along C.P.R. right-of-way.	ODM, Sault Ste. Marie file SSM-822. A.C.R. map 42C, 1 and 8.	Cu	Minor chalcopyrite occurs in diorite.
Tp. 46; along the Dog River.	ODM, Sault Ste. Marie file SSM-789. A.C.R. map 42C, 1 and 8.	Cu	Chalcopyrite and bornite occur in diorite and in quartz veins in volcanics.
Tp. 46; I.R. No. 62, on island in Dog Lake.	A.C.R. map 42C, 1 and 8.	Cu	Copper and gold occur in quartz veins in granite.
Tp. 47; NE corner, at SW end of Loch Katrine.	ODM map 1946-2. A.C.R. map 42C, 1 and 8.	Ni, Cu, Au	
Tp. 47; central part of tp., ½ mi. W of Dog Lake.	ODM, Sault Ste. Marie file SSM-788. A.C.R. map 42C, 1 and 8.	Au, Cu, Zn	Primarily a gold prospect. Quartz veins carry pyrite, chalcopyrite, pyrrhotite, sphalerite, and gold.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Tp. 48; ¼ mi. N and E of Tuff Lake.	ODM, Sault Ste. Marie file SSM-786. A.C.R. map 42C, 1 and 8.	Cu, Zn	Shear zone 10 ft. wide in rhyolite, strikes N50E, dips 50S, was traced for a length of 50 ft. Pyrite, pyrrhotite, chalcopyrite, and sphalerite occur over width of 3 ft. Grab sample assayed 5.50% Cu, trace Au. Property reportedly drilled by Joburke Gold Mines Ltd.
Tp. 48; W-central part of tp., ¼ mi. SE of mi. post 3.	ODM, Sault Ste. Marie file SSM-786. A.C.R. map 42C, 1 and 8.	Cu, Au	A 15-ft. shear zone in mafic metavolcanics, striking N30W, carries pyrite, chalcopyrite, and gold. Shaft 20 ft. deep. Sample assayed 0.02 oz. /ton Au over 9 ft.
Tp. 48; SE¼, SW end of Old Cabin Lake (W. McKenzie).	ODM, Sault Ste. Marie file SSM-346. A.C.R. map 42C, 1 and 8.	Cu, Au	Chalcopyrite and pyrite occur in agglomerate and in quartz schist.
Tp. 48; SE¼, NW shore of Godin Lake.	ODM, Sault Ste. Marie file SSM-348. A.C.R. map 42C, 1 and 8.	Cu, Au	Chalcopyrite occurs in a quartz porphyry in greenstone.
Tp. 48; 1 mi. W of Godin Lake (W.E. Markes)	ODM, Sault Ste. Marie file SSM-347. A.C.R. map 42C, 1 and 8.	Au, Cu, Pb	Primarily a gold prospect. A sheared and altered zone in andesite strikes N75W, dips 70N, has an average width of 30 ft. and a length of 400 ft. Mineralization consists of pyrite, pyrrhotite and chalcopyrite with values in Au.
Tp. 48; W-central part of tp.	ODM, Sault Ste. Marie file SSM-352. A.C.R. map 42C, 1 and 8.	Au, Cu	Primarily a gold prospect. 3873.0 ft. of d.d. in 23 holes by Shaynee Consolidated Mines, in 1962-63, revealed pyrite, pyrrhotite and chalcopyrite in quartz veins in greenstone.
Tp. 49; SW¼, Herman Lake area.	ODM, Sault Ste. Marie file SSM-354. A.C.R. maps 42C, 2 and 7; 42C, 1 and 8.	Au, Cu	Primarily a gold prospect. 989.8 ft. of d.d. in 6 holes, EM survey and sampling by Adonis Mines Ltd., in 1959-60, revealed sheared and altered mafic lavas with chalcopyrite, pyrite and pyrrhotite. Best copper assay was 0.52% Cu.
Tp. 49; S-central part of tp. 1 mi. N of Lovell Lake (Michael Syndicate).	ODM, 1927, Vol. 36, pt. 2, p.78. A.C.R. map 42C, 1 and 8.	Cu, Au	A breccia zone in mafic schist is intruded by quartz veins carrying pyrrhotite and chalcopyrite. Au values reported.
Tp. 49; E shore of Maskinonge Lake (Michael Syndicate)	A.C.R. map 42C, 1 and 8.	Au, Cu	Au and Cu in mafic volcanics.
Tp. 137; small island off Shelter Point in Whiskey Lake.	ODM, 1962, G.R. No. 10, p.62. ODM maps 2003, 2108.	Cu	Quartz-chalcopyrite veins in conglomerate.
Tp. 137; S end of Campbell Island.	ODM maps 2003, 2108. ODM, 1962, G.R. No. 10, p.65-66. ODM, Sault Ste. Marie file SSM-566.	Pb, Cu	Quartz-carbonate vein carrying pyrite, galena, and chalcopyrite, striking NW and dipping 30N, was traced for a length of 225 ft. and is 4 to 6 ft. wide.
Tp. 138; small island at the NE end of Kindie Lake.	ODM maps 2004, 2108. ODM, 1962, G.R. No. 10, p.81.	Cu	Narrow quartz veins in diabase carry chalcopyrite, malachite and azurite.
Tp. 138; W of narrows in Kindie Lake.	ODM maps 2004, 2108. ODM, 1962, G.R. No. 10, p.87.	Cu	Minor copper mineralization in fractures in diabase.
Tp. 138; S shore of Rangers Lake.	ODM maps 2004, 2108. ODM, 1962, G.R. No. 10, p.66.	Cu	Chalcopyrite mineralization occurs in talus blocks at intervals over a length of 1500 ft.
Tp. 138; ¼ mi. SE of Reynolds Location.	ODM maps 2004, 2108. ODM, 1962, G.R. No. 10, p.80.	Cu, Pb	Quartz veins mineralized with Cu and Pb.
Tp. 138; 1 mi. N of Cider Point on Whiskey Lake.	ODM maps 2004, 2108. ODM, Sault Ste. Marie file SSM-363.	Cu	Sparse veinlets of chalcopyrite occur in fractures in a mafic dike. Geol. and SP surveys in 1954.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Tp. 149; ½ mi. N of Nordic Lake.	ODM maps 2108, 2113. ODM, 1968, G.R. No. 57, p.134. ODM, Sault Ste. Marie file SSM-366.	Cu	Quartz-chalcopyrite veins occur in shear zone in diabase. The zone strikes N60W, dips vertical to steeply N, and was traced for a length of 3800 ft. with widths of 1 to 5 ft. Trenching, in 1953-54, by Buckles Algoma Uranium Mines Ltd.
Tps. 161 and 162; N of Coffee Lake, along the boundary between Tps. 161 and 162.	ODM maps 2026, 2027, 2108. ODM, 1963, G.R. No. 13, p.73.	Cu	Primarily a uranium prospect; d.d. by Picton Uranium Mines Ltd., encountered chalcopryite, pyrite, and pyrrhotite mineralization at a depth of 1049.5 ft. Core samples assayed 1.2% Cu over 2.5 ft.
Tp. 167; N shore of the NW arm of Matinenda Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-448.	Cu	Copper mineralization occurs in a shear zone, over a length of 30 ft. and a width of 3 ft. A grab sample assayed 1.85% Cu and 0.012 oz./ton Au.
Tp. 169; 1½ mi. W of E border of tp., 1000 ft. S of Hwy. 546.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1305.	Cu	Trace of chalcopryite and copper staining in a siliceous rock.
Tp. 169; ½ mi. W of E border of tp., 600 ft. N of Hwy. 546.	ODM map 2108. ODM, Sault Ste. Marie file SSM-1305.	Cu	A skarn zone between gabbro and limestone is mineralized with minor chalcopryite.
Tp. 169; ¾ mi. N and 2 mi. W of SE corner of the tp.	ODM map 2108. ODM, Sault Ste. Marie file SSM-697.	Cu	Quartz-chalcopryite-pyrite stringers occur in a fault zone in quartzite, striking N75E and dipping 70S. A grab sample of the better mineralized rock assayed 0.62% Cu.
Tp. 169; ½ mi. W of N end of Endikai Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-457.	Cu	
Tp. 169; 1½ mi. W of N end of Endikai Lake; 400 ft. N of Creamer Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-457.	Cu	
Tp. 169; W border of tp., 1 mi. S of N border of tp., on SE shore of Regal Lake.	ODM map 2108. ODM, Sault Ste. Marie file SSM-457.	Cu	
Tp. 176.	ODM map 2108.	Cu	Quartz-chalcopryite vein, with some associated gold.
Tp. 182; W end of Caribou Lake.	ODM map 2108.	Cu	Quartz-chalcopryite vein.
Tp. 188; 1 mi. W of SW end of Wakomata Lake.	ODM map 2108.	Cu	Quartz-chalcopryite-hematite vein with core width of 1.5 ft. Trenching; 175 ft. of d.d. in 1 hole, in 1959, by B. Duncan.
Frechette Island, North Channel, Lake Huron; N and W of Betty Lake.	ODM, Sudbury files. ODM map P.438.	Cu, Au	Chalcopryite, pyrrhotite and pyrite in quartz vein trending N65W, 3 feet by about 500 feet, within Nipissing diabase. Assays over a 485-foot length and 2-foot width averaged 0.15 oz./ton Au; assays over 180-foot length and 1.9-foot width averaged 0.94% Cu, 0.145 oz./ton Au. Some d.d. in 1949; some d.d. in 1956, 58, 60 by Poly Ores Mining Co. Ltd.
Hotham Island, North Channel, Lake Huron; at and near SE corner of island.	ODM, Sudbury files. ODM map 2108.	Cu	Two quartz veins bearing chalcopryite and pyrite, in diabase and quartzite. One trends NW for 400 feet and is 2 to 5 feet wide; second trends E for 500 feet and is up to 2 feet wide. Two grab samples assayed 0.51 and 1.87% Cu.

BRUCE COUNTY

ALBEMARLE TOWNSHIP

Bruce Peninsula Zinc Deposits

Main Metals: Zn.

Location: Albemarle, Eastnor, Lindsay, St. Edmunds Tps.; Bruce Peninsula N of Owen Sound.

Reference: GSC maps 18-1965, 19-1965.

Geology: Light coloured sphalerite replacing fossils, disseminated in pores and fine fractures, and as spherical concretions in biohermal reefs in flat-lying Middle Silurian dolomite of the Guelph and Amabel Formations.

Economic Features: A test shipment in 1911 of 6.9 tons of hand-cobbed ore averaged 47.9% of Zn and 0.007% Pb. Recent grab samples ranged from 2.25% Zn to 15.19% Zn, 0.045% Cd (Northern Miner, Jan. 26, 1967).

History: 1910-15 Albemarle Zinc Mines Ltd. open cut 12 X 20 feet and 30 feet deep, in the W part of lot 30, con. III EBR, Albemarle Tp.
Production: 1911 - 6.9 tons; 1915 - 2.5 tons.
1936 Several pits and trenches in lots 8-9, con. X-XI, St. Edmunds Tp.
1943 Further surface excavations by V.T. Wyant and W.L. Forrest of Goderich in St. Edmunds Tp.
1947 Canada Zinc Mines Ltd. acquired the Albemarle and St. Edmunds deposits.
1955-57 (approx.) d.d. and surface exploration on various deposits by Cominco Ltd.
1965-66 Geochemical soil survey over much of the Bruce Peninsula by M.J. Boylen Prospector Account.
1967 5000 feet of d.d. (200 feet vertical holes on 400 foot grid) on lots 3-4, con. VI EBR; trenching on lots 3-4, con. III EBR, Albemarle Tp., by Reef Point Mines Ltd.
7 shallow (less than 50 feet) d.d. holes on con. III-V WBR, Eastnor Tp., by Coniagas Mines Ltd., 5 d.d. holes (75-200 feet) on lot 6, con. V EBR, Eastnor Tp., by Kamalta Exploration Ltd.
Other occurrences or geochemical anomalies on which little work has been performed include:
St. Edmunds Tp - M.J. Boylen Prospector Account.
Lindsay Tp. - New Harricana Mines Ltd.
Albemarle Tp. - Satellite Metal Mines Ltd.
- Northern Canada Mines Ltd.

Remarks: Sphalerite occurrences are characterized by a shallow vertical extent. Deposits are localized by reef structures at or near the contact between the Amabel and overlying Guelph Dolomites.

References: ODM, 1967, M.P. 8, 17 p.
GSC, 1966, Paper 65-41.
Northern Miner, Jan. 26, 1967.
ODM, Toronto, Res. Geol. files.

EASTNOR TOWNSHIP

Bruce Peninsula Zinc Deposits

(See Albemarle Township)

LINDSAY TOWNSHIP

Bruce Peninsula Zinc Deposits

(See Albemarle Township)

ST. EDMUNDS TOWNSHIP

Bruce Peninsula Zinc Deposits

(See Albemarle Township)

CARLETON COUNTY

FITZROY TOWNSHIP

Kingdon Mine (Past Producer)

Main Metals: Pb (minor Zn).

Location: Fitzroy Tp.; lots 22-24, con. VI, 1 1/4 mi. N of Galetta.
Reference: GSC map 1739.

Geology: A fault fissure in Grenville marble is occupied by a 5 foot galena-calcite vein.

Economic Features: Main vein is up to 10 feet wide and averages 5 feet, over a length of 2750 feet. Average grade of deposit is 8.5% Pb (CIMM, 1917).

History: 1884-85 No. 1 shaft sunk 50 feet deep; 90 feet of drifting by James Robertson.

1914-31 Shaft sunk to 1448 feet with 13 levels; 20,076 feet of drifting completed; 905,000 tons of ore hoisted yielding 76,821,409 lbs. of Pb concentrates (60,074,072 lbs. of Pb recovered valued at \$4,266,938) and 857,312 lbs. of Zn concentrates; Kingdon Mining, Smelting and Manufacturing Co. Ltd. performed the work.

1949 22 surface d.d. holes by Kingdon Mining Co. Ltd.

Remarks: Ontario's largest lead producer to date (1967).

References: GSC, 1924, Mem. 136, p.95-101.
GSC, 1930, Econ. Geol. Ser. 8, p.136-138.
CIMM, 1917, Trans., Vol.20, p.183.
Thomson, J.E., 1949, ODM unpubl. rept.
ODM, Toronto, Res. Geol. files.

CARLETON COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Fitzroy Tp.; NW extension of con. VI (Campbell)	GSC, 1930, Econ. Geol. Ser. 8, p. 138-9	Pb	Narrow calcite-galena veins in marble
Fitzroy Tp.; E $\frac{1}{2}$, lot 20, con. VII (Stanton)	OBM, 1952, F.R. 1952-4, p. 14	Pb	Calcite-galena vein in marble
Fitzroy Tp.; lot 20, con. VIII	GSC, 1906, Ann. Rept. Vol. XIV, p. 68	Pb	6-inch galena vein in marble

COCHRANE DISTRICT

AUDEN TOWNSHIP

Auden Township Prospect

Main Metals: Cu.

Location: Auden Tp.; banks of Nagagami River, 1/4 and 1/2 mile S of N border of Tp.

Geology: Chalcopyrite, pyrite, pyrrhotite, in metasediments.

Economic Features: Drill core assays: 0.10% Cu, 0.41% Cu, both over widths of 5 feet.

History: 1954 Prospected by J. McGale.
1965 MAG and EM surveys, 1079.5 feet of d.d. in 4 holes by Colleen Copper Mines Ltd.

References: ODM, Sault Ste. Marie, files SSM-699, -46.

CLERGUE TOWNSHIP

Alexo Mine (Past Producer)

(See Dundonald Township)

DUNDONALD TOWNSHIP

Alexo Mine (Past Producer)

Main Metals: Ni, Cu.

Location: Dundonald Tp., part of lots 1 and 2, con. III; Clergue Tp., part of lots 11 and 12, con. III; 3 1/2 miles SW of Porquis Junction.
Reference: ODM maps P.17, P.18.

Geology: The country rocks are metabasalts intruded by ultramafic sills, the largest of which (the Dundonald Sill) is a layered intrusive 2400 feet thick. Some thin discontinuous ultramafic lenses overlie this sill. One of the lenses, the Alexo Sill, forms the central part of a N-trending syncline. The mineralized zone at the Alexo Mine is at or near the base of the Alexo sill, strikes NE and dips 80NW. Pyrrhotite and pentlandite with lesser amounts of chalcopyrite and heazlewoodite (Ni_3S_2) form massive sulphide lenses, many of which are overlain by disseminated sulphides.

Economic Features: The mineralized zone is 700 feet in length and ranges in width from 3 to 40 feet. In 1936 the main stope was 75 feet in length, approximately 15 feet wide and extended from surface to the 120-foot level.

Production Statistics:

	Ni(X 1,000)	Cu(X 1,000)	Ore Milled	Value
1912-19	4,426 lbs.	480 lbs.	51,857 tons	\$426,636
1943-44	46 lbs.	328 lbs.	4,923 tons	111,410
Total	4,472 lbs.	808 lbs.	56,780 tons	538,047

Ownership: Noranda Mines Limited.

History: 1912-19 Alexo Nickel Mine operated by the owners with development of 300 feet on the 75-foot level, 300 feet on the 120-foot level, and 50 feet on the 265-foot level.
1936 Pumping and sampling by Cuniptau Mines Limited.
1943-44 Alexo shaft 310 feet in depth with total development work of 1708 feet, of which 746 feet was on the 120-foot level. Also, 26 underground d.d. holes with a combined length of 1248 feet by Harlin Nickel Mines Limited.
1953 Geophysical surveys and surface drilling by Noranda Mines Limited.

References: OBM, 1917, Vol.26, p.258-73.
Can. Jour. Earth Sci., 1968, Vol.5, p.111-43.
Royal Ont. Nickel Comm., 1917, p.229-32.
ODM, 1937, Vol.46, pt.1, p.222-3.
ODM, 1945, Vol.44, pt.2, p.110.

MacIntosh Springs Prospect

Main Metals: Ni.

Location: Dundonald Tp.; N part lots 2, 3, con. I; 11,000 feet WSW of Alexo Mine.
Reference: ODM map P.307.

Geology: An ultramafic sill, differentiated into peridotite, pyroxenite and gabbro layers intrudes a sequence of mafic volcanic rocks. Sulphides are present both in the peridotite and along the andesite-peridotite contacts.

Economic Features: Two small showings contain disseminated nickeliferous sulphides within the peridotite at the andesite-peridotite contact.

History: 1951 MAG survey by Quebec Asbestos Corp. Ltd.
1951 Geol. survey by the Dominion Gulf Co.
1955 1324 feet of d.d. by Consolidated Matarrow Mines Ltd.
1960-64 Geol. and geophysical surveys, 4300 feet of d.d. by Falconbridge Nickel Mines Ltd.

References: ODM, Timmins, file T-417.
CIMM, 1966, Trans., Vol.69, p.147-55.

GODFREY TOWNSHIP

Aconda Prospect

Main Metals: Cu.

Location: Godfrey Tp.; N 1/2, lot 9, con. III, S of Aconda Lake; claims P.44322 and P.44323.

Reference: ODM maps 1954-4, 2046.

Geology: Intercalated andesite and rhyolite flows strike N and face E. Development work was concentrated in the area south of Aconda Lake, on a N-trending discontinuous zone, approx. 300 feet in length, of disseminated pyrite and chalcopyrite, with a few stringers of massive chalcopyrite and pyrite. The sulphides are part of the same zone that forms the Mordey Prospect.

Economic Features: New Walcoro hole No. 3, drilled N along the strike of the mineralized zone and intersected 18 feet of core which averaged 3.1% Cu. Other drill holes intersected only narrow sections of minor chalcopyrite.

History: 1949 Surface trenching, and sampling by Aconda Mines Ltd. (Philip-O'Neill option).
1949 Three d.d. holes totalling 1375 feet by Millbren Copper Mines Ltd.
1951 Property optioned by New Walcoro Porcupine Mines Ltd., and 4042 feet of d.d. in 12 holes completed.
1961 Three d.d. holes for a total of 1500 feet by Maple Bay Copper Mines Ltd. and geophysical survey.
1964 P.J. O'Neill drilled 5 holes with a total footage of 1287 feet.

References: ODM, Timmins file T-330.
ODM, 1954, Vol.63, pt.7, p.36-41.

Canadian Jamieson Mine (Producer)

Main Metals: Zn, Cu.

Location: Godfrey Tp.; NW 1/4, claims P.20411, P.27861-P.27865, P.27899, P.27900, P.28030, P.4147; Jamieson Tp., claims P.27859, P.27860, P.27912, P.28039.

Reference: ODM map 1954-4.

Geology: The deposits are in a NW-trending belt of andesitic to rhyolitic lavas and fragmentals, tightly folded and intruded by gabbro, diorite and granitic dikes. The majority of the ore consists of massive pyrite, sphalerite and chalcopyrite with minor galena. It occurs in three principal zones, each associated with a major body of rhyolite: a north zone 250 feet long, 100 feet wide and 20 feet thick; a centre zone of at least 3 separate bodies, along the same contact, that extend from within

100 feet of surface to a depth of 550 feet below surface; and a south zone consisting of a series of lenses with a combined length of 400 feet extending from surface to a depth of 300 feet. The Kam-Kotia Mine, 4 miles to the NNW, is located in andesites at a slightly higher stratigraphic horizon in the same group of formations.

Economic Features: Estimated reserves in 1966 (before production) were 531,400 tons grading 4.22% Zn, 2.48% Cu, 0.85 oz./ton Ag and 0.009 oz./ton Au, (Mining in Canada, March 1967).

Ownership: Canadian Jamieson Mines Limited.

History: 1942-50 Trenching and 2500 feet of d.d. by George Jamieson.
1964-65 Geophysical surveys, 30 surface drill holes for 18,481 feet, shaft to a depth of 639 feet by Canadian Jamieson Mines Ltd.
1965 Shaft 760 feet deep with 5 levels and mill established to treat 400 tons per day, by Canadian Jamieson Mines Ltd.

References: Canadian Mines Handbook, 1968-69, p.67.
ODM, Timmins, file T-742.
Mining in Canada, March 1967, p.13-15.
ODM, 1954, Vol.63, pt.7, p.36-41.

Mordey Prospect

Main Metals: Cu.

Location: Godfrey Tp.; NE 1/4 and NW 1/4, lot 9, con. II, S 1/2 lot 9, con. III; and SE 1/4 of S 1/2 lot 10, con. III.
Reference: ODM map 1954-4.
ODM, 1954, Vol.63, pt.7.

Geology: Mineralization occurs in N-striking and E-facing andesite and rhyolite, with the best surface mineralization in rhyolite. Stringers and veinlets of massive sulphides including chalcopyrite, sphalerite and pyrite generally strike in a northwesterly direction. Some sulphides with quartz form the matrix of breccia fragments.

Economic Features: Reserves outlined by drilling to October, 1966 were estimated at 42,000 tons averaging 2.47% Cu (Northern Miner, Oct. 11, 1966). Four carloads of concentrate were shipped totalling 240 tons with grades ranging from 21.45% Cu to 27.25% Cu (Northern Miner, Sept. 1, 1966).

Ownership: United Obalski Mining Company Limited.

History: 1927 Geophysical survey and 14 d.d. holes by Aconda Mines Ltd.
1936 6 d.d. holes by Alameda Mines Limited.
1945 Geol. survey and 5 d.d. holes for 2513 feet by Mordey Copper Mines Ltd.
1956-62 Geophysical survey and some d.d. by Maple Bay Copper Mines Ltd.

1964-66 64 d.d. holes totalling 21,681 feet by Genex Mines Ltd. In 1966, 277-foot shaft with levels at 125 and 250 feet. Development footage consisted of 2647 feet of drifts, 310 feet of crosscuts and 692 feet of raises. Underground drilling was 47 holes with a combined length of 5656 feet. Work by Genex Mines Limited and Irvington Mining Company Ltd. A mill operated intermittently during 1966 at an average rate of 150 tons daily. All mill feed was drawn from 250-foot level.

References: Canadian Mines Handbook, 1966-67, p.132-3.
Northern Miner, Sept. 1, Oct. 11, 1966.
ODM, Timmins, file T-231.
ODM, 1954, Vol.63, pt.7, p.43-7.
ODM, 1966, Vol.76, p.108.

Steep Lake Prospect

Main Metals: Cu.

Location: Godfrey Tp.; SW 1/2 of S 1/2 lot 11, con. V, claim P.27830.
Reference: ODM map 1954-4.

Geology: Heavily disseminated pyrite and chalcopyrite mineralization is exposed over a length of 250 feet along a rhyolite-andesite contact; and throughout its length is mineralized over a width from 1 to 3 feet. In other places where the andesite fingers out into the adjacent rhyolite, disseminated sulphides occur in andesitic breccia.

Economic Features: A chip sample across 6.5 feet assayed 1.66% Cu.

History: Late 1930's Shallow pits and 5 X-ray d.d. holes.
1964 Consolidated Brewis Mines Ltd. drilled 2 holes and made a geophysical survey (formerly the Phillips-O'Neill property).

References: ODM, Timmins, file T-330.
ODM, 1954, Vol.63, pt.7, p.48-51.

JAMIESON TOWNSHIP

Canadian Jamieson Mine (Producer)

(See Godfrey Township)

Jameland Mine Prospect

(See Robb Township)

Pleno Prospect

Main Metals: Cu, Zn.

Location: Jamieson Tp.; lots 10, 11, 12, con. IV and V; claim P.12350.

Reference: ODM map P.20.

Geology: The rhyolite-andesite ore-bearing contact zone on the adjacent Kam-Kotia property has been traced in a SE direction, by surface drilling, onto the Pleno Mines Ltd. property. Sulphide mineralization, consisting of pyrite, pyrrhotite, chalcopyrite and sphalerite, was intersected by 30 surface drill holes over a length of 900 feet and for a vertical depth of about 400 feet. The chalcopyrite and sphalerite mineralization appears to occur in three parallel zones - two of which coalesce to the southeast.

Economic Features: Early drill results returned an average core length of 6.8 feet of massive sulphides. The best core intersection to July, 1965, was 18 feet averaging 0.84% Cu and 1.01% Zn (Pleno Mines Ltd. prospectus, July 10, 1965).

Ownership: Pleno Mines Limited.

History: 1948-49 Geophysical survey and 3 d.d. holes totalling 600 feet by Dominion Gulf Co.

1954-55 Geophysical surveys and 18 drill holes totalling 9511 feet by Pleno Mines Ltd.

1960-64 34 drill holes totalling 20,471 feet by Pleno Mines Ltd.

1966 Kam-Kotia 450 level extended 1610 feet onto the Pleno property and underground drilling carried out by Kam-Kotia Mines.

References: Survey of Mines, 1968, p.163.

ODM, Timmins, file T-544.

Pleno Mines Limited, 1965, Prospectus, July 10.

ODM, 1957, M.R.C. 2, p.42.

KIDD TOWNSHIP

Kidd Creek Mine (Producer)

Main Metals: Zn, Cu, Pb, Ag.

Location: Kidd Tp.; lots 1, 2, 3 and 4, con. V.

Reference: ODM map P.489.

Geology: The orebodies lie within a group of NW-facing felsic tuffs and breccias, which are adjacent to metabasalts to the NW and mafic intrusives to the SE. The sulphide zone strikes approximately N20E, dips steeply E, and plunges 75N. A zone of graphite and graphitic sediments occurs within the ore zone which is generally concordant with the stratigraphy. The ore zone is 2200 feet in length and up to

400 feet in width. There is a relatively barren pyrite-graphite zone which divides the orebody into a northern and southern part. Three types of ore are present in the deposit. "Siliceous copper ore", consisting of chalcopyrite in a cherty breccia with very little associated pyrite or sphalerite, and "massive sphalerite-pyrite ore", containing galena and native silver occur in the north part. "Mixed Ore", composed of massive chalcopyrite and sphalerite, occurs in the south part.

Economic Features: Estimated reserves, before production, were 62,500,000 tons grading 7.08% Zn, 1.33% Cu and 4.85 oz./ton Ag (Canadian Mines Handbook, 1968-1969).

Production statistics, with 1967 metal production estimated are:

Year	Zinc, lbs. X 1000	Copper, lbs. X 1000	Lead, lbs. X 1000	Cadmium, lbs. X 1000	Sulphur, lbs. X 1000
1965	409	1,484	-	-	-
1966	26,530	10,420	245	82	1,672
1967	449,280	102,500			

Year	Silver, oz. X 1000	Gold, oz.	Ore Milled tons	Value, dollars
1965	72	-	27,936	\$ 650,074
1966	321	29	278,443	9,387,278
1967	7,800		3,039,000	

Ownership: Ecstall Mining Limited, wholly-owned subsidiary of Texas Gulf Sulphur Company.

History: An airborne electromagnetic survey, conducted by Texas Gulf Sulphur located a conductor which later was checked by a ground electromagnetic survey. Drilling this conductor located the orebody and announcement of the find was made in April, 1964. Some 126 diamond drill holes with a total length of 104,340 feet were drilled from surface. Mining is done by an open pit method and the ore is transported to a concentrator in Hoyle Township which has been in operation since November 1966, although a small amount of production is reported from mill tests done at the Kam-Kotia mill in 1965. The concentrator can handle 9000 tons per day and produces a zinc concentrate, copper concentrate and copper-lead concentrate. The concentrator is designed to provide for the addition of a circuit to produce a pyrite concentrate.

References: Canadian Mines Handbook 1968-69, p.328-329.

CIMM, 1967, Guidebook, p.107.

Northern Miner, 1964, April 16, June 25.

Northern Miner, 1966, March 3.

LOVELAND TOWNSHIP

Enid Creek Prospect

Main Metals: Ni, Cu.

Location: Loveland Tp.; claims P.55152-P.55165, and P.55614-P.55626.

Geology: Disseminated chalcopyrite and nickeliferous pyrrhotite in a gabbro which intrudes and engulfs andesitic lavas.

Economic Features: A 431-foot drill hole put down by Hollinger in the NE corner of Claim P.55154 gave the following results:

<u>Vertical depth ft.</u>	<u>% Nickel</u>	<u>% Cu</u>
250-260	1.144	0.5
260-270	0.207	0.25
270-280	0.223	0.35
385-397	0.858	0.75

A second drill hole 200 feet SSW of the former, averaged 0.36% Ni and 0.43% Cu over a 22-foot core length and 1.12% Ni and 0.5% Cu over a 2-foot core length.

History: 1957-66 8995 feet of d.d. and geophysical surveys by Hollinger Consolidated Gold Mines Ltd.

References: ODM, Timmins, files T-640, T-794.

MANN TOWNSHIP

Cunigold Prospect

Main Metals: Cu, Zn.

Location: 16 miles south of Cochrane, Mann Tp.; W 1/2 lot 5, N 1/2 lot 6, con. II.

Geology: Sill-like bodies of peridotite conformably intrude E-trending rhyolite flows and agglomerate. Sulphide mineralization is concentrated in the rhyolite near the rhyolite-peridotite contact, and in the peridotite on the former Cunigold Mines Ltd. operation.

Economic Features: On Claim P.61334, Cunigold Mines reported a zone of disseminated to massive pyrrhotite-pyrite-minor chalcopyrite, approx. 1200 feet long and 100 feet wide along a rhyolite-gabbro contact. A 23.5-foot drill core section averaged 0.76% Cu, 0.08% Ni (Northern Miner Feb. 23, 1950). Jonsmith investigating a conductive zone within the rhyolite south of the peridotite intersected in one drill hole, 51 feet of massive sulphides which averaged 1.68% Zn, 0.22% Cu and 0.3 oz./ton Ag.

History: 1945 Trenching and packsack drilling by Cunigold Mines Ltd.
1965 Geol. and geophysical surveys and 13 drill holes totalling 9705 feet by Jonsmith Mines Ltd.

References: ODM, Timmins, file T-1070.
Northern Miner, 1950, Feb. 23.

Zevely Prospect

Main Metals: Ni, Cu.

Location: Mann Tp.; lot 2, con. VI; E bank Frederick House River.

Geology: Andesitic pillow lavas are intruded by a large E-trending sill of peridotite. Massive stringers and irregular patches of chalcopyrite and nickeliferous pyrrhotite are encountered in the andesite within 100 feet of the southern peridotite contact.

Economic Features: Pyrrhotite-chalcopyrite mineralized zone is exposed for a width of 72 feet and a length of approx. 300 feet. Assays from 6 grab samples were:

	<u>Copper</u>	<u>Nickel</u>	<u>Platinum</u>	<u>Palladium</u>
No. 1	1.84%	3.6 %	- oz.	- oz.
No. 2	6.62	2.11	-	-
No. 3	4.22	2.46	.05	.09
No. 4	-	-	.03	.15
No. 5	1.04	5.29	-	-
No. 6	1.38	2.32	-	-

(Reference: Northern Miner, 1948, Nov. 18).

History: 1947 MAG survey by Mining Geophysics Corp. Ltd.
1949 MAG and electrical resistivity surveys by Geo-Technical Development Co. Ltd.
1949 20,000 feet of diamond-drilling.

References: Northern Miner, 1948, Nov. 18.
ODM, Timmins, file T-173.

MUNRO TOWNSHIP

Centre Hill Mine (Past Producer)

Main Metals: Cu, Zn.

Location: Munro Tp.; N 1/2 lot 6, con. IV; NW 1/4 and SW 1/4 of S 1/2 lot 5, con. V; S 1/2 lot 6, and lot 7, con. V; claims L53946-L53957.
Reference: ODM map 1951-5.

Geology: Mineralization is in an E-trending band of rhyolitic agglomerate and tuff approximately 200 feet wide and over 4000 feet long. This band is bounded on the N and S by a mafic-ultramafic intrusive complex and is intruded itself by sills and irregular bodies of peridotite. The mineralized zone has been traced by drilling for about 1200 feet and comprises 4 lenses of massive sulphides. The combined true width of sulphides (mainly massive pyrrhotite, chalcopyrite and sphalerite) in many of the surface holes was about 20 feet.

Economic Features: Reserves were estimated at 400,000 tons, indicated, grading 2.09% Cu and 1.69% Zn, plus 200,000 tons, probable, grading 1.98% Cu and 1.63% Zn.

History: 1952-59 110 drill holes, totalling 55,163 feet by Centre Hill Mines Ltd.; shaft to 408 feet and stations established at 200 and 350 feet.

1959 Geophysical survey by Zenmac Metal Mines Ltd.

1964 103 underground drill holes totalling 23,146 feet and shaft deepened to 632 feet with stations established at 475 and 600 feet by Munro Copper Mines Ltd.

1966 Shaft deepened to 970 feet with the deepest level at 850 feet. Total development work consisted of 2937 feet of drifting, 1045 feet of crosscutting and 898 feet of raising. Underground d.d. consisted of 36 holes with a combined length of 2049 feet. Construction of a mill to treat 500 to 700 tons per day was completed by Munro Copper Mines Limited.

1967-June 1968 Concentrate valued at \$239,000 shipped by Munro Copper Mines Ltd. Mill operation ceased June, 1968. New surface drilling program initiated October, 1968.

References: Canadian Mines Handbook 1966-67, p.219; 1968-69, p.229.
Prospectus, 1966, Munro Copper Mines Ltd.
ODM, 1966, Vol.76, p.125-6.
ODM, 1957, M.R.C.2, p.28-9.

Hedman Mine Copper Prospect

Main Metals: Cu, Ni.

Location: Munro Tp.; lots 4, 5, 6, con. VI; Warden Tp.; lots 4, 5, 6, 7, con. I.

Reference: ODM map 1951-5.

Geology: A series of mafic-ultramafic intrusive sills separated from one another by three narrow volcanic bands of rhyolite agglomerate or andesite. In addition to the asbestos orebody, sulphides of copper, nickel and cobalt are present at the volcanic-peridotite contacts.

Economic Features: A zone approximately 2000 feet long across claims L56559 and L59423 gave the following results from a few surface and drill core samples: 1.64% Ni, 1.31% Cu; 0.37% Ni, 1.77% Cu; 0.53% Ni, 0.28% Cu; 1.60% Ni, 0.52% Cu.

In the southern part of the property, claim L53314, appreciable amounts of pyrite and chalcopyrite are present in several pits in the narrow interbands of rhyolite.

Ownership: Hedman Mines Limited.

History: Cu-Ni mineralization encountered during development of main asbestos ore deposit by Hedman Mines Ltd.

References: ODM, Timmins, file T-531.
ODM, 1951, Vol.60, pt.8, p.40-3.

Potterdoal Mine (Past Producer)

Main Metals: Cu, Zn, Au.

Location: Munro Tp.; N 1/2 lot 7, con. VI.
Reference: ODM map 1951-5.

Geology: A lens of massive chalcopyrite, sphalerite and pyrrhotite at the contact between andesite and peridotite. The lens exposed at surface was about 8 feet wide and 24 feet long.

Economic Features: In 1925, a 25-ton bulk sample assayed 15.22% Cu, 4.15% Zn, 2.7 oz./ton Ag and 0.045 oz./ton Au. In 1930, a shipment of 1913 tons was made, from which 18,371 lbs. Cu and 56.33 oz. Au were recovered.

History: 1927-28 4 drill holes totalling 660 feet, geophysical survey, inclined shaft to 125 feet, and vertical shaft to 250 feet by Potterdoal Mines Ltd.

References: ODM, 1951, Vol.60, pt.7, p.42-3.
ODM, 1928, Vol.37, pt.3, p.84.

ROBB TOWNSHIP

Jameland Mine Prospect

Main Metals: Cu, Zn.

Location: Robb Tp.; claims P.38780 and P.48476-48482; Jamieson Tp.; claims P.37625-37626, P.37647-37649, and P.37676-37678, which is part of lots 11 and 12, con. III.
Reference: ODM maps 53c, P.19, P.20.

Geology: The country rocks are andesite and rhyolitic tuffs, agglomerates and breccias which are intruded by dioritic dikes and sills. The volcanic strata trend NW and dip steeply N. Pyrite mineralization with associated chalcopyrite and sphalerite occur both in the fragmental rhyolites and in the andesites. The larger sulphide lenses are concentrated near the rhyolite-andesite contacts.

Economic Features: Drilling to March, 1968, indicated ore grade Cu and Zn values along a strike length of about 1600 feet, across a zone whose maximum horizontal width is 300 feet, and through a vertical distance of nearly 1000 feet. There are two distinct sulphide ore bodies, one copper-rich, the other zinc-rich.
Ore Reserves, October 1968 (Northern Miner, Oct. 17, 1968).

	<u>Indicated Ore tons</u>	<u>% Cu</u>	<u>% Zn</u>
probable	432,000	1.96	-
probable	170,000	1.06	7.21
possible	300,000	1.30	-

Ownership: Jameland Mines Limited.

History: 1948-56 Geol., MAG and EM surveys and 21 drill holes with a combined length of 9600 feet by Dominion Gulf Company.
1959, 1964 Geophysical surveys by Jameland Mines Ltd.
1966-68 Surface drilling of 79,724 feet in 102 holes by Jameland Mines Ltd. Shaft sinking to 1200 feet planned for the fall of 1968.

Remarks: Production forecast for 1970 with a milling rate of about 700 tons per day. (Northern Miner, October 17, 1968).

References: Canadian Mines Handbook, 1968-1969, p.176.
ODM, Timmins, files T-549, T-1398.
ODM, 1957, M.R.C. 2, p.40.
Northern Miner, 1968, October 17.

Kam-Kotia Mine (Producer)

Main Metals: Cu, Zn.

Location: Robb Tp.; claims P.12403-12405, P.12339-12343, P.12353, P.12356.
Reference: ODM map 53c.

Geology: Andesite flows and tuffs contain lenses of rhyolite tuffs and breccias. The strike is N55W, and the rock sequence faces N and dips about 75N. The orebodies occur as numerous irregular lenses of massive sulphides with associated quartz-sulphide stockworks. Massive sulphides zones consist of 85 to 95% pyrite, pyrrhotite, chalcopyrite and sphalerite. Parts of the orebody tend to be enriched in either chalcopyrite or sphalerite and the stockworks contain Cu mineralization. On surface the main ore lens was 350 feet in length up to 200 feet in width and persisted from surface to beyond the 150-foot level.

Economic Features: Ore Reserves, December 1967 (Canadian Mines Handbook, 1968-1969, p.182) were 3,480,000 tons including positive and broken ore of 2,100,000 tons averaging 1.38% Cu and 4% Zn, 150,000 tons averaging 1.0% Cu and 1.90% Zn, and 480,000 tons averaging 0.36% Cu and 4.60% Zn; probable ore of 100,000 tons averaging 1.50% Cu and 1.60% Zn; and possible ore of 650,000 tons averaging 1.50% Cu and 2.51% Zn.

Production: In 1943 and from 1961 to 1968, 3,581,000 tons were milled which produced 93,878,000 lbs. Cu, 28,137,000 lbs. Zn, 309,000 oz. Ag and 2,121 oz. Au valued at \$38,453,000.

Ownership: Kam-Kotia Mines Ltd.

History: 1932 Drilling by Hollinger Consolidated Gold Mines Ltd.
1943-44 Operated by Hollinger Consolidated Gold Mines Ltd. for Wartime Metals Corporation, and processed 189,064 tons of ore.
1961 to present Mining by Kam-Kotia Mines Ltd. from open pit converted to underground operation by 1965; shaft, 1974 feet deep, with underground development to the end of 1966 of 31,849 feet of drifting and 3416 feet of crosscutting. A 950 ton per day mill in 1961, increased to 1500 tons per day in 1963.

Remarks: In 1968, program commenced to increase mill capacity to 2700 tons per day (Northern Miner, Oct. 17, 1968).

References: CIMM, 1967, Guidebook, p.132-4.
ODM, 1966, Vol.76, p.121-3.
Canadian Mines Handbook, 1968-1969, p.182.
Northern Miner, 1968, October 17.

TISDALE TOWNSHIP

McIntyre Mine (Producer)

Main Metals: Cu, Au.

Location: Tisdale Tp.; part of lots 8, 9, 10, con. II, III, IV.
Reference: ODM map 2075.

Geology: The Pearl Lake porphyry intrudes basic lavas near the axis of the Hollinger Anticline. Copper mineralization is confined to the porphyry where it occurs in a zone from 200 to 300 feet S of the N contact. The mineralized zone is about 1200 feet in length and 300 feet wide and extends vertically from the 1100 to the 3600 foot level. This zone conforms with the shape of the porphyry and plunges 45E. Seventy percent of the copper mineralization is present as chalcopyrite with the balance as bornite. The sulphides occur as disseminations, as minor seams, in massive form and associated with quartz stringers. Tetrahedrite and tennantite are associated with quartz, and molybdenite is present in small amounts but is not recovered. Native silver has been observed associated with bornite. Pyrite is absent in the ore but generally is present in the porphyry.

Economic Features: Production began at 800 tons per day and has been increased to about 2000 tons per day. Ore grade lenses are up to 600 feet in length, 125 feet in width and extend vertically for 2500 feet. Ore reserves in 1967 were 4,211,500 tons averaging 0.82% Cu (Canadian Mines Handbook 1968-1969, p.217). Silver and gold are recovered from the copper orebody but the production of these metals is included with the production of the gold mine.

Production: From 1963 to 1966, 27,339 thousand lbs. of Cu was recovered from 1,754 thousand tons milled valued at 10,642 thousand dollars.

Ownership: McIntyre Porcupine Mines Limited.

History: 1959 Cu mineralization located by underground drilling and explored by a crosscut on the 1625 foot level by McIntyre Porcupine Mines Ltd.
1959-60 70,800 feet of underground d.d. and 1270 feet of development work by McIntyre Porcupine Mines Ltd.
1963 Copper production began August 5.

References: CIMM, 1967, Guidebook, p.120.
ODM, 1968, G.R.58, p.129, 159.
ODM, 1960, Vol.70, p.44-6.
Canadian Mines Handbook, 1968-1969, p.217.

WHITESIDES TOWNSHIP

Ross Prospect

Main Metals: Cu, Ni.

Location: Whitesides Tp.; NW corner; claims P.19074-P.19079, P.18819-P.18822, P.19695, P.19897, P.19898.
Reference: ODM, map P.488.

Geology: The property straddles the N-trending contact between a mafic intrusive body and intercalated felsic and intermediate volcanic rocks. Chalcopyrite-pyrrhotite mineralization is mainly present in gabbro within a few hundred feet of the volcanic contact.

Economic Features: The principle mineralization is in 2 zones, "A" and "B". The "A" or eastern zone averages between 0.31 and 0.32% Cu and 0.19 to 0.10% Ni over an average width of 15.3 feet for a length of 400 feet. Zone "B" averages 0.33% Cu and 0.24% Ni over a width of 10.6 feet for a length of 140 feet (Hollinger Consolidated Gold Mines Ltd. and Lyndhurst Mines Ltd., circa 1958).
Samples by Lyndhurst Mines Ltd. on Zone "B" averaged 0.64% Cu and 0.33% Ni over an average width of 19 feet - length not specified. Drilling results (circa 1964) from Camador Mining Exploration Ltd. reported 27 feet of mineralization of which 7.5 feet averaged just over 2% combined copper-nickel.

History: 1929 Surface trenching, 1700 feet of d.d. by Aconda Mines.
Circa 1958 Surface trenching and sampling by Hollinger Consolidated
Gold Mines Ltd. and Lyndhurst Mines Ltd.
Circa 1964 Drilling by Camador Mining and Exploration Co. Ltd.
1964 Ground geophysical survey by Nickel Rim Mines Ltd.

References: ODM, 1931, Vol.40, pt.3, p.36-7.
Financial Post Survey of Mines, 1930, p.172.
ODM, Timmins, file T-821.
M.R.B., Ottawa, Mineral files.

WARDEN TOWNSHIP

Hedman Mine Copper Prospect

(See Munro Township)

COCHRANE DISTRICT

OCCURRENCES

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Alexandra Tp.; N central part.	ODM, 1968, M.P. 18, p.33.	Zn	Gahnite (zinc spinel) in metasediments and pegmatite.
Bowman Tp.; lot 7, con. II.	ODM, 1965, G.R. 40, p.18.	Cu, Pb	Disseminated chalcopyrite - minor galena in sheared andesite and feldspar porphyry dikes.
Byers Tp.; NW of Byers Lake.	ODM, Timmins, file T-2046.	Cu	Pyrite - pyrrhotite - chalcopyrite in quartz lenses.
Cargill Tp.; NW 1/4.	ODM, Timmins, file T-576.	Cu, Ni	Minor chalcopyrite and nickeliferous pyrrhotite in metagabbro.
Carman Tp.; SW corner.	ODM map P.356.	Cu	Chalcopyrite in iron formation.
Cody Tp.; Poplar Point.	ODM, Timmins, file T-807.	Cu, Zn	Disseminated chalcopyrite, sphalerite in fragmental rhyodacite.
Cote Tp.; S central part.	ODM, Timmins, file T-320.	Cu, Pb	Minor chalcopyrite, galena in quartz veins cutting gabbro.
Deloro Tp.; Shaw Lake.	ODM, Timmins, file T-503, T-1083.	Cu	Minor chalcopyrite in sulphide zone 30 by 300 feet in sheared volcanic rocks.
Dundonald Tp.; S shore Frederick House Lake	Northern Miner, 1968, April 18.	Ni	New occurrence.
Enid Tp.; NE corner.	ODM, 1931, Vol.40, pt.3, p.37.	Cu, Ni	Disseminated chalcopyrite and pentlandite in gabbro.
Godfrey Tp.; lot 11, con. V.	ODM, 1954, Vol.63, pt.7.	Cu, Pb	Disseminated chalcopyrite and sphalerite in rhyolite.
Hurdman Tp.; W-central part.	ODM, 1968, M.P. 18, p.33.	Zn	Gahnite (zinc spinel) in paragneiss.
Jamieson Tp.; lot 12, con. II.	ODM, 1944, Vol.53, pt.4, p.15,16.	Cu	Chalcopyrite in quartz cementing brecciated andesite.
Jamieson Tp.; lot 12, con. I.	ODM, 1944, Vol.53, pt.4, p.15, 16.	Cu, Zn	Minor chalcopyrite and sphalerite in aplite dikes.
Little Tp.; lot 1, con. VI.	ODM, Timmins, file T-268.	Cu, Ni	Minor Cu-Ni mineralization along peridotite-volcanic contact.
Loveland Tp.; SE of Byers Lake.	ODM, 1944, Vol.53, pt.4, p.16.	Cu, Ni	Cu-Ni sulphides in pyroxenite float.
Mann Tp.; lots 8, 9, con. III.	ODM, Timmins, file T-266.	Cu, Ni	Minor Cu-Ni mineralization in peridotite.
McCart Tp.; lot 7, con. V.	Royal Ontario Nickel Comm., 1917, p.54. CIMM, 1966, Trans. Vol.69, p.147-55.	Ni	Nickeliferous pyrrhotite in peridotite.
Marriott Tp.; SE shore McDiarmid Lake.	ODM, Timmins, file T-851.	Cu	Small lenses of massive chalcopyrite in metabasalt.
Munro Tp.; lot 12, con. III.	ODM map 2046.	Ni	Minor nickeliferous sulphides in peridotite.
Munro Tp.; lot 5, con. V.	ODM, Timmins, file T-235.	Cu	Disseminated pyrite - pyrrhotite - chalcopyrite in rhyolite.
O'Meara Tp.; W side of Chipman Lake (Albert).	ODM, Port Arthur files.	Cu	Pyrrhotite, pyrite and lesser chalcopyrite disseminated as narrow bands in quartz-feldspar amphibole gneiss. One d.d. hole for 419 feet by O. Albert in 1964.
Thackeray Tp.; NW corner.	ODM, Timmins, file T-401.	Cu, Pb	Minor chalcopyrite-galena in silicified volcanic breccia.
Turnbull Tp.; SW 1/4.	ODM, Timmins, file T-240.	Cu, Zn	Disseminated chalcopyrite and sphalerite in quartz veins cutting gabbro.
Whitesides Tp.; NW corner.	ODM, 1931, Vol.40, pt.3, p.36. ODM map P.488.	Ni	Minor nickeliferous pyrrhotite in gabbro.
Whitesides Tp.; Pirsson Lake.	ODM map P.488.	Cu, Ni	Minor chalcopyrite and nickeliferous pyrrhotite in gabbro.
Whitney Tp.; SW corner.	Northern Miner, 1968, Jan. 25.	Ni	Minor nickel values in serpentinized peridotite.

FRONTENAC COUNTY

BARRIE TOWNSHIP

Ore Chimney Prospect

Main Metals: Zn, Pb, Ag, Au.

Location: Barrie Tp.; lots 34-36, con. I, 3 mi. N of North Brook.
Reference: ODM map 2053.

Geology: Quartz vein 2-3 feet wide containing pyrite, galena, sphalerite and minor chalcoppyrite in sheared andesite.

Economic Features: 11,000 tons above 500 feet level averages 0.20 oz. Au, 5.64 oz. Ag, 2% Zn, 1% Pb (Company Prospectus, 1957).

History: 1908-28 400 foot shaft and 100 foot winze with 7 levels; 2174 feet of crosscutting and drifting by Ore Chimney Mining Co. Ltd.
1930-35 Geophysical and geological surveys, stripping and trenching; 3372 feet of d.d. and 100 feet of crosscutting by Bey Mines Ltd.
1948 Metallurgical test by East Webb Mines Ltd.
1956 Geological survey and 4667 feet of d.d. by Cavalier Mining Corp. Ltd. (Torwest Resources Ltd.).
1963 600 feet of d.d. by R.W. Cruickshank.

References: ODM, 1942, Vol.51, pt.4, p.42.
ODM, 1968, M.R.C. 10, p.27.
ODM, Toronto, Res. Geol. files.

LOUGHBOROUGH TOWNSHIP

Frontenac Lead Mine (Past Producer)

Main Metals: Pb (minor Zn, Ag).

Location: Loughborough Tp.; lots 15-16, con. IX, near the village of Perth Road, 18 mi. N of Kingston.
Reference: ODM map 2054.

Geology: Calcite-galena vein up to 44 feet wide, averaging 10-12 feet, in Grenville marble. Vein is in two segments separated by 3000 feet of low ground. Segments have been traced 1500 feet and 1000 feet respectively.

Economic Features: Bulk sampling on surface over a length of 400 feet and an average width of 12 feet gave 4.20% Pb, 0.30% Zn, 0.22 oz./ton Ag, (ODM, Toronto, Res. Geol. files).

Ownership: Lake Kingston Mines Ltd.

History: 1866-70 No. 1 shaft sunk to 80 feet; about 2000 tons ore mined.
1875-80 No. 1 shaft deepened to 267 feet; drifting on 5 levels; smelter constructed in Kingston; 2000 tons ore mined by Frontenac Lead Mining and Smelting Co.
1903-05 No. 2 shaft sunk to 80 feet, 500 tons of ore mined.
1911-12 No. 3 shaft sunk to 150 feet, and 500 feet of drifting by North American Smelting Co. Ltd.
1916-17 38,527 lbs. Pb valued at \$4,845 produced by Kingston Smelting Co.
1926-27 No. 1 shaft deepened to 313 feet, 120 feet of drifting on 300 foot level by Forbes Galena Mines Ltd.
1947-48 3108 feet of d.d. by New Calumet Mines Ltd.
1951-52 11 d.d. holes and bulk sampling by Draper Lake Frontenac Lead-Zinc Mines Ltd.
1958 2046 feet of d.d. by Lake Kingston Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.5-6.
OBM, 1916, Vol.25, pt.2, p.18-21.
GSC, 1930, Econ. Geol. Ser. 8, p.142-145.
ODM, Toronto, Res. Geol. files.

OLDEN TOWNSHIP

Long Lake Zinc Mine (Past Producer)

Main Metals: Zn, Pb.

Location: Olden Tp.; lot 3, con. V-VI, 1/2 mi. W of Long Lake.
Reference: ODM map 1947-5.

Geology: Sphalerite with minor galena, chalcopyrite and pyrite in veins and lenses up to 140 feet long and 14 feet wide, in Grenville marble.

Economic Features: A 100 lb. selected sample assayed 1.65 oz./ton Ag, 2.31% Pb, 30.55% Zn (J.E. Thomson, unpub. rept., 1952).

History: 1897-1913 5 shafts, 60-125 feet deep; drifting and crosscutting; trenching and pitting; 3442 tons of ore valued at \$41,550 produced by various companies.
1914-15 Shafts dewatered and 1000 feet of d.d. by Long Lake Zinc Co.
1948-50 Shafts dewatered, drifting and 24 surface d.d. holes by Rochette Gold Mines Ltd.
1966 Surface exploration by Mid-South Explorations Ltd.

References: ODM, 1947, Vol.56, pt.6, p.91-94.
GSC, 1930, Econ. Geol. Ser. 8, p.146-151.
Northern Mines, Oct. 27, 1966.
ODM, Toronto, Res. Geol. files.

FRONTENAC COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Barrie Tp.; lots 11-13, con. I.	ODM, 1942, Vol. 51, pt. 4, p.42.	Zn, Au	30-inch quartz vein in sheared greenstone.
Barrie Tp.; lots 13-15, con. V-VI.	ODM, 1942, Vol. 51, pt. 4, p.40.	Cu, Pb, Zn	Narrow quartz veins and stringers in marble.
Barrie Tp.; N½ lot 13, con. VI.	ODM, Toronto, Res. Geol. files.	Pb, Zn	Quartz-calcite stringers in marble.
Barrie Tp.; lots 19-20, con. VI.	OBM, 1901, Vol. 10, p.117-18.	Cu	Quartz vein in marble.
Barrie Tp.; N½ lot 21, con. VI.	ODM, Toronto, Res. Geol. files.	Cu	Disseminated sulphides in quartzite and marble.
Barrie Tp.; S½ lot 25, con. VI.	ODM, Toronto, Res. Geol. files.	Cu, Pb, Zn	Disseminated sulphides in marble.
Barrie Tp.; lots 7-10, con. VIII-IX (International).	ODM, 1942, Vol. 51, pt. 4, p.41-42.	Zn, Pb, Cu	Sphalerite-bearing quartz vein in dolomitic marble.
Barrie Tp.; lot 12, con. VIII.	ODM, 1942, Vol. 51, pt. 4, p.41.	Zn	30 ft. shaft sunk on narrow quartz vein.
Barrie Tp.; S½ lots 3-5, con. X. (Gough).	ODM, 1942, Vol. 51, pt. 4, p.41.	Zn	12-inch quartz vein in marble.
Barrie Tp.; S½ lot 24, con. XII.	ODM, Toronto, Res. Geol. files.	Cu, Pb, Zn	Quartz-calcite veinlets in mica-schist.
Barrie Tp.; S½ lot 25, con. XII.	ODM, Toronto, Res. Geol. files.	Cu	Chalcopyrite in quartz stringers.
Bedford Tp.; lot 5, con. III.	ODM, Toronto, Granted Lands Section files.	Zn	East shore of Thirty Island Lake.
Bedford Tp.; lot 12, con. IV, (L. Murphy).	ODM, 1947, Vol. 56, pt. 6, p.67.	Pb	8 ft. pit exposes galena in marble.
Bedford Tp.; lot 13-14, con. V, (J. Murphy).	ODM, 1947, Vol. 56, pt. 6, p.67.	Pb	Galena in calcite-barite veinlets.
Bedford Tp.; lot 17, con. VI, (Bedford).	ODM, 1947, Vol. 56, pt. 6, p.68-70.	Pb	Calcite-barite-galena vein 1-4 ft. wide, 1,100 ft. long.
Bedford Tp.; lot 20, con. VI, (Crozier).	ODM, 1947, Vol. 56, pt. 6, p.70.	Pb	Narrow calcite-galena vein in marble.
Bedford Tp.; lot 18, con. VII, (Robinson).	ODM, 1947, Vol. 56, pt. 6, p.70.	Pb	Several 1-2 ft. calcite-galena veins in marble.
Bedford Tp.; lot 18, 19 and 21, con. VIII.	ODM, 1947, Vol. 56, pt. 6, p.71-72.	Pb	Four small galena showings in narrow calcite veins.
Bedford Tp.; E½ lot 2, con. IX.	ODM, Toronto, Res. Geol. files.	Cu, Fe	Disseminated sulphides with magnetite.
Clarendon Tp.; lot 26 and 27, con. IX.	GSC, 1901, Vol. 14, pt. J.	Pb	Galena in quartz vein.
Kennebec Tp.; W½ lot 11, con. II.	ODM, 1942, Vol. 51, pt. 4, p.74.	Cu	Disseminated sulphides in Grenville marble.
Kennebec Tp.; lot 32, con. II.	ODM, 1942, Vol. 51, pt. 4, p.73.	Cu, Pb, Au	Mineralized quartz stringers.
Kennebec Tp.; SW¼ lot 31, con. III.	ODM, Toronto, Res. Geol. files.	Cu	Chalcopyrite in quartzite.
Kennebec Tp.; lot 10, con. X.	ODM, Toronto, Res. Geol. files.	Cu	Skarn zone at volcanic-gneiss contact.
Olden Tp.; lot 8, con. II, (Smith).	ODM, 1947, Vol. 56, pt. 6, p.91.	Zn	Sphalerite in serpentine marble.
Olden Tp.; W½ lot 10, con. IV, (McKnight).	ODM, 1947, Vol. 56, pt. 6, p.57.	Ni, Au	Rusty pyritized zone in quartzite.
Olden Tp.; lot 10, con. VI, (Raymond).	ODM, 1947, Vol. 56, pt. 6, p.57.	Ni, Cu	Rusty pyritized zone in greywacke.
Oso Tp.; lot 31, con. IV, (Crain).	ODM, 1947, Vol. 56, pt. 6, p.46.	Cu	Chalcopyrite in quartz-calcite vein.
Palmerston Tp.; lots 1-2, con. VIII-IX, (Riddell).	ODM, 1956, Vol. 65, pt. 7, p.42.	Cu	Chalcopyrite in two 1-ft. quartz veins.
Palmerston Tp.; lot 1, con. IX.	ODM, Toronto, Res. Geol. files.	Cu	Quartz-copper vein.
Storrington Tp.	OBM, 1895, Vol. 5, p.222.	Ni	Disseminated in basaltic dike.

HALIBURTON COUNTY

HINDON TOWNSHIP

Dupel Prospect

Main Metals: Cu.

Location: Hindon Tp.; lots 4-7, con. II; 12 mi. N of Minden.

Reference: ODM map 2148.

Geology: Disseminated chalcopyrite and bornite in sill-like bodies of diorite amphibolite, 200-300 feet thick, intruding granite, pegmatite and gneiss.

Economic Features: 10 pit samples gave 1.74-4.39% Cu over a length of 2300 feet. Best d.d. assay gave 1.2% Cu over 17.5 feet (ODM, 1957, M.R.C. 2, p.6).

Ownership: Canadian Goldale Corp. Ltd.

History: 1954-56 Trenching, surface exploration, geophysical surveys and 5467 feet of d.d. by Dupel Mines Ltd.

1966-67 Surface exploration by Whitegate Mining Co. Ltd.

References: ODM, 1957, M.R.C. 2, p.6.

Northern Miner, Nov. 25, 1954; Jan. 20, May 12, 1955; June 14, 1956.
ODM, Toronto, Res. Geol. files.

HALIBURTON COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Glamorgan Tp.	OBM, 1898, Vol.7, pt.3, p.231.	Ni	Location unknown.
Glamorgan Tp.; N½ lot 2, con. VI (Simmons).	ODM, Toronto, Res. Geol. files.	Cu	Stringers of chalcopyrite and pyrrhotite in paragneiss.
McClintock Tp.; N½ lot 18, con. IX (Ellerington).	ODM, Toronto, Res. Geol. files.	Cu	Pyrrhotite and chalcopyrite disseminated in biotite gneiss.
McClintock Tp.; N½ lot 17, con. X (Bouges).	ODM, Toronto, Res. Geol. files.	Cu	Disseminated pyrrhotite and chalcopyrite in biotite gneiss.
McClintock Tp.; S½ lots 16-17, con. X.	ODM, Toronto, Res. Geol. files.	Cu	Disseminated pyrrhotite and chalcopyrite.

HASTINGS COUNTY

LIMERICK TOWNSHIP

Macassa Nickel Prospect

Main Metals: Ni, Cu.

Location: Limerick Tp.; lots 28-29, con. VI-VII, 14 mi. SE of Bancroft.
Reference: ODM map 2148.

Geology: Deposit occurs in metapyroxenite near its contact with gabbro. Mineralization consists of pyrrhotite, pentlandite, pyrite, chalcopyrite, with minor cubanite and sphalerite.

Economic Features: Estimated 2,000,000 tons grading 1% Ni and 0.25% Cu to 1000-foot depth (Northern Miner, 1962).

Ownership: Macassa Gold Mines Ltd.

History: 1961 Discovery by Bicroft Uranium Mines Ltd.; some d.d.
1962-63 13,640 feet of d.d., sampling and metallurgical testing by Macassa Gold Mines Ltd.

Remarks: Reserve estimates are to the 1000-foot level, the maximum depth d.d. has reached. The 3 holes drilled to that depth gave the best grade.

References: Northern Miner, April 12, 1962.
Canadian Mines Handbook, 1968-9, p.205-206.
Lumbers, S.B., ODM, unpubl. rept.

MADOC TOWNSHIP

Eldorado Copper Mine (Past Producer)

Main Metals: Cu (minor Au, Ag).

Location: Madoc Tp.; lot 18, con. V; 1/2 mi. W of Eldorado.
Reference: ODM map 2154.

Geology: The deposit is a lens 36 feet long by 7-10 feet wide at the contact between granite and marble. The ore consisted mainly of hematite to a depth of 60-80 feet, pyrite, chalcopyrite and minor chalcocite below.

Economic Features: Ore was reported to assay 4-10% Cu (OBM, 1906, Vol.15, pt.1, p.91).

History: pre-1906 Hematite ore removed by open cut 75 feet deep, during which time the property was known as the Coe Iron Mine. A 75-foot shaft sunk from the bottom of the open cut had levels at 110 feet, 130 feet, and 150 feet; drifting on these levels of 105 feet, 170 feet, and 175 feet respectively by Medina Gold Mining Co.
1906 Shaft abandoned. Mining continued from open cut, following the ore down dip (65°) to 300 feet. Production of 234,000 lbs. Cu matte containing 23 oz. Au, 182 oz. Ag, and 109,000 lbs. Cu by Ontario Copper Co.
1956 Shaft dewatered and re-examined by Picton Uranium Mines Ltd.

Remarks: The hematite cap was formed by surface oxidation of the sulphide orebody.

References: ODM, 1968, G.R.73, p.21-22.
OBM, 1906, Vol.15, pt.1, p.90-91.
OBM, 1907, Vol.16, pt.1, p.76.
OBM, 1913, Vol.22, pt.2, p.108.
M.R.B., Ottawa, mineral files.
Northern Miner, July 19, 1956.

Hollandia Lead Mine (Past Producer)

Main Metals: Pb.

Location: Madoc Tp.; E 1/2, lot A, con. VI; 2 mi. N of Bannockburn.
Reference: ODM map 2154.

Geology: Galena-calcite vein 2.4 feet wide, maximum 10 feet, cutting Grenville marble and paragneiss.

Economic Features: Vein averages about 6% Pb, but assays of 1-12% Pb have been recorded (GSC, 1930, Econ. Geol. Ser. 8, p.157).

History: 1898 20 tons of cobbled ore produced from open cuts by L. Meyer and R.C. Vander Meulen.
1903-1906 and 1916 4 shafts sunk to 90, 132, 65, and 40 feet. Total production reported as 2,653,365 lbs. Pb valued at \$111,097 by Ontario Mining and Smelting Co. (1903-04) and Stanley Smelting Co.
1956 18 d.d. holes by Teck Exploration Co. Ltd.
1966 Soil geochemical and ground magnetometer surveys south of the vein by Penarroya Canada Limited.

References: ODM, 1943, Vol.52, pt.3, p.55-56.
ODM, 1968, G.R.73, p.24.
GSC, 1930, Econ. Geol. Ser. 8, p.155-157.
M.R.B., Ottawa, mineral files.
ODM, Toronto, Res. Geol. files.

MARMORA TOWNSHIP

Bonter Prospect

Main Metals: Cu, Ni.

Location: Marmora Tp.; lot 27, con. V, 8 mi. N of Marmora.
Reference: GSC map 560A.

Geology: Pyrrhotite and chalcopyrite disseminated in a body of pyroxenite
350 feet long by 50-75 feet wide.

Economic Features: Surface samples assayed as high as 2.39% Cu and 0.48%
Ni over 60 feet. Drill core assays were mostly less than 1% combined
Cu and Ni (ODM, 1957, M.R.C. 2, p.5). One drillhole assayed 0.26% Cu
and 0.45% Ni over 176 feet (ODM, Toronto, Res. Geol. files).

History: 1925 Test pit and rock cuts.
1943 Geophysical surveys and 1921 feet of d.d. in 6 holes by
Consolidated Mining and Smelting Co. of Canada Ltd.
1953 3609 feet of d.d. in 7 holes by Ontario Nickel Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.5.
ODM, 1943, Vol.52, pt.3, p.17.
ODM, Toronto, Res. Geol. files.

HASTINGS COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Cashel Tp.; lot 20, con. I.	ODM, 1968, G.R. 71, p.39.	Ag, Pb	Galena in quartz vein.
Cashel Tp.; lot 31, con. I, (Cashel Copper).	ODM, 1968, G.R. 71, p.39-40.	Cu, Pb, Ag	Narrow sulphide-bearing quartz veins.
Cashel Tp.; lot 28, con. III.	ODM, 1968, G.R. 71, p.40.	Pb, Ag	2 ft. galena-calcite vein.
Cashel Tp.; lot 29, con. IV.	ODM, 1968, G.R. 71, p.40.	Pb, Zn, Ag	Galena-calcite vein 2-4 ft. thick.
Dungannon Tp.; lot 23, con. III.	ODM, 1943, Vol. 52, pt. 3, p.17.	Cu	Sulphides in calcite stringers.
Elzevir Tp.; lot 18, con. I.	GSC, 1930, Econ. Geol. Ser. 8, p.158.	Pb, Ag	3 ft. galena-quartz vein.
Elzevir Tp.; lot 25, con. III-IV, (Silver King).	ODM, Toronto, Res. Geol. files.	Ag, Pb	Quartz stringers in schist and sheared granite.
Huntingdon Tp.; lot 10, con. XII, (Blakely).	ODM, 1964, I.M.R. 12, p.29-30.	Zn	Sphalerite coating breccia fragments in calcite-fluorite vein.
Lake Tp.; lot 7, con. III.	ODM, Toronto, Res. Geol. files.	Cu	Chalcopyrite in sheared quartz-biotite paragneiss.
Lake Tp.; lots 14-15, con. III.	ODM, Toronto, Res. Geol. files.	Cu	Chalcopyrite in sheared argillite and greywacke.
Lake Tp.; lots 16-17, con. III.	ODM, Toronto, Res. Geol. files.	Fe, Cu	Magnetite and chalcopyrite in biotite paragneiss.
Lake Tp.; lot 30, con. VII.	ODM, 1968, G.R. 54, p.24.	Cu	Skarn zone in basic volcanic rock.
Lake Tp.; lot 8, con. XI, (Katherine).	ODM, 1968, G.R. 54, p.27-28.	Pb, Zn, Ag	2 ft. galena-calcite vein.
Lake Tp.; lot 10, con. XI.	GSC, 1866-1869, Rept. of Progress, p.163.	Pb	20-inch galena-calcite vein.
Lake Tp.; lot 11, con. XI.	GSC, 1910, Mem. '6, p.350.	Pb	
Limerick Tp.; lots 1-2, con. II, (Chrysler).	ODM, Toronto, Res. Geol. files.	Pb, Ag	Galena-barite-calcite vein up to 8 ft. thick, 4,000 ft. long.
Limerick Tp.; lots 27-29, con. II.	GSC, 1863-1866, Summ. Rept., p.105.	Pb	
Madoc Tp.; lot 29, con. V.	GSC, 1930, Econ. Geol. Ser. 8, p.161.	Cu, Pb	Quartz stringers in marble.
Madoc Tp.; lot 29, con. VI, (Webber).	GSC, 1930, Econ. Geol. Ser. 8, p.161.	Pb, Zn	Galena and sphalerite in quartz vein.
Madoc Tp.; lot 11, con. XI, (Queensboro).	ODM, 1916, Vol. 25, pt. 1, p. 197.	Cu, Zn	Traces of copper and zinc in lenses of pyrite.
Madoc Tp.; lot 24, con. XI.	OBM, 1909, Vol. 18, pt. 1, p. 135.	Pb, Zn, Cu	Galena, sphalerite, chalcopyrite in quartz vein.
Marmora Tp.; lots 28-29, con. III.	GSC, 1863-1866, Summ. Rept. p.105.	Pb	
Mayo Tp.; lot 16, con. V.	ODM, Toronto, Res. Geol. files.	Pb	Galena stringers in marble.
Monteagle Tp.; lot 21, con. II.	ODM, 1943, Vol. 52, pt. 3, p.56.	Pb	Galena-calcite stringers in pyroxenite and granite gneiss.
Rawdon Tp.; lot 4, con. XIII.	OBM, 1902, Vol. 11, p.205.	Pb, Zn	Galena and sphalerite in quartz-calcite vein.
Tudor Tp.; lots 1-2, con. A, (Stewart).	GSC, 1930, Econ. Geol. Ser. 8, p.160-161.	Pb	3 ft. galena-calcite vein.
Tudor Tp.; lot 9, con. A, (Reelman).	ODM, 1925, Vol. 34, pt. 1, p.165.	Pb	Location uncertain.
Tudor Tp.; lots 4-5, con. B, (Roberts).	GSC, 1930, Econ. Geol. Ser. 8, p.160.	Pb	10-inch galena-calcite vein.
Tudor Tp.; lot 28, con. B.	GSC, 1866-1869, Rept. of Progress.	Pb	Narrow galena-calcite-barite vein.

<u>Location</u>	<u>Reference</u>	<u>Metals</u>	<u>Remarks</u>
Tudor Tp.; lot 30, con. B.	GSC, 1930, Econ. Geol. Ser. 8, p.162.	Pb	8-inch galena-calcite vein.
Tudor Tp.; lot 11, con. II, (Blackburn).	GSC, 1930, Econ. Geol. Ser. 8, p.159.	Pb	6-inch galena-calcite vein.
Tudor Tp.; lots 2-3, con. III	ODM, Toronto, Res. Geol. files.	Cu, Ni	Disseminated sulphides in quartz stringers.
Tudor Tp.; lots 4-5, con. III, (Craig).	Lumbers, S.B., ODM, report in press.	Cu, Ag, Au	Chalcopyrite and pyrrhotite in 6-ft. quartz vein.
Tudor Tp.; lot 32, con. III.	ODM, 1943, Vol. 52, pt. 3, p.57.	Pb	
Tudor Tp.; lot 34, con. IV.	GSC, 1863-1866, Summ. Rept. p. 104.	Pb	Galena-calcite vein.
Tudor Tp.; lot 12, con. V.	ODM, 1943, Vol. 52, pt. 3, p.57.	Pb	
Tudor Tp.; lot 11, con. VI.	ODM, 1943, Vol. 52, pt. 3, p.57.	Pb	
Tudor Tp.; lot 10, con. VII.	ODM, 1943, Vol. 52, pt. 3, p.57.	Pb	
Tudor Tp.; lot 29, con. XIV.	GSC, 1866-1869, Rept. of Progress p.162-163.	Pb	Galena-calcite vein.
Tudor Tp.; lots 26-28, con. XIX.	ODM, 1943, Vol. 52, pt. 3, p.57.	Pb	
Tudor Tp.; lot 12, Hastings Rd. W.	Lumbers, S.B., ODM, report in press.	Pb	Galena-calcite vein.
Tudor Tp.; lots 11-12, Hastings Rd. E. (Ramsey).	Lumbers, S.B., ODM, report in press.	Pb	Galena-barite-calcite vein $\frac{1}{2}$ -4 ft. thick.
Tudor Tp.; lots 30-32, Hastings Rd. E. (Murphy).	GSC, 1866-1869, Rept. of Progress, p.162.	Pb	8-inch galena-calcite vein.
Wollaston Tp.; lot 15, con. II, (McMurray).	ODM, Toronto, Res. Geol. files.	Fe, Cu	Magnetite with minor chalcopyrite in skarn.

KENORA DISTRICT

BALL TOWNSHIP

Bridget Lake Copper Prospect

Main Metals: Cu, Ag.

Location: Ball Tp.; 1200 ft. ENE of the NW end of Bridget Lake.

Reference: ODM map 49a.

Geology: Heavy chalcopyrite and pyrite mineralization is exposed in a silicified carbonate vein approximately 1 foot thick. Finely disseminated chalcopyrite, pyrite, and some sphalerite are present in the contiguous chloritic rock. The vein does not appear to extend along strike.

Economic Features: A 4-foot chip sample returned 1.25% Cu, 2.76 oz./ton Ag and 0.06 oz./ton Au.

Ownership: Piper Red Lake Mines Ltd.

History: Pre-1963 Trenching by persons unknown.

1963 Trenching, geological mapping, MAG and SP surveys - Cochenour Willans Gold Mines Ltd.

References: Fisher, D.E., 1963, Private Report to Cochenour Willans Gold Mines Ltd.

Galena Island Prospect

Main Metals: Pb, Ag, Zn.

Location: Ball Tp.; south side of island 1/4 mi. WNW of West Narrows.

Reference: ODM map 49a.

Geology: The showing lies in an east-trending carbonate zone up to 400 ft. thick, bordered on the north by quartz porphyry and metavolcanic rocks and on the south by metavolcanics. The carbonate is cut by numerous quartz stringers and veins. Massive galena and minor sphalerite, pyrite, and chalcopyrite occur in a few irregular veinlets up to 2 inches thick within the commonly silicified carbonate.

Economic Features: The mineralization extends for at least 800 feet.

A selected grab sample is reported to have run 12 oz./ton Ag and 0.45 oz./ton Au.

Ownership: Optioned by Cochenour Willans Gold Mines Ltd. from Wm. Stupack.

History: Pre-1944 Trenching and stripping by persons unknown.

1945 4 X-ray d.d. holes by persons unknown.

1950 Trenching, geological mapping, 1475 ft. d.d. by Lake Bed Lead Syndicate.

1960-1965 4 X-ray d.d. holes (569 ft.) by Wm. Stupack.

References: ODM, 1952, P.R. 1952-4, p.21.

ODM, Red Lake files.

BALMER TOWNSHIP

McDougal Lake Deposits

Main Metals: Cu, Ni.

Location: Balmer Tp.; approx. 3 mi. N and 1 1/4 mi. W of the SE corner.

Reference: ODM map 1951-3.

Geology: Southwest of McDougal Lake drilling has shown pyrrhotite, pyrite, and minor chalcopyrite disseminated or filling fractures in lean iron formation or along the schistosity in quartzite and argillite. Pyrrhotite replaced by chalcopyrite and niccolite also occurs in the same zone. One half mile northeast of McDougal Lake drilling has indicated a similar zone containing pyrrhotite, pyrite, and chalcopyrite.

Economic Features: The Northern Miner (Nov.27, 1958) reports a 2-3 foot drill intersection from the southwest zone which returned 1.40% Cu and 0.47% Ni. Diamond drill logs indicate several visual estimates of 3% to 5% chalcopyrite from the northeast zone. The Northern Miner also reports assays of from 0.66% to 5.56% Cu from various drill holes in the northeast part of the township.

History: 1957-1960 Trenching, airborne magnetic and electromagnetic surveys, a ground magnetic survey, and several thousand ft. of d.d. by Cordoba Mines Ltd.

References: ODM, Red Lake files.

Kilbarry Prospect

Main Metals: Cu, Ag.

Location: Balmer Tp.; approximately 3000 ft. E. of the bridge on the Chukuni River. Reference: ODM map 1951-3.

Geology: The property is underlain by metabasalts and minor metasediments cut by at least 6 northwest-striking quartz porphyry dikes. Massive to sparsely disseminated pyrite, pyrrhotite, and chalcopyrite with minor amounts of arsenopyrite and sphalerite are found along the southwest contact of a quartz porphyry dike in a 10-foot band of flow-top material. Drilling has indicated a mineralized zone 800 feet long and extending to a depth of 650 feet.

Economic Features: According to Chisholm (ODM, 1951) average grade for a 600-foot length is 1.47% Cu and 0.065 oz./ton Au over a thickness of 5.4 feet. The best intersection was 4.05% Cu and 0.06 oz./ton Au across 5.6 feet.

History: 1946-1947 MAG and geol. surveys, about 9000 ft. of d.d. by Kilbarry Red Lake Gold Mines Ltd.

References: ODM, 1951, Vol. 60, pt. 10, p. 46-48.
ODM, Red Lake files.

BELANGER TOWNSHIP

Fredart Lake Deposits

Main Metals: Cu, Ni, Ag, Au.

Location: Belanger Tp.; approx. 1 mi. SE of Fredart Lake.
Reference: ODM map P.350.

Geology: Four NE-trending mineralized zones are present. The two westerly zones are 1200 feet and 700 feet long and contain an echelon pods of mineralization in coarse-grained garnetiferous amphibolite found along the contact of a thick metadiorite sill. The two easterly zones are 1700 feet and 800 feet long and mineralization is confined to shear zones in metasediments. Mineralization in both cases consists of massive pyrite, pyrrhotite and some magnetite containing streaky to disseminated chalcopyrite and sphalerite. Significant values in silver and gold are common in the mineralized shear zones.

Economic Features: Economic mineralization has only been encountered in the most easterly zone where drilling has outlined a body 800 feet long and about 14 feet thick which grades 0.83% Cu, 4.57% Zn and 0.47 oz/ton Ag. 1,150 tons per vertical foot are indicated to the 200-foot level. A smaller zone branching from the above is 225 feet long by about 7 feet thick and contains 0.30% Cu, 7.92% Zn and 0.36 oz./ton Ag.
Reference: Filio, J.J.D., 1966, private report to Copper Lode Mines Ltd.

History: 1962 Trenching, geol. dip needle and EM surveys by Falconbridge Nickel Mines Ltd.
1964-1965 Trenching, geol. and EM surveys, 24,059 ft. of d.d. by Copper Lode Mines Ltd.
1968-1969 (proposed) Detailed MAG survey, initial 3000 ft. of d.d. by Copper Lode Mines Ltd.

References: Holbrooke, G.L., 1964, private report to Copper Lode Mines Ltd.
Filio, J.J.D., 1966, private report to Copper Lode Mines Ltd.
Northern Miner, Oct. 10, 1968.
ODM, Red Lake, files.

BRIDGES TOWNSHIP

Noranda Prospect

Main Metals: Zn, Ag.

Location: Bridges Tp.; 2 mi. W of Game Lake and 1/4 mi. N of Highway 17.

- Geology: The mineralized zone lies in a sheared and recrystallized quartzite or quartz dike bounded by garnetiferous metasediments. Sphalerite and pyrite are the main sulphide minerals. Minor galena, chalcopyrite and magnetite are also present.

Economic Features: Trenching has exposed mineralization over a zone 20 feet wide. Chip samples across the zone gave about 1/2% Zn and 0.5 oz./ton Ag.

History: 1967-68 Trenching and sampling by Noranda Mines Ltd.

References: ODM, 1967, M.P.16, p.7.

DENT TOWNSHIP

Selco Prospect

Main Metals: Zn, Cu, Ag.

Location: Dent Tp.; approx. 3/4 mi. WNW of SE corner, Dent Tp.
Reference: ODM map 48g.

Geology: Massive sphalerite, chalcopyrite and pyrite, containing significant silver values, occurring in a complex series of porphyritic felsic metavolcanics.

Economic Features: From three holes drilled in December, 1968 on 200-foot centres the following results were obtained:

Hole No.	Core Length feet	Cu percent	Zn percent	Ag percent
1	49.3	2.54	14.96	3.37
2	18.8	6.26	14.69	4.96
	72.0	2.25	25.35	4.47
3	34.2	1.95	21.21	3.57

Ownership: South Bay Mines Ltd.

History: 1927 Property trenched and surveyed by Dunlop Consolidated Mines Ltd.
1968 Airborne and ground EM surveys, 1,908 feet of d.d. in 4 holes - Selco Exploration Co. Ltd.
1969 Company announces that South Bay Mines Ltd. drilling to a depth of 425 feet on the main sector of the ore zone, has indicated sufficient ore to justify a 500-ton per day operation. Diluted grade of ore to 425 feet is 2.24% Cu, 14.11% Zn, and 3.64 oz. Ag/ton. Production is planned for the first quarter of 1971.

References: Northern Miner, 1969, Jan. 16, p.1, 11, 16; July 17, p.1, 8.
ODM, 1928, Vol.37, pt.4, p.48.
ODM, Press Release, 17 July, 1969.

DRAYTON TOWNSHIP

McCombe Prospect

Main Metals: Cu, Au.

Location: Drayton Tp.; island in NE arm of Minnitaki Lake, 6 mi. SE of Sioux Lookout.

Reference: ODM map P.353.

Geology: Mineralization consisting of pyrite, pyrrhotite and chalcopyrite occurs in brecciated diorite and tuffaceous volcanics.

Economic Features: Grab samples gave assays ranging from 0.25 to 0.57% Cu and 0 to 0.22 oz./ton Au. The best intersection was a core length of 4.5 feet which assayed 2.30% Cu, and 0.12 oz./ton Au.

History: 1957-58 EM survey by Noranda Mines Ltd.

1961 IP survey and 5 d.d. holes for a total of 1,659 feet by Rio Tinto Canadian Exploration Ltd.

References: ODM, Kenora files.

ODM, P.R. 1951-1, p.10.

EARNGEY TOWNSHIP

Colberg Prospect

Main Metals: Cu, Ni, Co.

Location: Earngey Tp.; on peninsula approx. 2 mi. ENE of Uchi Mine.

Reference: ODM map 48g.

Geology: Sulphide mineralization is found widely disseminated in a coarse grained metagabbro dike. The dike lies in mafic to intermediate lavas and intermediate pyroclastics and is at least 2300 feet long, up to 300 feet thick, and is slightly convex to the northeast, thickening in its central portion. Mineralization consists of nickeliferous pyrrhotite, chalcopyrite, pentlandite, violarite, pyrite, magnetite, and marcasite. Traces of cobalt bloom have been found in trenches.

Economic Features: The main showing lies in the north-south portion of the gabbro and has been traced for a distance of 500 feet. Drilling has indicated similar mineralization 400 feet south and it is also present in a trench 800 feet northwest. Values from trenches are higher than

those from diamond drilling. One chip sample across 25 feet ran 1.44% Cu, 0.30% Ni, and 0.15% Co, while a second across 22 feet ran 1.16% Cu, 0.18% Ni, and trace Co. In comparison a 26-foot section of core gave a weighted average of 0.04% Cu and 0.03% Ni while a 25-foot core section gave 0.62% Cu and 0.04% Ni.

History: Pre 1955 Trenching by M. Colberg.

1955-56 Staked by Kolak Mines Ltd.

1956 Trenching and 390 feet of X-ray d.d. by Campbell Island Mines and Explorations Ltd.

1957 Geol. survey, 4802 feet of d.d. by Campbell Island Mines and Explorations Ltd.

References: Campbell Island Mines and Explorations Ltd., 1957, Prospectus.

ODM, 1957, M.R.C. No.2, p.68.

ODM, Red Lake files.

EWART TOWNSHIP

Chimo-Alcock Prospect

Main Metals: Zn, Cu.

Location: Ewart Tp.; 1 mi. due E of east end of High Lake.

Reference: ODM map 2069.

Geology: Sulphides occur in a sheared basalt. The E-W striking sinuous shear in which the sulphides occur is narrow and appears to be a surface structure.

Economic Features: Grab samples assayed up to 3% Zn, 1% Cu, 0.25% Co, 0.08 oz./ton Au and 3 oz./ton Ag. Best width of mineralized zone is 4 feet.

History: 1962 EM induction survey and 1 d.d. hole for 500 feet by Chimo Gold Mines Ltd.

References: ODM, 1965, G.R.41, p.48-49.

High Lake Prospect

Main Metals: Cu, Au.

Location: Ewart Tp.; NE end of High Lake, 30 mi. W of Kenora.

Reference: ODM map 2069.

Geology: Disseminated chalcopyrite in a granite porphyry.

Economic Features: A 75-foot wide channel sample assayed 0.95% Cu, and a 150 pound bulk sample from the same pit assayed 1.89% Cu. Highest gold value obtained was 0.04 ounces over a width of 35 feet which also ran 0.52% Cu. Work done in 1963 by Alcock extended the known area of copper mineralization to a length of at least 2000 feet and a width of 250 feet.

History: 1956 2,155 feet of d.d. by Green Bay Mining and Exploration Co. Ltd.
1963 272 feet of d.d. by Alcock and Tew.

References: ODM 1965, G.R.41, p. 46-48.
ODM, Kenora files.

Selco-Alcock Prospect

Main Metals: Cu.

Location: Ewart Tp.; 900 feet N of N shore of High Lake and about 1 mi. W of above prospect.
Reference: ODM map 2069.

Geology: Copper mineralization in thin massive veins of pyrite and pyrrhotite occur in fractures in porphyry and as disseminations in the adjacent porphyry.

Economic Features: The length of the zone is about 300 feet and average width is about 4 feet. A sample from the zone assayed 0.03 oz./ton Au, 0.4 oz./ton Ag and in excess of 1% Cu.

History: 1961 MAG and geol. surveys and 1,258 feet of d.d. by Selco Exploration Co. Ltd.

Reference: ODM, 1965, G.R.41, p.48.

HYNDMAN TOWNSHIP

Tache Prospect

Main Metals: Cu, Ni.

Location: Hyndman Tp.; 25 mi. W of Ignace, 2,000 feet S of the Canadian Pacific Railway.
Reference: ODM map 1960h.

Geology: Massive, dark, coarse-grained hornblende diorite contains erratically disseminated pyrrhotite and chalcopyrite. Sulphide is also

present in sheared chloritized hornblende-rich phases of the diorite.

Economic Features: Five bulk samples taken from trenches gave assays of 0.21 to 0.37% Cu and 0.27 to 0.33% Ni.

History: 1956 Geophysical survey, trenching and 3 d.d. holes totalling 460 feet by Cominco, Ltd.

Reference: ODM, 1960, Vol.69, pt.6, p.28.

KIRKUP TOWNSHIP

Cameron Prospect

Main Metals: Cu.

Location: Kirkup Tp.; X-45 claim, SE shore of Bigstone Bay.

Reference: ODM map 39f.

Geology: Mineralized shear zone in volcanics striking N45E and dips 75SE. Mineralization consists of a network of pyrite and chalcopyrite associated with lenses and veinlets of quartz and dolomite.

Economic Features: The mineralization extends for a length of 75 feet and is up to 5 feet wide. A grab sample assayed 12.66 percent Cu.

Ownership: Cameron Brothers, Kenora.

History: 1930 Trenching and sampling.

1951 2 d.d. holes.

References: ODM, 1930, Vol.39, pt.3, p.69.

ODM map 39f.

MANROSS TOWNSHIP

Ellard Prospect

Main Metals: Cu.

Location: Manross Tp.; 5 mi. E of French Narrows, Lake of the Woods, 15 mi. SE of Kenora.

Reference: ODM map 2115.

Geology: Sulphides in the form of pyrite, pyrrhotite, chalcopyrite, and minor galena are found in cherty sediments and lie close to a dioritic body. The sulphides occur in thin seams parallel to bedding planes as well as in shears and cross fractures.

Economic Features: The mineralized zone can be traced for about 500 feet and is up to 12 feet wide. Chip samples taken from the original trench are reported to assay 1.25% Cu across 12 feet or 1.49% Cu across 8 feet.

History: 1967 MAG and EM surveys by K.G. Ellard (1966) Grubstake.
1967 2 d.d. holes by Cominco, Ltd.

References: ODM, Kenora files.
ODM, 1967, M.P.16, p.5.

Norlex Prospect

Main Metals: Cu.

Location: Manross Tp.; French Narrows, 12 mi. S of Kenora.
Reference: ODM map P.401.

Geology: The mineralized zone, consisting of pyrite, pyrrhotite and chalcopyrite, occurs in a thin band of felsic volcanic rocks. The felsic volcanics lie within mafic volcanic rocks near the south edge of a large gabbro sill.

Economic Features: Trenching in five places has encountered sulphides along a strike length of about 2,000 feet. The best core intersection gave 0.39% Cu and a trace of Zn over 8.5 feet.

History: 1966 EM and MAG surveys, and 13 d.d. holes by Norlex Mines, Ltd.

References: ODM, Kenora files.
ODM, 1966, P.R. 1966-1, p.11.

MITCHELL TOWNSHIP

Elbtw (Horseshoe) Lake Prospect

Main Metals: Zn, Ag, Pb, Cu.

Location: Mitchell Tp.; S side of Elbow (Horseshoe) Lake.
Reference: ODM map 36e.

Geology: The mineralization lies within a shear zone from 60 to 100 feet wide and traced for 3400 feet along strike in paragneiss surrounded by granite rocks. Sulphide mineralization is concentrated on both edges of the shear zone and consists of pyrite, pyrrhotite, sphalerite, and some chalcopyrite and galena.

Economic Features: Diamond drilling has indicated values up to 5.46% Zn, 0.91 oz./ton Ag, 1.18% Pb and minor Cu and Au over thicknesses of from 5 to 14 feet in the 1800-foot zone and 500-foot south zone.

History: 1927-1950 Intermittent prospecting and trenching.
1951 2207 ft. of d.d. by Heath Gold Mines Ltd.
1964 Diamond drilling by Norite Explorations Ltd.

References: ODM, 1952, P.R. 1952-4, p.21.
Norite Explorations Ltd., 1964, Prospectus.
ODM, Red Lake files.

MULCAHY TOWNSHIP

Fahlgren Lake Prospect

Main Metals: Cu, Ni.

Location: Mulcahy Tp.; SE end of Fahlgren Lake.
Reference: ODM map 49a.

Geology: Mineralization occurs as disseminated sulphide blebs near and along the basal portion of a medium-grained to coarse-grained metagabbro sill. The sulphides, pyrrhotite, pentlandite, and chalcopyrite, form 5% to 10% of the rock. Pentlandite has exsolved from pyrrhotite and with chalcopyrite it commonly rims pyrrhotite, the chalcopyrite always occurring next to the gangue.

Economic Features: Mineralization occurs intermittently over thicknesses up to 10 feet for a distance of over 2000 feet. Assay values given by Kuryliw (1963) range from Trace to 0.60% Cu and from 0.22% to 0.55% Ni.

Ownership: Cochenour Willans Gold Mines Ltd. (63.9%), Coin Lake Gold Mines Ltd. (18%), Selco Exploration Co. Ltd. (8.1%), Vendors (10%).

History: 1957 Trenching, geological mapping, EM survey, d.d. by Cochenour Willans Gold Mines Ltd.
1957 MAG survey by INCO.
1958-1959 Trenching, X-ray d.d. by Cochenour Willans Gold Mines Ltd.

References: Kuryliw, C.J., 1963, unpub. M.Sc. Thesis, U. of Manitoba.
ODM, 1968, M.P.22, p. 10-12.
ODM, Red Lake files.

Trout Bay Copper Prospect

Main Metals: Cu, Zn, Ag.

Location: Mulcahy Tp.; approx. 4000 ft. SW of the SE end of Trout Bay.
Reference: ODM map 49a.

Geology: Two bodies of massive sulphides are located about 800 feet apart on either side of an east-trending fault. Movement appears to have been dextral with the south side moving west. Pyrrhotite, sphalerite, pyrite, and chalcopyrite have filled dilation zones along the noses of drag folds in metasedimentary rocks cut by metagabbro. The smaller western body, about 20 feet thick on the nose of the fold, is about 100 feet long; the eastern body is about 30 feet thick on the fold nose and has been traced for a distance of about 450 feet by drilling. Both zones plunge moderately to the west but the mineralization cannot be traced below about 200 feet.

Economic Features: The western body is calculated to contain 13,766 tons grading 0.68% Cu, 4.75% Zn and 0.94 oz./ton Ag. The eastern body contains about 124,760 tons containing 7.86% Zn, 1.50% Cu, 1.70 oz./ton Ag, 0.24% Pb and 0.007 oz./ton Au (Private communication, D.A. Hutton, Chief Geologist, Cochenour Willans Gold Mines Ltd., Nov. 1968).

Ownership: Cochenour Willans Gold Mines Ltd. (63.9%), Coin Lake Gold Mines Ltd. (18%), Selco Exploration Co. Ltd. (8.1%), Vendors (10%).

History: 1957 Covered by EM survey by Cochenour Willans Gold Mines Ltd.
1960-1961 Trenching, SP survey, and 1423 ft. of d.d. on the western zone by Cochenour Willans Gold Mines Ltd.
1962 Geological mapping, MAG survey covering the eastern zone by Falconbridge Nickel Mines Ltd.
1966 Airborne MAG and EM surveys by Selco Exploration of Canada Ltd.
1967-1968 Trenching, MAG survey and 12,336 ft. of d.d. on eastern zone and 321 ft. of d.d. on western zone by Cochenour Willans Gold Mines Ltd.

References: ODM, 1968, M.P.22, p. 10-12.
ODM, Red Lake files.

Trout Bay Nickel Prospect

Main Metals: Cu, Ni.

Location: Mulcahy Tp.; approx. 4400 ft. SW of the SE end of Trout Bay.

Reference: ODM map 49a.

Geology: Copper-nickel mineralization is found in an antigorite-tremolite schist occurring along the stratigraphic top of a chert-magnetite iron formation. It has been traced intermittently for a distance of 2 1/4 miles in a northwest-southeast direction. The schist represents a sheared and altered basal portion of a metagabbro sill. Mineralization in the form of pyrrhotite, pentlandite (violarite near surface), chalcopyrite and pyrite occur as disseminations or elongate lenticles in the antigorite-tremolite schist. In intensely altered portions of the schist chalcopyrite occurs as unevenly distributed halos around pentlandite-rich lenticles, usually accompanied by some pyrite.

Economic Features: The best zone of mineralization grades approximately 0.50% Ni and 0.25% Cu and is over 400 feet long with a maximum thickness of 30 feet. The deepest section encountered was at a vertical depth of 460 feet (Private report, Falconbridge Nickel Mines, 1962).

Ownership: Cochenour Willans Gold Mines Ltd. (63.9%), Coin Lake Gold Mines Ltd. (18%), Selco Exploration Co. Ltd. (8.1%), Vendors (10%).

History: 1960-1961 Trenching, SP survey, d.d. by Cochenour Willans Gold Mines Ltd.
1962 Geol. and MAG surveys, 22,419 ft. of d.d. by Falconbridge Nickel Mines Ltd.
1962 Trenching, EM, MAG, SP and geol. surveys, 759 ft. of d.d. on the extreme southeast end of the mineralized zone by Conwest Explorations Ltd.

References: Kuryliw, C.J., 1963, unpub. M.Sc. Thesis, U. of Manitoba.
ODM, 1968, M.P.22, p. 10-12.
ODM, Red Lake files.

REVELL TOWNSHIP

Pidgeon Prospect

Main Metals: Cu, Ni.

Location: Revell Tp.; 1 1/4 mi. W of Tache and 1,000 feet S of the C.P.R. track.

Reference: ODM map 1960h.

Geology: Chalcopyrite and nickeliferous pyrrhotite occurs as disseminations in a hornblende diorite. The diorite containing the mineralization is separated from a very feldspathic phase by a thin band of metavolcanics.

Economic Features: Sulphides occur in two parallel zones each about 10 feet to 15 feet wide and separated by about 15 feet of very weakly mineralized diorite. The zone has been traced for 400 feet but is hidden by swamp to the east. The best assays were obtained from No. 2 hole which intersected 10 feet of 0.77% Cu and 0.64% Ni, and 12 feet of 0.90% Cu and 0.68% Ni.

History: 1967 8 d.d. holes by Maverick Mines and Oils.

References: ODM, 1967, M.P.16, p.9.

Pidgeon, G.L., personal communication.

ZEALAND TOWNSHIP

Mavis Lake Prospect

Main Metals: Cu, Ni.

Location: Zealand Tp.; S 1/2 of lot 17, con. VIII, 5 mi. NE of Dryden.

Reference: ODM map 50e.

Geology: Pyrrhotite with minor amounts of pyrite and chalcopyrite form an east-striking and steeply north-dipping sulphide zone parallel to the schistosity of the enclosing mica schists. The south contact of a large area of granite occurs just north of the showing.

Economic Features: The zone averages less than 4 feet wide and has been traced for a length of over 500 feet. The best surface sample returned 1.88% Cu and 0.31% Ni over a width of 4.5 feet. Core assays returned similar Ni values but Cu was lower.

History: 1956 9 d.d. holes for a total of 745 feet by Lun-Echo Gold Mines Ltd.

References: ODM, Kenora files.
ODM, 1957, M.R.C. No.2, p.19.

Pidgeon Prospect

Main Metals: Zn.

Location: Zealand Tp.; S 1/2 of lot 6, con. IV.
Reference: ODM map 50e.

Geology: Sulphide replacement zone, chiefly pyrrhotite with minor sphalerite, occurs at the southwest-striking contact of arkose with greywacke to the northwest.

Economic Features: Grab samples from the small mineralized outcrop gave assays of 1% zinc. From the limited development work dimensions have not been determined.

History: 1956 1 d.d. hole and some surface work by G.L. Pidgeon of Wabigoon.

References: ODM, 1941, Vol.50, pt.2, p.46.
ODM, 1957, M.R.C.2, p.22.

49°00' - 91°15'

Anderson Prospect

Main Metals: Cu, Zn.

Location: 49°00' - 91°15'; W end of Lumby Lake.
Reference: ODM map 1960g.

Geology: The chalcopyrite and sphalerite mineralization is associated with both sheared quartz porphyry and sheared "greenstone". The sulphide mineralization appears to be controlled by shearing.

Economic Features: Erratic values reported in grab samples ranging from 0.20% Cu to 10.57% Cu. Low erratic values of Cu reported in drill core. Mineralized zone traced for about 2,000 feet. A series of trenches in this area show pyrite, chalcopyrite, and sphalerite disseminated over widths of up to 20 feet. Assays (ODM, 1960, p.46) over a 20-foot width in the westernmost trench is as follows:

0.034 oz./ton Au, 0.57 oz./ton Ag, 0.25% Cu and 0.22% Zn.

History: 1951 Trenching, EM survey and 9 d.d. by Noranda Mines Ltd.

References: ODM, Kenora files.

ODM, 1960, Vol.69, pt.5, p. 45-46.

M.R.B., Ottawa, mineral files.

Gray Prospect

Main Metals: Cu, Pb, Zn, Au.

Location: 49°00' - 91°15'; N shore of Spoon Lake.

Reference: ODM map 1960g.

Geology: Mineralized and silicified shear zone in altered quartz porphyry. Chalcopyrite, galena, sphalerite, and pyrite occur as blebs and as disseminations in the siliceous zone.

Economic Features: The zone is reported to be 8 feet wide and traced for 1/3 of a mile. Grab samples assayed (ODM, 1960, p.48) 0.29% Cu, 6.74% Zn, 1.75% Pb, and 0.05 oz./ton Au.

History: 1951 Geol. mapping and trenching by Little Long Lac Gold Mines Ltd.

References: ODM, Kenora files.

ODM, 1960, Vol.69, pt.5, p.48.

49°15' - 92°15'

Alcock-Jergenson Prospect

Main Metals: Cu, Ni.

Location: 49°15' - 92°15'; E side of Kawashegamuk Lake, 12 mi. S of Dymont.

Reference: ODM map 42c.

Geology: Disseminated chalcopyrite and nickeliferous pyrrhotite in gabbro body at border of granodiorite stock in volcanics. Chalcopyrite also occurs in a rhyolite dike.

Economic Features: Best grab samples in gabbro assayed 0.63% Cu and 0.37% Ni. Best grab samples from rhyolite dike assayed 4.14% Cu.

History: 1951 EM survey by INCO, option dropped in 1952.
1956 Optioned to Falconbridge Nickel Mines, Ltd.

References: ODM, 1957, M.R.C.2, p.15.
M.R.B., Ottawa, mineral files.

49°15' - 93°30'

Alcock Prospect

Main Metals: Cu, Ni.

Location: 49°15'-93°30'; East Bay, Caviar Lake, 45 mi. SE of Kenora.
Reference: ODM map 2115.

Geology: A number of small, discontinuous lenses of disseminated chalcopyrite and nickeliferous pyrrhotite occur in a mafic intrusion and pillow lavas.

Economic Features: Assays are not available, but the mineralized lenses outlined by drilling were not considered to be of ore grade.

History: 1956 Geol. and EM surveys, trenching and over 7,000 feet of drilling by Green Bay Mining and Exploration Co. Ltd.

Reference: ODM, Kenora files.

Apex Prospect

Main Metals: Cu, Ni.

Location: 49°15'-93°30'; between Atikwa and Denmark Lakes, adjoins Maybrun Mines Ltd. to the E.
Reference: ODM map 2115.

Geology: Spotty disseminated chalcopyrite and pyrrhotite occur almost entirely in a pod-shaped mafic intrusive body in "greenstone". Mineralization is most abundant where a diorite phase overlies the amphibolite phase of the intrusion. There are also occurrences of sulphide in agglomerate and "greenstone" on the property with low copper and gold values.

Economic Features: Mineralization occurs along a length of 500 feet and to a depth of 600 feet. The best drill intersections were 1.08% Cu and 0.62% Ni over 25 feet, and 0.51% Cu and 0.98% Ni over 12 feet. Highest gold values were 0.05 oz./ton.

History: 1955-56 Stripping, trenching and 32 d.d. holes for a total of 13,393 feet by Apex Consolidated Resources, Ltd.

Ownership: Apex Consolidated Resources, Ltd.

Reference: ODM, Kenora files.

Bergman Prospect

Main Metals: Cu, Ni.

Location: 49°15'-93°30'; N shore of Isinglass Lake, 45 mi. SE of Kenora.
Reference: ODM map 2115.

Geology: Disseminated chalcopyrite and pyrrhotite in a nearly flat-lying mafic intrusion in "greenstone". The sulphides occur in a more mafic phase of the intrusion.

Economic Features: Mineralized zone is up to 100 feet thick. Cu and Ni occur in equal proportions and best combined assays are 1 percent.

History: 1955 Geophysical survey and 11 d.d. holes for total of 6,010 feet by Dome Exploration (Canada) Ltd.

References: ODM, Kenora files.
ODM, 1957, M.R.C.2, p.15.

Denlake (Denmark Lake) Prospect

Main Metals: Cu.

Location: 49°15'-93°30'; S shore of Denmark Lake and W shore of Rowan Lake.

Geology: The prospect is underlain by Keewatin-type volcanics. An oxidized zone of sheared andesite contains disseminated chalcopyrite and pyrrhotite.

Economic Features: Two occurrences, have been opened up by trenching. One showing has a length of about 30 feet and a maximum width of 15 feet narrowing to 3 feet. Chip samples across 5-foot widths are reported to range from 0.59% Cu to 2.16% Cu. The other showing occurs over a length of 100 feet and has widths of up to 25 feet. No assays are reported.

History: 1952 Surface stripping, trenching and sampling. MAG and EM surveys (no diamond drilling reported) by Denlake Mining Company, Ltd.

References: ODM, Kenora files.
M.R.B., Ottawa, mineral files.

Gauthier-Nilson Prospect

Main Metals: Cu, Ni.

Location: 49°15'-93°30'; N shore of Denmark Lake, 45 mi. SE of Kenora.
Reference: ODM map 2115.

Geology: Copper, nickel sulphide replacement in peridotite. Chalcopyrite, nickeliferous pyrrhotite, and pyrite occur in joint planes and disseminations through the peridotite.

Economic Features: The main trench averaged 0.64% Cu and 0.48% Ni over 21.5 feet. The best intersection from a hole drilled under the trenching gave about 1 1/2% combined Ni and Cu over 45 feet.

Ownership: Gauthier and Nilson, Kenora.

History: 1951 Surface trenching and sampling. Optioned to INCO.
1955 5 d.d. holes by M.J. Boylen.
1956 2 d.d. holes by Gauthier and Nilson.
1967-68 IP survey and 9 d.d. holes by C.C. Huston and Associates.

References: ODM, Kenora files.
M.R.B., Ottawa, mineral files.
A. Gauthier, personal communication.

Kenbridge Deposit

Main Metals: Ni, Cu.

Location: 49°15'-93°30'; Populus Lake.
Reference: ODM map 2115.

Geology: A brecciated mafic intrusion, 2,500 feet long and 200 feet wide intrudes and includes fragments of "greenstone" country rock. The composition of the intrusion ranges from gabbro to peridotite. Disseminated and massive pyrrhotite, chalcopyrite, pentlandite and pyrite occur in the gabbroic matrix of the intrusion.

Economic Features: Flat-lying sulphide lenses one above the other, have horizontal dimensions of 800 feet by 100 feet. The series as a whole plunges NE at 55 degrees. Some of these lenses are up to 100 feet wide, 20 feet thick and contain up to 4 percent combined Ni and Cu. The grade and tonnage (M.R.B. file) in 1957 when development work stopped were:
Developed ore, 794,960 tons grading 1.14% Ni and 0.58% Cu.
Indicated ore, 2,707,780 tons grading 1.04% Ni and 0.54% Cu.

Ownership: Kenbridge Nickel Mines, Ltd.

History: 1937 About 10,000 feet of d.d. by Coniagas Mines, Ltd.
1948-49 12,000 feet of d.d. by INCO.
1952 Geological mapping, geophysical surveys, and extensive d.d. program by Falconbridge Nickel Mines, Ltd.
1955-57 Shaft sinking and underground development work by Falconbridge. Kenbridge Nickel Mines was incorporated in 1956 to manage the operation.

References: ODM, 1956, Vol.65, pt.4, p.20.
ODM, 1957, M.R.C.2, p.17.
M.R.B., Ottawa, mineral files.

Longe Prospect

Main Metals: Cu, Ni, Au.

Location: 49°15'-93°30'; N Shore of Rowan Lake, between Rowan and Denmark Lakes.

Geology: Chalcopyrite, pyrite and pyrrhotite, with low gold values, occur as a replacement of the rims in pillow lava along the strike of the flows over a distance of a mile. Another type of mineralization occurs as copper and nickel sulphides along joints in a mafic intrusion.

Economic Features: Mineralized areas located are small. Sampling from No.1 trench is reported to average 4.15% Cu, 0.03 oz./ton Au, and 1 oz./ton Ag, over a width of 3 feet and length of 12 feet.

History: 1956 Some d.d. by Nic-Cop Mines Ltd.

References: ODM, 1957, M.R.C.2, p.18.
M.R.B., Ottawa, mineral files.

Maybrun (Atikwa Lake) Mine Prospect

Main Metals: Cu, Au.

Location: 49°15'-93°30'; Atikwa Lake, 44 mi. SE of Kenora.

Reference: ODM map 2115.

Geology: Mineralized zone occurs in pillow lavas. Chalcopyrite, pyrite and pyrrhotite with values in gold occur in shear zones, along fractures, and around the rims of pillows. The ratio of chalcopyrite to pyrrhotite is 2:1.

Economic Features: Chalcopyrite mineralization has been encountered over a length of 2,600 feet. A recent tonnage estimate for the several zones is 1,155,000 tons averaging 1.12% Cu and 0.03 oz./ton Au in an area 185 feet wide and 150 feet deep, with additional potential tonnage present (ODM, 1967, map P.388, marginal notes).

Ownership: Maybrun Mines Ltd.

History: 1951-53 Property discovered and developed by Noranda Mines Ltd. Development included 3,500 feet of trenching, 28,715 feet of d.d., and shaft sinking to 298 feet.

1955-58 Property optioned to Maybrun Mines Ltd., and further exploration carried out.

1965-66 Further geophysical surveys and d.d. by Maybrun Mines Ltd. Operations suspended Sept., 1966.

References: ODM, Kenora files.

ODM, 1967, map P.388, marginal notes.

ODM, 1957, M.R.C. 2, p.19.

49°30' - 92°30'

Emmons Lake Prospect

Main Metals: Cu, Ni.

Location: 49°30'-92°30'; 3 mi. E of Ukik Lake on N shore of Emmons Lake.

Reference: ODM map P.242.

Geology: Pods of massive and disseminated chalcopyrite, pyrrhotite and niccolite are reported to occur in massive diorite.

Economic Features: The best d.d. intersection was 1.02% Cu, and 1.34% Ni over 17.2 feet. The deposit, however, does not appear to extend to depth.

History: 1960 Surface work including geological and geophysical surveys as well as 10 d.d. holes by Newconex, Ltd.
1962 4 d.d. holes by McIntyre Porcupine Mines, Ltd.

References: ODM, Kenora files.
M.R.B., Ottawa, mineral files.

49°30' - 92°45'

Glatz Prospect

Main Metals: Cu, Ni.

Location: 49°30' - 92°45'; 20 mi. S of Dryden and 3 mi. SE of Ukik Lake.

Geology: Disseminated pyrite, pyrrhotite, and chalcopyrite occur along and near the contact between andesite and diorite.

Economic Features: Patches of disseminated sulphides occur over a length of about 1,500 feet and a width of about 100 feet. The best assays from grab samples ran 0.77% Cu and 0.21% Ni.

History: 1966 EM survey and 4 d.d. holes by Victoria Algoma Minerals, Ltd.

References: ODM, Kenora files.

Kozowy Prospect

Main Metals: Cu, Ni.

Location: 49°30' - 92°45'; 1/2 mi. W of Nabish Lake, about 10 miles SW of Dryden.

Reference: ODM map 2115.

Geology: Sulphide mineralization occurs along a north-trending breccia zone composed of sub-rounded andesitic fragments in a coarser dioritic matrix. The sulphides are mainly nickeliferous pyrrhotite, lesser amounts of chalcopyrite and pyrite, and minor pentlandite.

Economic Features: Grab samples up to 3% Ni and 1/2% Cu have been reported. Dimensions of the mineralized zone are not known.

History: 1968 Trenching, magnetic and electromagnetic surveys by Hollinger Mines Ltd.

References: ODM, 1968, M.P.16, p.6.
Kozowy, personal communication.

Nabish Lake Prospect

Main Metals: Cu, Ni.

Location: 49°30'-92°45'; 10 mi. S of Dryden and 1 1/2 mi. E of S tip of Nabish Lake.

Reference: ODM map P.242.

Geology: Sulphides are related to shearing in altered gabbro, close to a gabbro-granite contact.

Economic Features: Two pits, 30 feet apart have exposed widths of 9 and 12 feet. A grab sample assayed 1.5% Cu and 0.3% Ni.

History: 1956 4 d.d. holes totalling 1000 feet drilled by Preston East Dome Mines Ltd.

1960 EM survey by Preston East Dome Mines Ltd.

Remarks: EM survey failed to locate any conducting zones.

References: ODM, 1957, M.R.C.2, p.20.

M.R.B., Ottawa, mineral files.

Pidgeon Prospect

Main Metals: Ni, Cu.

Location: 49°30'-92°45'; S shore of Contact Bay, Wabigoon Lake.

Reference: ODM map P.242.

Geology: A band of finely disseminated pyrite and chalcopyrite occurs in a schistose mafic rock.

Economic Features: No details of width and grade are available.

History: 1957 MAG, EM surveys and 8 d.d. holes by Falconbridge Nickel Mines Ltd.

References: ODM, Kenora files.

Trap Lake Prospect

Main Metals: Cu, Au.

Location: 49°30'-92°45'; 9 mi. S of Dryden and 1/2 mi. E of Trap Lake.

Reference: ODM map P.242.

Geology: A quartz vein with pyrite and chalcopyrite striking N60W occurs at the contact of a wide diabase dike and a fine-grained diorite to the south.

Economic Features: The vein is 9 feet wide and exposed for a length of 170 feet. An average of 3 channel samples ran 2.31% Cu, 0.11 oz./ton Au, and 1.02 oz./ton Ag over an average width of 4.1 feet. Assays of up to 0.08% Ni and 0.05% Co were reported.

History: 1952 Trenching and 2 d.d. holes by Lantz and Pidgeon of Wabigoon.
1955 1,300 feet of d.d. by Preston East Dome Mines, Ltd.

References: ODM, 1957, M.R.C.2, p.21.
ODM, Kenora files.
M.R.B., Ottawa, mineral files.

49°30' - 93°00'

Meridian Bay Prospect

Main Metals: Ni, Cu.

Location: 49°30'-93°00'; W side of Meridian Bay, Eagle Lake, 20 mi. SW of Dryden.
Reference: ODM map 48d.

Geology: Pyrrhotite, magnetite, chalcopyrite and pyrite replace an inclusion in diorite near the north-striking granite-"greenstone" contact.

Economic Features: The sulphides were reported to carry 1/2 to 1% Ni, in addition to Cu and Au values (Larson 1911). The mineralized zone varies from 3 to 12 feet in width and has been stripped for about 200 feet. However, more recent sampling of the zone by Macfie Explorations Ltd. indicated only traces of Ni, Cu and Zn.

History: 1910 Trenching.
1956-57 Geological and geophysical surveys by Macfie Explorations, Ltd.

References: ODM, Kenora files.
ODM, 1939, Vol.48, pt.4, p.24.
ODM, 1911, Vol.20, pt.1, p.196.

49°30' - 93°30'

Lava Lake Prospect

Main Metals: Cu, Ni.

Location: 49°30'-93°30'; 46 mi. SE of Kenora, 5 mi. E of Fisher Lake.

Reference: ODM map 2115.

Geology: Disseminated pyrrhotite, chalcopyrite and pyrite occur at a number of locations within a greenstone belt which is several miles wide in an area between Lava and Easter Chicken Lakes.

Economic Features: No ore grade material is reported.

History: 1955 Geological and geophysical surveys, and 14 d.d. holes totalling 6,415 feet by Falconbridge Nickel Mines, Ltd.

References: ODM, Kenora files.

ODM, 1957, M.R.C.2, No.2, p.17,

49°30' - 94°15'

Copconda Prospect

Main Metals: Cu.

Location: On Island No.528-P in the French Narrows area, 12 mi. S of Kenora.

Reference: ODM map P.401.

Geology: Mineralization at the main showing consists of pyrite, pyrrhotite and chalcopyrite, as disseminations and stringers replacing chloritic, tuffaceous, cherty sediments, over a width of 20 feet. Pyrite, pyrrhotite and minor chalcopyrite occur in mafic fragmentals on the shore of an adjacent island.

Economic Features: Two chip samples from the main showing assayed 0.22% Cu and 0.42% Cu respectively, with minor Ni and a trace of Au.

History: 1966-68 EM survey and 627 feet of d.d. by Copconda Mines, Ltd.

References: ODM, Kenora files.

49°45' - 92°00'

Campbell Prospect

Main Metals: Cu.

Location: 49°45'-92°00'; Pickerel Arm, Minnitaki Lake, 11 mi. SW of Sioux Lookout.

Reference: ODM map P.269.

Geology: Chalcopyrite occurs in shear zones and fractures at angles to the shearing. The mineralization in these widespread shear zones is found in silicified and carbonatized quartz porphyry which underlies Pickerel Arm and its shores.

Economic Features: Mineralization occurs over an area of at least 4,000 feet by 2,000 feet. However, most of this area is underlain by water, and d.d. indicated only low copper values.

History: 1955-56 Geological and geophysical survey, and d.d. by Rio Canadian Exploration, Ltd.

References: ODM, 1957, M.R.C.2, p.39.

50°00' - 94°15'

Hawes Prospect

Main Metals: Cu, Ni.

Location: 50°00'-94°15"; 2 mi. NW of Redditt.

Reference: ODM map 2115.

Geology: Disseminated chalcopyrite and pyrrhotite with minor pyrite. occur in mafic dike 150 feet wide, near its west contact. The dike is more variable in composition than other diabase dikes and is cut by aplite.

Economic Features: Sulphides occur over a length of more than 200 feet and have a maximum width of 25 feet. The zone is reported to contain 2% combined Cu and Ni.

History: 1956 Trenching, geophysical survey and 17 d.d. holes totalling 1,765 feet by Stratmat, Ltd.

References: ODM, 1957, M.R.C.2, p.17.

50°15' - 90°30'

Savant Lake Prospect

Main Metals: Cu, Pb, Zn, Ag.

Location: 50°15'-90°30'; 4 mi. N of Savant Lake station and 3/4 mi. W of the Savant-Pickle Crow Road.

Reference: ODM map P.354.

Geology: Sulphide mineralization consisting of pyrite, pyrrhotite, minor chalcopyrite, sphalerite and galena, occurs in a sheared chloritized zone in biotite-garnet gneiss.

Economic Features: Mineralization extends over a length of 250 feet and consists of 2 parallel zones about 15 feet apart, each averaging about 5 feet in width. One of the better assays is 1.67% Cu, 1.44% Zn, 0.28% Pb and 3.46 oz./ton Ag over a width of 9 feet.

History: 1953 Trenching.

1958 MAG and EM surveys and several X-ray d.d. holes by Lun-Echo Gold Mines Ltd.

References: ODM, Kenora files.

ODM, 1954, M.R.C.1, p.30.

M.R.B., Ottawa, mineral files.

50°15' - 94°45'

Gordon Lake Mine (Producer)

Main Metals: Ni, Cu.

Location: 50°15'-94°45'; Gordon Lake, 52 miles N of Kenora.

Reference: ODM map P.366.

Geology: The orebodies are associated with a major east-west fault zone dipping steeply north. It is broadly convex southward and forms the boundary between gneisses on the north and granite on the south. Below the 300-foot level, however, the fault is entirely in the gneisses. A number of peridotite lenses occur within the fault zone, and are surrounded by banded amphibolites which grade into banded quartz-rich paragneiss. Pyrrhotite, pentlandite, chalcopyrite and pyrite occur within the peridotite bodies in disseminated form and also as lenses and stringers of massive sulphides. In the peridotite, joints have exerted some control on the deposition of the sulphides; in the gneisses

and amphibolites, the mineralization is controlled by shearing and banding.

Economic Features: Ore reserves, on December 31, 1967 (Canadian Mines Handbook 1968-69) were:

Proven Ore 493,864 tons averaging 1.16% Ni and 0.71% Cu.

Probable Ore 110,084 tons averaging 1.04% Ni and 0.44% Cu.

Indicated Ore 104,099 tons averaging 1.43% Ni and 0.45% Cu.

The mine has been developed at 150-foot intervals to a depth of 1,650 feet and further lateral development on levels above the 1,650-foot level is being carried on.

Ownership: Consolidated Canadian Faraday, Ltd.

History: 1942-43 Stripping, trenching, sampling, and d.d. by Noranda Mines Ltd.

1948 Exploration by INCO.

1949 Surface exploration, geophysical surveys and d.d. on eastern part of the Gordon Lake Mine property by Falconbridge Nickel Mines Ltd.

1952 Property acquired by Quebec Nickel Corporation, Ltd. and further surface work, and d.d. undertaken and shaft sinking and underground development started.

1955 Quebec Nickel Corporation merged with Eastern Mining and Smelting Corp. Ltd.

1958 Eastern Mining and Smelting Corporation Ltd. was renamed Nickel Mining and Smelting Corp.

1959 Underground development resumed.

1962 Production started.

1967 Nickel Mining and Smelting Corp. was taken over by Consolidated Canadian Faraday. Total production to December 31, 1967 was 887,606 tons of Cu and Ni ore milled (ODM annual reports 1962-67).

References: ODM, 1957, M.R.C.2, p.16.

ODM, 1957, Vol.66, pt.4, p. 22-24.

Canadian Mines Handbook, 1968-69, p.92.

M.R.B., Ottawa, mineral files.

GSC, 1958, Paper 58-6, 14 p.

Fortune Lake Prospect

Main Metals: Cu, Ni.

Location: 50°15'-94°45'; Fortune Lake, 4 mi. E of Werner Lake.

Reference: ODM map 1957-3.

Geology: Minor amounts of chalcopyrite occur in a large inclusion of paragneiss within massive granite.

Economic Features: A sample taken across an 8-foot trench assayed 0.77% Cu.

History: 1957 4 d.d. holes by Stratmat Ltd.
1958 Geophysical surveys and 3 d.d. holes by Sogemines Development Co. Ltd.

Remarks: Two other zones of sulphides were located about 1/2 mi. E of Fortune Lake by geophysical work but assays from drilling these zones gave only 0.1% Cu.

References: ODM, Kenora files.
ODM, 1957, Vol.66, pt.4, p.27.

Werner Lake Nickel Prospect

Main Metals: Ni, Cu, Cr, V.

Location: 50°15'-94°45'; E end of Werner Lake, adjoining the E end of the Gordon Lake Mine property.
Reference: ODM maps 1957-2 and 1957-3.

Geology: The main showing consists of a mineralized peridotite body containing disseminated pyrrhotite, pentlandite, chalcopyrite and pyrite. This peridotite body is located along the same main fault which passes through the Gordon Lake mine property. A second mineralized zone occurring 1 1/2 mi. E on the same fault, consists of disseminated chalcopyrite in paragneiss.

Economic Features: The dimensions of the mineralized peridotite body is 147 feet long by 47 feet wide and has an average content of 0.40% Ni, 1.76%Cu, 0.54% vanadium pentoxide, and 4.12% Cr (Precambrian, Apr. 1949). Assay results, (1954 Prospectus, Werner Lake Nickel Mines Ltd.), from d.d. holes intersecting the peridotite body are as follows:

DD Hole No.	Core Length - Ft.	Assay (Percent Ni)
1	63.0	0.48
2	66.0	0.38
3	15.5	0.49
4	-	-
5	53.5	0.31

Ownership: Werner Lake Nickel Mines, Ltd.

History: 1942-45 Trenching, mapping and dip needle survey plus 32 d.d. holes for a total of 3,750 feet by Dome Exploration (Canada) Ltd.
1955 Geophysical surveys and 4,000 feet of drilling by Werner Lake Nickel Mines, Ltd.

References: ODM, Kenora files.
ODM, 1957, Vol.66, pt.4, p.27.

50°15' - 95°00'

Norpax Property

Main Metals: Ni, Cu.

Location: 50°15'-95°00'; Almo Lake, 53 mi. N of Kenora.
Reference: ODM map 1957-2.

Geology: Mineralized peridotite occurs at intervals along a major E-W fault zone which extends from Werner Lake on the east to Rayner Lake on the west and passes under the northern part of Almo Lake. The country rocks cut by the fault are granitic and quartz diorite rocks which contain numerous inclusions of paragneiss. The peridotite occurs along the fault in discontinuous bodies with widths up to 100 feet. The sulphides: pyrrhotite, pentlandite, violarite, chalcopyrite and pyrite occur mainly in the peridotite.

Economic Features: Surface drilling has indicated a narrow zone of mineralization about 1,400 feet long in the fault zone. Underground drifting and diamond drilling indicated 1,010,000 tons averaging 1.2% Ni and 0.5% Cu (Canadian Mines Handbook 1963, p.215).

Ownership: Norpax Nickel Mines, Ltd.

History: 1953-54 Geophysical surveys and detailed surface work and 8 d.d. holes totalling 2,000 feet by Selco Exploration Co., Ltd.
1954 Vertical shaft was sunk and lateral development work on 250-foot and 375-foot levels by Norpax Mines and Oils, Ltd.
1957 Name changed from Norpax Mines and Oils, Ltd. to Norpax Nickel Mines, Ltd.
1962 Dewatering of workings and sampling by Nickel Mining and Smelting Corp.

References: ODM, 1957, Vol.66, pt.4, p. 25-27.
ODM, Kenora files.
Canadian Mines Handbook, 1963, p.215.

Reynar Lake Prospect

Main Metals: Cu.

Location: 50°30'-95°00'; S side of Reynar Lake, 55 mi. NW of Kenora.
Reference: ODM map 1957-2.

Geology: The property is underlain by granite and gneisses. A major W-striking fault zone crosses the property, but only one drill hole cut peridotite, the favourable host rock found along the fault zone.

Economic Features: Drilling indicated only narrow and low Cu values with only traces of Ni.

History: 1955-56 MAG and SP surveys and 10 d.d. holes by Consolidated Bellekeno Mines, Ltd.

References: ODM, Kenora files.
ODM, 1957 M.R.C.2, p.16.
Northern Miner, July 5, 1956.

50°30' - 95°00'

Young Prospect

Main Metals: Cu, Ni.

Location: 50°30'-95°00'; S shore of Anderson Lake.
Reference: ODM map 2097.

Geology: Two main showings are located in the vicinity of the contact between a metadiabase and a mafic metavolcanic. Mineralization at the west showing consists of pyrite, pyrrhotite and chalcopyrite in shear zones and in irregular patches. The east showing is located about 2,000 feet further east and consists of disseminated pyrite, pyrrhotite, chalcopyrite and malachite concentrated at or near the metadiabase-mafic metavolcanic contact.

Economic Features: Relatively good Ni and Cu assays over widths of 12 and 13 feet have been reported from the two showings. However, recent sampling (ODM, 1967, G.R.47, p. 31-33) of both zones indicated only low Cu and Ni values: 0.17 percent Cu and 0.12 percent Ni across 10 feet at the west showing and 0.20 percent Cu and only a trace of Ni at the east showing.

History: 1963 Trenching and sampling by J. Young, Sioux Lookout.

References: ODM, 1967, G.R.47, p. 31-33.

50°45' - 92°45'

Snakeweed Lake Prospect

Main Metals: Cu, Ag, Mo.

Location: 50°45'-92°45'; approx. 37 mi. E. of Red Lake and 3/4 mi. SE of Snakeweed Lake.

Reference: ODM map P.349.

Geology: Coarse-grained, garnetiferous, biotite schists and amphibolites, a metamorphic phase of highly sheared basic tuffs, are the host rocks for the mineralization. Accompanied by abundant shearing, brecciation, chloritization, and silicification, mineralization occurs as blebs, veinlets, and disseminations of pyrrhotite, pyrite, and chalcopyrite, and locally replaces mafic minerals. Minor chalcopyrite is also associated with pyrrhotite-rich phases of iron formation.

Economic Features: An information brochure published by Rexdale Mines Ltd. (January, 1967) indicated that 275,000 tons of ore grading 2% Cu and 2 oz./ton Ag had been outlined over a 500-foot strike length projected to the 500-foot depth horizon.

History: 1955-56 Trenching, geological mapping, EM survey, 2295 ft. of d.d. by Split Rock Mines Ltd.

1958 1135 ft. of d.d. by Split Rock Mines Ltd.

1960 1533 ft. of d.d. by Split Rock Mines Ltd.

1965-66 Geol., EM and MAG surveys, trenching, approx. 20,000 feet of d.d. by Rexdale Mines Ltd.

References: Rexdale Mines Ltd., 1965, Prospectus.

Rexdale Mines Ltd., January, 1967, Information Brochure.

ODM, Red Lake files.

51°00' - 89°30'

Sturdy Mines Prospect

Main Metals: Cu, Ni.

Location: 51°00'-89°30'; 30 mi. SE of Pickle Crow.

Geology: Disseminated sulphides in a gabbro sill.

Economic Features: Samples from a trench have averaged 0.66% Cu, 0.25% Ni, and 0.12% Co. Best assay was 1.22% combined Cu-Ni across a width of 15 feet. Dimensions are not known.

History: 1968 Trenching and sampling by Sturdy Mines, Ltd.

References: Northern Miner, Aug. 22, 1968.

51°15' - 92°00'

Anglea Lake Deposits

Main Metals: Cu, Zn, Ag.

Location: 51°15'-92°00'; approx. 4 mi. E of Casummit Lake.
Reference: ODM map 42d.

Geology: Widespread pyrrhotite and pyrite with minor chalcopyrite and sphalerite occur as disseminations and with quartz and carbonate in stringers in mafic metavolcanic flows, pyroclastics, argillite, chert, and iron formation producing several small discontinuous electromagnetic anomalies.

Economic Features: Generally less than 0.3% Cu, 0.3% Zn and erratic low silver values encountered.

History: 1967 MAG and EM surveys and 2,588 ft. of d.d. on various geophysical anomalies by Dome Exploration (Canada) Ltd.

References: ODM, Red Lake files.

Shabumeni Lake Deposits

Main Metals: Cu, Zn, Ag.

Location: 51°15'-92°00'; E side, N-trending peninsula, S end of Shabumeni Lake.
Reference: ODM map 42d.

Geology: Disseminated chalcopyrite and sphalerite associated with disseminated to massive pyrite and pyrrhotite in metasedimentary rocks and metavolcanic flows, and pyroclastics.

Economic Features: Generally less than 0.1% Cu, 1.0% Zn, and a few low silver values encountered.

History: 1967 MAG and EM surveys and 1906 ft. of d.d. by Dome Exploration (Canada) Ltd.

References: ODM, Red Lake files.

51°15' - 92°30'

Guest Prospect

Main Metals: Cu.

Location: 51°15'-92°30'; 1000 ft. N of the E end of Swain Lake.

Reference: ODM map 45c.

Geology: Spotty pyrite, pyrrhotite, and chalcopyrite mineralization in irregular pods, disseminations, and stringers parallel to the bedding, associated with a narrow chert unit. This chert unit is interbedded with intermediate metavolcanics and felsic pyroclastics which themselves carry erratic disseminations of pyrite, pyrrhotite, and chalcopyrite.

Economic Features: Chalcopyrite mineralization has been traced for a strike length of 400 feet but is too inconsistent to be economic. The best assay from the chert unit returned 2.15% Cu over 6.3 feet while the intermediate volcanics returned 1.60% Cu over 9.0 feet.

History: 1965 Trenching by A.L. Guest Prospecting Grubstake 1964-66. 1965-1966 Geol., EM and IP surveys, 378 ft. of d.d. by Asarco Exploration Company of Canada Ltd.

References: ODM, Red Lake files.

Swain Lake Prospect

Main Metals: Cu, Zn, Co.

Location: 51°15'-92°30'; approx. 1 mi. E of the narrows on Swain Lake.

Geology: Patchy, globular, and disseminated pyrrhotite, chalcopyrite, sphalerite, and cobalt mineralization occur along an east-west strike length of over 1/2 mile. The sulphides are predominantly confined to an intermediate to felsic metavolcanic unit which has

been severely brecciated and invaded by quartz and epidote stringers. The host rock is interbedded with mafic metavolcanics and some intermediate to felsic pyroclastic rocks.

Economic Features: Finely disseminated mineralization occurs over 50-foot sections of core. Sections containing 3-5% combined pyrrhotite and chalcopyrite are up to 10 feet thick.

History: 1963 IP survey, 2,050 ft. of d.d. by Gunnex Ltd.

References: ODM, Red Lake files.

51°30' - 90°15'

Kapkichi Lake Prospect

Main Metals: Cu, Ni.

Location: 51°30'-90°15'; SW side of Kapkichi Lake, approx. 7 mi. W of the former Central Patricia Gold Mine.
Reference: ODM map 2148.

Geology: Disseminated nickeliferous pyrrhotite and chalcopyrite occur in a quartz diorite intrusion which cuts metabasalt with minor metasediments. The zone is up to 300 feet wide and 900 feet in length.

Economic Features: Typical sections from the 1946-1949 drilling assayed 0.50% Cu and 0.25% Ni over core lengths of 100 feet. Local sections 10 to 15 feet thick gave values as high as 1.5% to 2.0% combined Cu-Ni. One 20-foot section intersected in 1958 returned values of 1.16% Cu and 0.14% Ni.

Ownership: Kapkichi Nickel Mines Ltd.

History: 1946, 1949 Trenching, MAG survey and 15 d.d. holes by Central Patricia Gold Mines Ltd. and Conwest Exploration Co. Ltd.
1956-60 MAG and EM surveys, 5794 ft. of d.d. and some trenching by Kapkichi Nickel Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.39.
ODM, Red Lake files.

51°30' - 91°15'

McVicar Lake Prospect

Main Metals: Cu, Ni.

Location: 51°30'-91°15'; approx. 2 mi. E of the narrows on McVicar Lake.

Geology: Mineralization consists of disseminated to banded sulphides, mainly pyrrhotite and chalcopyrite, associated with coarse-grained phases of a metagabbro which appears to have intruded a finer grained, brecciated metagabbro. Minor amounts of chalcopyrite associated with pyrite are found in metagabbro near the shore of McVicar Lake.

Economic Features: Assays of the best mineralization varied from a high of 0.96% Cu across 3.2 feet to a low of 0.13% Cu across 5.0 feet, and from 0.08% Ni across 3.2 feet to 0.26% Ni across 5.0 feet.

History: 1959 Trenching and 1911 ft. of d.d. by Kenlew Mines Ltd.
1961 SP and EM surveys by Kenlew Mines Ltd.
1962 MAG and EM surveys, 535 ft. of d.d. by Kerr Addison Gold Mines Ltd.

References: ODM, Red Lake files.

51°30' - 91°30'

Lang Lake Prospect

Main Metals: Cu, Ag, Mo, Au.

Location: 51°30'-91°30'; 1 1/4 mi. N of the E end of Lang Lake.
Reference: ODM map 39d.

Geology: The prospect lies at the west end of the Shonia Lake "greenstone" belt immediately east of the granite contact. Mineralization consists of pyrite, minor chalcopyrite, and erratic molybdenite very widely disseminated within metagreywacke, silicified mafic metavolcanics, and sheared feldspar porphyry. It is also found filling, and as a replacement for epidote and quartz within, narrow, closely-spaced fractures. Sulphide mineralization can comprise 35% of the rock with chalcopyrite accounting for up to 5% of this total.

Economic Features: Trenching and diamond drilling during the summer of 1968 traced the main mineralized zone for 1200 feet, leaving it open on the east. Including some barren sections 20 to 50 feet thick, the zone is up to 750 feet wide. Based on assay data supplied by Bochawna Copper to shareholders the grade appears to be about 0.3% Cu with some silver and erratic molybdenum values over core lengths of 400 feet or more when barren core sections greater than 20 feet are excluded.

History: 1960 EM survey and 1245 ft. of d.d. by Castlebar Silver and Cobalt Mines Ltd.
1967 Limited prospecting and trenching by L.C. Boland.
1968 Trenching, EM survey, 5400 ft. of d.d. by Bochawna Copper Ltd.

References: ODM, Red Lake files.

52°15' - 93°30'

Findlay Lake Deposits

Main Metals: Cu.

Location: 52°15'-93°30'; W of Findlay Lake .
Reference: NTS 53C/5.

Geology: Two north-trending zones carrying minor chalcopyrite mineralization each occur over a strike length of 3 miles. To the present work has been concentrated on the more southerly zone. The mineralization occurs in a vertical, north-trending shear zone in widths up to 105 feet. It consists of disseminated to massive pyrrhotite carrying minor amounts of disseminated chalcopyrite.

Economic Features: Visual estimates put the chalcopyrite content of the mineralization exposed in the better trenches at about 1/2%; the best trench contains about 1% chalcopyrite.

History: 1967-1968 Prospecting, trenching, ground geophysical surveys, and geological mapping.

References: ODM, 1968, unpub. report on field work in the Hornby-Findlay Lakes area by S.A. Averill.

52°30' - 92°45'

North Spirit Lake Silver Prospect

Main Metals: Pb, Zn, Ag.

Location: 52°30'-92°45'; N shore of North Spirit Lake about 1/2 mi. E of the 6th Meridian.

Reference: ODM map 47g.

Geology: Mineralization occurs in lenses in sericite schist on the shoreline and is only exposed during low water. Galena, sphalerite, native silver, and ruby silver are associated with pyrite as disseminations in sericite schist or in massive form associated with quartz vein material. The original showing was about 75 feet long and up to 12 feet wide but trenching has shown it to be about 15 feet by 4 feet a few feet below the original surface. Minor sphalerite has been traced intermittently along the nearby granite contact for over two miles to the west.

Economic Features: Two samples purported to have come from the zone were assayed by Silver Spirit Mines Ltd. with the following results:

Ag (oz.)	Pb (%)	Zn (%)	Cu (%)	Au (oz.)
11.20	3.00	2.42	0.02	0.02
14.00	8.40	6.32	0.01	0.01

J. Durham reports that previous to trenching samples taken from the zone returned as much as 200-300 oz./ton Ag, 19%-20% combined Pb-Zn, and \$12.00 to \$15.00 per ton Au.

History: 1938 Discovery and minor prospecting by D. Adams of Newmont Mining Corp.

1942 Mining Corporation of Canada examined the showing and possibly carried out limited d.d.

1946 Trenching by MacDonell, Young and Associates.

1948 4 X-ray d.d. holes by Lake Bed Lead Syndicate.

1964 IP survey by Silver Spirit Mines Ltd.

References: Durham, J.E., Cochenour Willans Gold Mines Ltd., personal communication.

Silver Spirit Mines Ltd., 1964 Prospectus.

52°45' - 91°00'

Randall Lake Prospect

Main Metals: Cu, Ag, Au.

Location: 52°45'-91°00'; between two narrow NE trending lakes approx.
3/4 mi. N of NE end of Randall Lake. Reference: ODM map 48h.

Geology: The showing lies in highly sheared metavolcanic rocks along their contact with a metagabbro. The shear zone, traced for over 4000 feet, is up to 87 feet thick and consists of sericite, talc, and chlorite schist impregnated with stringers and veinlets of calcite and quartz, and is generally weakly mineralized with pyrite and a few grains of chalcopyrite. Tetrahedrite, chalcopyrite, and pyrite are found primarily within a one-foot thick quartz vein but may locally be found in the enclosing schist.

Economic Features: Trenching and diamond drilling indicate a mineralized zone 80 feet long at surface and about 50 feet long at a vertical depth of 135 feet. One intersection showing good mineralization across 8 feet was encountered 250 feet west of the main showing. Chip samples of 1 foot, 1 foot, and 4 feet taken at 25-foot intervals along the surface showing gave a weighted average of 1.7 oz./ton Au, 13.19 oz./ton Ag and 2.06% Cu.

History: 1957 Stripping, 3 X-ray d.d. holes by Mosher interests.
1959-60 Airborne EM survey, trenching, ground EM radiograph, and MAG surveys, 4,889 ft. of d.d. by Teal Exploration Ltd.
1959 Ground investigation by Anaconda Exploration of Canada Ltd.
1967 Sampling and geological report by Pyrotex Mining and Exploration Co. Ltd.

References: Teal Exploration Ltd., 1959, Prospectus.
Pyrotex Mining and Exploration Co. Ltd., 1967, Prospectus.
ODM, Red Lake files.

52°45' - 93°30'

Berens River Mine (Past Producer)

Main Metals: Au, Ag, Pb, Zn.

Location: 52°45'-93°30'; approx. 2 1/4 mi. S of the E end of South Trout Lake.
Reference: ODM map P.538.

Geology: Tetrahedrite, sphalerite, galena, dyscrasite, native silver, and minor ruby silver are found in at least 20 veins (essentially breccia zones) over a north-south strike length of at least 1 1/2 miles, where they fill fractures in quartz within Archean pyroclastics. The No. 1 vein from which most production was attained, strikes west, dips 65S and is about 2400 feet long. A small amount of ore was extracted from the No. 3 vein, found about 2000 feet north of No. 1. Vein thicknesses range from 1 to 10 feet.

Economic Features: Estimate of reserves: No. 1 vein - 75,000 tons grading 0.10-0.12 oz./ton Au and 4-5 oz./ton Ag left in the old workings; Nos. 3, 10 and 19 veins - 600,000 tons grading 0.18 oz./ton Au, 7.81 oz./ton Ag, 2.06% Pb, and 2.99% Zn estimated from surface drilling (Golsil Mines Ltd., 1965).

Ownership: Golsil Mines Ltd.

History: 1928-1929 Trenching, surveying, 5369 ft. of d.d. by Favourable Lake Mining and Exploration Co.

1936-39 27,544 ft. of d.d., shaft sinking and underground development by Berens River Mines Ltd.

1939-1948 Production and development work by Berens River Mines Ltd. (Production statistics from Company reports).

Shaft sinking	4,053 feet	Tons milled	560,607
Crosscutting	16,203	Au recovered	157,503 oz.
Drifting	23,845	Ag recovered	5,702,616 oz.
Raising	10,670	Pb recovered	6,315,372 lb.
		Zn recovered (from 1943)	1,797,091 lb.
		Total Value	\$9,481,498.00

1960 EM survey.

1961-1964 23,067 ft. of d.d. on veins Nos. 3, 10, and 19 by Golsil Mines Ltd.

1966-1968 No. 2 shaft dewatered and deepened, and underground d.d. by Golsil Mines Ltd.

References: Ayres, L.D., ODM, written communication.

CIMM, 1948, Symposium Vol., p.365-8.

Can. Min. Jour., 1949, June, p. 83-86.

Berens River Mines Ltd., 1937-1948, Annual Reports.

Golsil Mines Ltd., 1965, Prospectus.

Oliver Deposits

Main Metals: Cu.

Location: 52°45'-93°30'; E of N end of Setting Net Lake.

Reference: ODM, 1929, Vol.38, pt.2, p.80.

Geology: The area is underlain by metavolcanic rocks intruded by metagabbro and later by granitic rocks. Most of the showings occur in silicified and partly sheared metavolcanic rocks along their contact with granitic intrusions. One showing occurs in metavolcanics along the contact of a metagabbro body. Mineralization consists of streaks or disseminations of varying amounts of pyrrhotite and pyrite with chalcopyrite and minor sphalerite and molybdenite.

Economic Features: The deposits are small and low grade.

History: 1928 Stripping and trenching by D.G. Oliver interests.

1957 MAG and resistivity survey by Continental Mining and Exploration Ltd.

References: ODM, 1929, Vol.38, pt.2, p. 78-81.

ODM, Red Lake files.

Senet Copper Deposits

Main Metals: Cu.

Location: 52°45'-93°30'; approx. 3700 ft. E of the bay in the NE corner of Setting Net Lake.

Reference: ODM map 38a.

Geology: The main showing consists of two lenses of mineralization in a weakly sheared, locally silicified metabasalt. Pyrite, pyrrhotite and chalcopyrite are present as disseminations or small stringers. About 1/4 mile east the Springer showing consists of traces of chalcopyrite in massive pyrite and pyrrhotite in a silicified metabasalt. About 4000 feet north of the main showing pyrite and chalcopyrite occur as fine seams and disseminations in a siliceous host rock. Chalcopyrite and pyrite are found in quartz porphyry between multiple auriferous quartz veins approximately 800 feet southeast of the main showing.

Economic Features: Values of 2.5% Cu and 1.90% Cu over 18 feet and 5 feet respectively have been obtained from chip samples of outcrop on the main showing. This showing has been drilled for a strike length of 1000 feet.

Ownership: K. Koleff.

History: 1929 Stripping and trenching.

1945-46 d.d. by Kega Gold Mines Ltd.

1952 627 feet of d.d. by Peteque Mining and Exploration Ltd.

1956-57 Geol., MAG, SP, EM, and resistivity surveys, 14,803 feet of d.d. by Continental Mining and Exploration Ltd.

References: ODM, 1929, Vol.38, pt.2, p.83.

ODM, 1957, M.R.C. 2, p.68-69.

ODM, Red Lake files.

52°45' - 94°00'

Borland (Beatrice) Lake Prospect

Main Metals: Pb, Ag, Zn.

Location: 52°45'-94°00'; Borland Lake.

Reference: N.T.S. 53C/16.

Geology: The showing is found in biotite paragneiss (metagreywacke) containing sills and lenses of granitic rocks and pegmatite and a few layers of marble and calc-silicate gneiss. Several biotite-poor, quartz-rich areas containing up to 10% argentiferous galena and minor sphalerite, both in small stringers and disseminations, occur in a 75-foot thick zone. The east end of the mineralized zone is cut off by and ultramafic sill.

Economic Features: The deposit contains 238,000 tons averaging 9.0 oz./ton Ag along a strike length of 1200 ft. (N. Miner, Aug. 18, 1966). Noranda drilling averaged 0.024 oz./ton Au (N. Miner, July 22, 1965). The lead content of the deposit was not released.

History: 1946-1947 4 X-ray d.d. holes (about 600 ft.) by Berens River Mines Ltd.

1961 5 trenches and 205 ft. of d.d. by Noranda Mines Ltd.

1962 2,461 ft. of d.d. by Noranda Mines Ltd.

1963 1,821 ft. of d.d. by Noranda Mines Ltd.

1964 7,386 ft. of d.d. by Noranda Mines Ltd.

1965 9,101 ft. of d.d. by Astrabrun Mines Ltd.

1967 2,052 ft. of d.d. by Barymin Explorations Ltd.

Remarks: Deposit lies almost wholly under Borland Lake and is covered by 5 to 10 ft. of water and as much as 100 ft. of clay.

References: Ayres, L.D., 1965, ODM, Notes on property visit.

ODM, Red Lake files.

Murray-Stewart Prospect

Main Metals: Pb, Ag.

Location: 52°45'-94°00'; about 3/4 mi. N of Favourable Lake and 2 1/2 mi. E of the mouth of the Borland River.
Reference: N.T.S. 53D/16.

Geology: Narrow veins containing argentiferous galena occur in bands of slightly sheared rhyolite and feldspar porphyry. Mineralization occurs in lenses up to 3 feet long and 10 inches thick and consists of galena, some chalcopyrite, and pyrite disseminated in a gangue of partly replaced wall rock and quartz.

Economic Features: Grab samples were reported to have yielded assays as high as 89 oz./ton Ag.

History: 1929 Prospecting and staking by K. Murray and H.R. Stewart.
1964 1,981 ft. of d.d. by North Rock Explorations Ltd.

References: ODM, 1929, Vol.38, pt.2, p.83.
ODM, Red Lake files.

53°00' - 93°00'

Stain River Deposits

Main Metals: Cu, Ag, Au.

Location: 53°00'-93°00'; approx. 2200 ft. SE of the mouth of the Stain River.
Reference: ODM map 47f.

Geology: Pillowed mafic metavolcanics contain a silicified zone traced for 250 feet and averaging 2 1/2 to 3 feet thick with local swells to 6 feet. Visible mineralization consists of pyrite and chalcopyrite and is most massive in the narrower sections of the zone.

Economic Features: Two selected grab samples gave assays of 1.90 and 0.85 oz./ton Au, 2.82 and 1.10 oz./ton Ag, and 1.90% and 0.87% Cu.

History: 1946 Trenching, geol. and MAG surveys, and d.d. by Berens River Mines Ltd.

References: ODM, 1969, M.P. 27.
ODM, Red Lake files.

KENORA DISTRICT

OCCURRENCES

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Avery Tp.; 6 mi. E. of Dinorwic.	ODM map P.242.	Cu	Chalcopyrite in volcanics.
Baird Tp.; SW side of small pond 8500 ft. NNW of Madsen shaft.	ODM, Red Lake files.	Cu	Minor chalcopyrite with pyrite and pyrrhotite in iron formation, and locally andesite.
Ball Tp.; W side of Pipestone Narrows near power line.	ODM, Red Lake files.	Ni	Low nickel assays returned from altered peridotite and cross-cutting carbonate.
Ball Tp.; shoreline 800 ft. SE of large island in Phillips Channel.	ODM, Red Lake files.	Cu	Disseminated chalcopyrite and pyrite in quartz carbonate in a breccia zone.
Ball Tp.; approx. 1 mi. SE of the NW end of Pipestone Bay.	ODM, Red Lake files.	Cu,Zn	Chalcopyrite and sphalerite associated with pyrite and pyrrhotite in iron formation.
Ball Tp.; about 1000 ft. W of W end of Middle Bay.	ODM, 1935, Vol.44, pt.6.	Cu,Zn,Pb	5-ft. shear zone in mafic metavolcanics contains quartz veins and massive pyrite, chalcopyrite, sphalerite and galena over widths up to 2 ft.
Ball Tp.; West Red Lake Mine.	ODM, 1940, Vol.49, pt.2, p.214-7.	Au,Cu,Zn,Pb	Chalcopyrite, sphalerite and galena, with pyrite in auriferous quartz veins and carbonatized mafic metavolcanics.
Ball Tp.; W end of small bay immediately S of West Narrows.	ODM, Red Lake files.	Cu	1-2% pyrite and pyrrhotite and minor chalcopyrite in iron formation over core length of 66 ft.
Ball Tp.; 500 ft. NE of NE end of Douglas Lake.	ODM, Red Lake files.	Cu	3 feet of disseminated chalcopyrite, pyrrhotite, and pentlandite in amphibolite schist.
Ball Tp.; NW end of peninsula on S side of West Narrows.	ODM, Red Lake files.	Cu	Traces of chalcopyrite with considerable pyrrhotite in graphitic argillite.
Ball Tp.; W end of elongate bay, NW side Pipestone Bay.	ODM, Red Lake files.	Au,Pb,Zn,Cu	Galena, sphalerite and chalcopyrite with heavy iron sulphides in 3-foot auriferous quartz vein.
Ball Tp.; 1600 ft. W and slightly S of Middle Bay.	ODM, Red Lake files.	Cu	Low copper values in trench in iron formation.
Ball Tp.; S shore, W end of Trout Bay.	ODM, Red Lake files.	Cu	Minor chalcopyrite in trench in hybridized gabbro.
Ball Tp.; about 600 ft. S of Narrows on small bay, NW end Pipestone Bay.	ODM, Red Lake files.	Cu,Zn,Pb	Chalcopyrite, sphalerite and galena in 18-inch quartz vein.
Ball Tp.; 1300 ft. N of E end of Bridget Lake.	ODM, Red Lake files.	Cu	Pyrite and chalcopyrite associated with quartz veinlets in sheared and altered greenstone.
Ball Tp.; 2200 ft. ENE of NW end of Bridget Lake.	ODM, Red Lake files.	Au,Cu	Chalcopyrite and pyrite disseminated within and veining auriferous quartz-carbonate.
Ball Tp.; 3200 ft. ENE of the W end of Trout Bay.	ODM, Red Lake files.	Pb,Zn,Cu	Pyrite, galena, sphalerite and chalcopyrite in quartz veins along a quartz porphyry - metavolcanic contact.
Bateman Tp.; 1½ miles W of Walsh Lake.	ODM, Vol.49, pt.2, p.65.	Ni	Nickeliferous pyrrhotite and pyrite in shear zone.
Bateman Tp.; near the W shore of East Bay, ½ mi. N of the narrows.	ODM, 1924, Vol.33, pt.3, p.38.	Pb,Ag	Argentiferous galena in vein 20 ft. long and up to 18 in. thick.
Bateman Tp.; NE end of McFinley Peninsula.	ODM, 1962, G.R.6, p. 27-28.	Au,Zn,Cu,Pb	Sphalerite, chalcopyrite and galena with iron sulphides in auriferous quartz veins and replacing iron formation.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Bateman Tp.; point on NE side of East Narrows.	Crull, E., Dickenson Mines Ltd., personal communication.	Pb,Ag	Argentiferous galena in iron formation.
Byshe Tp.; Keg Lake, approx. ½ mi. E of Chukuni River.	ODM, 1957, M.R.C.2, p.68.	Cu	Chalcopyrite in lenses that probably lie in drag folds along a metabasalt-diorite contact.
Byshe Tp.; approx. 2000 ft. E of NE end of Keg Lake.	Hermiston, W., ODM, personal communication.	Zn,Pb	Sphalerite, galena and pyrite in lenses in a sheared felsic rock.
Byshe Tp.; approx. 8000 ft. SE of Chukuni River bridge.	ODM, Red Lake, Field notes, Resident Geologist.	Cu,Pb	Chalcopyrite, galena and pyrite in 4-in. quartz vein and local silicified zones in metavolcanics and metagabbro.
Byshe Tp.; approx. 8000 ft. SE of the Chukuni River bridge.	ODM, Red Lake, Field notes, Resident Geologist.	Cu,Co	Chalcopyrite with a cobalt mineral in small lenses of sheared felsic intrusions.
Code Tp.; Roxora (Triggs) Mine.	Canada Mines Handbook, 1950, p.170.	Cu,Au,Ag	Au and Ag occur in quartz veins.
Connell Tp.; 3½ mi. SE of Kishkap Falls.	ODM, 1930, Vol.39, pt.2, p.27.	Cu	Chalcopyrite and iron sulphides in metasediments and iron formation.
Dent Tp.; W shore of Woman Lake immediately N of the Woman River.	ODM, 1927, Vol.36, pt.3, p.108.	Au,Zn,Cu	Pyrite, sphalerite and chalcopyrite in auriferous quartz vein.
Dent Tp.; NW shore of Confederation Lake.	ODM, 1927, Vol.36, pt.3, p.108.	Zn,Pb,Cu	Pyrite, sphalerite, galena and chalcopyrite in quartz vein.
Dome Tp.; 4000 ft. WNW of S end of East Bay.	ODM, 1927, Vol.36, pt.3, p.68.	Zn,Co	Sphalerite, with traces of cobalt with quartz-carbonate stringers in a fracture zone in greenstone.
Dome Tp.; island 1300 ft. N of McKenzie Island.	ODM, 1935, Vol.44, pt.6, p.11.	Pb,Zn	Galena and sphalerite in a quartz vein along a metabasalt - quartz porphyry contact.
Dome Tp.; Wilmar property	ODM, 1968, G.R.56, p.26.	Cu	Minor chalcopyrite with iron sulphides in metagabbro body.
Drayton Tp.; North Pines Mine.	ODM, 1932, Vol.41, pt.6, p. 28-30. ODM map 41h.	Cu	Minor Cu in pyrite deposit.
Ewart Tp.; Boundary property, Baubee Lake.	ODM, 1965, G.R.41, p.49. ODM map 2069.	Pb,Zn,Cu,Ag	Finely disseminated sulphides in volcanics.
Ewart Tp.; Electrum Lake.	ODM, 1965, G.R.41, p. 38-43. ODM map 2069.	Cu,Au	Cu, Au occurs in quartz porphyry and sheared basalt.
Ewart Tp.; 1 mi. E of High Lake.	ODM, 1965, G.R.41, p. 48-49. ODM map 2069.	Zn,Cu,Co,Au,Ag	Sulphides in sheared basalt.
Fairlie Tp.; W of Middle Narrows near Todd Tp. line.	Crull, E., Dickenson Mines Ltd., personal communication.	Pb,Ag	Argentiferous galena in narrow stringers in silicified metavolcanics.
Fairlie Tp.; 500 ft. NNE of intersection of Todd Tp. line with Red Lake.	ODM, Red Lake files.	Zn,Pb,Cu	Sphalerite, galena and chalcopyrite over 7.5 ft. core length in quartz-carbonate.
Fairlie Tp.; approx. ½ mile WNE of W end of McKenzie Island.	ODM, Red Lake files.	Cu	Minor chalcopyrite replacing pyrrhotite and filling fractures in interbedded chert and tuff.
Fairlie Tp.; 1 ½ mi. NNE of entrance to Martin Bay.	ODM, Red Lake files.	Au,Pb,Cu,Zn	Galena, chalcopyrite, and sphalerite in auriferous quartz veins in metagabbro.
Fairlie Tp.; W end of island 1½ miles N of 2 mi. marker, S Tp. boundary.	Crull, E., Dickenson Mines Ltd., personal communication.	Cu	3-in. veinlet of chalcopyrite in metavolcanics.
Godson Tp.; Kakagi Lake, Blacky Bay.	ODM, Kenora files.	Cu,Zn	Small surface showing of sulphides in altered andesite.
Graves Tp.; SW corner.	ODM, Red Lake files.	Au,Cu	Chalcopyrite and native copper in auriferous quartz veins in schist.
Heyson Tp.; 630 ft. S of No.2 post, KRL 11254.	ODM, 1968, G.R.56, p.36.	Cu	Minor chalcopyrite with pyrite and arsenopyrite along contact between mafic and intermediate metavolcanics.
Heyson Tp.; E end Faulkenham Lake.	ODM, 1940, Vol.49, pt.2, p.138. ODM, 1908, G.R.56, p.43.	Cu	Minor chalcopyrite in shear zones.
Heyson Tp.; SE end of Coin Lake.	ODM, 1968, G.R.56, p.46.	Cu,Au	Chalcopyrite and native gold in a narrow east-west shear.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Heyson Tp.; approx. 8000 ft. N of N end of Russet Lake.	Durham, J., Cochenour Willans Gold Mines Ltd., personal communication.	Zn	Bands of sphalerite up to 1 in. interbanded with quartz across 14 ft. in d.d. hole.
Heyson Tp.; approx. 8600 ft. NNE of the N end of Russet Lake.	Durham, J., Cochenour Willans Gold Mines Ltd., personal communication.	Zn	Two ft. of massive sphalerite in dacite in d.d. core.
Honeywell Tp.; approx. 2½ mi. N of Sundown Lake.	ODM, Red Lake files.	Cu,Zn,Ag	Low copper, zinc and silver values from d.d. holes in interbedded rhyolite and andesite.
Jaffray Tp.; lots 13 and 14, con.VI, Scramble Mine (Canadian Homestake).	ODM, 1915, Vol.24, p.96.	Cu,Au	Cu, Au in quartz veins.
Jutten Tp.; SE Bay of Savant Lake.	ODM, map P.352.	Cu	Chalcopyrite in quartz veins.
Jutten Tp.; S arm of Savant Lake.	ODM, map P.354.	Pb,Zn,Ag	. . .
Laval Tp.; 2 mi. W of Sandy Beach Lake.	ODM, 1964, Map P.242.	Pb,Ag	Galena in metasediments.
Lomond Tp.; ½ mi. SW of Lomond Lake.	ODM, Kenora, files.	Cu,Ni	Sulphides in volcanics.
Lomond Tp.; ½ mi. SE of Lomond Lake.	ODM, Kenora, files.	Cu	Chalcopyrite, pyrite and pyrrhotite in sheared siliceous iron formation.
McAree Tp.; E shore of Sandy Beach Lake.	ODM map P.242.	Cu,Au	. . .
McCullagh Tp.; about 4 mi. E of Pickle Crow Mine.	ODM, 1930, Vol.39, pt.2, p. 25-26.	Cu	Chalcopyrite with iron sulphides in quartz vein in sedimentary gneiss.
McCullagh Tp.; about 3 mi. E of Pickle Crow Mine.	GSC map 8-1961.	Cu	Chalcopyrite in mafic metavolcanics.
McCullagh Tp.; about 3 ¾ mi. E and slightly N of Pickle Crow Mine	GSC map 8-1961.	Cu	Chalcopyrite in small band of metasediments.
McDonough Tp.; E side of Slate Bay 4000 ft. N of Tp. line.	ODM, 1935, Vol.44, pt.6, p. 24-25.	Cu	Malachite and native copper in highly altered greenstone.
McDonough Tp.; NE end of Slate Bay.	ODM, 1935, Vol.44, pt.6, p.8.	Cu	Disseminated pyrite and chalcopyrite in metaconglomerate.
McDonough Tp.; shoreline 1½ mi. west of Post Narrows.	ODM, Red Lake files.	Cu	Disseminated chalcopyrite with pyrrhotite over a 23-ft. core length in graphitic argillite.
McDonough Tp.; 3800 ft. N of the end of Slate Bay.	ODM, Red Lake files.	Cu	Chalcopyrite widely disseminated in quartz porphyry.
McDonough Tp.; approx. 400 ft. off shore and 1 mi. S of N end of Slate Bay.	ODM, Red Lake files.	Cu	Trace chalcopyrite in massive sulphide zone and up to 2% in contiguous carbonatized metasediments.
McDonough Tp.; NE end of Slate Bay.	ODM, Red Lake files.	Cu	Minor chalcopyrite and sphalerite as fracture fillings in iron formation and traces of sphalerite in a quartz porphyry dike.
McDonough Tp.; NE-trending point in Slate Bay.	ODM, Red Lake files.	Cu	Widely disseminated chalcopyrite and sphalerite in quartz porphyry.
McDonough Tp.; 2400 ft. NW of 41 mi. marker, S Tp. boundary.	ODM, Red Lake files.	Cu	Minor chalcopyrite with pyrite and magnetite in skarn zone 140 ft. below lake bottom.
McDonough Tp.; 2200 ft. NNW of 41 mi. marker, S Tp. boundary.	ODM, Red Lake files.	Cu	Traces of disseminated chalcopyrite over 244-ft. core length in feldspar porphyry.
McDonough Tp.; S side of E-trending point in N end of Slate Bay.	ODM, Red Lake files.	Cu	Chalcopyrite with pyrrhotite in granite, granitized metasediments and granitic gneiss.
McDonough Tp.; ¾ mi. E of the narrows, N end of Slate Bay.	ODM, Red Lake files.	Cu	Chalcopyrite with arsenopyrite, pyrite, pyrrhotite in a large shear zone.
McIlraith Tp.; 1 and ½ mi. NE of Centrefire Lake.	ODM, Kenora files.	Cu	Chalcopyrite in fragmental and pillow volcanics.
Manross Tp.; Lake of the Woods, Pipestone Peninsula.	ODM, P.R. 1950-4, p.19.	Pb,Zn,Ag,Au	Sulphides occur in quartz stringers in a small granite body.
Manross Tp.; Wendigo Gold Mines Ltd.	ODM, 1935, Vol.44, pt.4, p.34-9. ODM map 39f.	Cu, Au, Ag	A former gold producer with copper as a byproduct.
Mitchell Tp.; N end of Fly Lake.	ODM, Red Lake files.	Cu	2-ft. zone with heavy iron sulphides, sphalerite and some chalcopyrite - some trenching and 728 ft. of d.d.
Mitchell Tp.; 1 mi. SE of entrance to Lost Bay, Confederation Lake.	ODM, Red Lake files.	Zn, Au	Assays of 11% zinc and 4.20 oz./ton Au reported.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Mulcahy Tp.; 1200 ft. ESE of the intersection of the Tp. line and Folley Lake.	ODM, 1968, Field notes, Resident Geologist.	Cu, Zn, Pb	Minor chalcopryrite, sphalerite and galena in a quartz vein.
Mulcahy Tp.; 400 ft. S of Tp. line on W side of peninsula.	ODM, Red Lake files.	Zn, Cu	Minor sphalerite and chalcopryrite with pyrrhotite in black argillite.
Mulcahy Tp.; from 1200 to 2400 ft. SE of SE end of Trout Bay.	ODM, 1968, M.P. 21, p. 10-12.	Cu, Zn	Chalcopryrite and traces of sphalerite with pyrrhotite in iron formation.
Mulcahy Tp.; about 600 ft. W & S of Muskrat Bay.	ODM, 1968, M.P. 21, p. 10-12.	Cu	Disseminated chalcopryrite with pyrrhotite in iron formation.
Mulcahy Tp.; about 8100 ft. ESE of the S end of Trout Bay.	ODM, 1968, Field notes, Resident Geologist.	Cu	Disseminated chalcopryrite with pyrite in quartzite.
Pickerel Tp.; Minnitaki Lake, Pickerel Arm.	ODM map P.268.	Zn, Au	. . .
Skinner Tp.; East of Bathurst Lake.	ODM, Red Lake files.	Cu	Disseminated to patchy chalcopryrite, galena, sphalerite and iron sulphides in quartz veins and enclosing quartz porphyry with thicknesses from 5 to 15 ft.
Skinner Tp.; about 3/4 mi. south of Carr Lake.	ODM, 1928, Vol.37, pt.4, p.39.	Zn	Sphalerite with pyrite in gossan zone in amphibolite.
Southworth Tp.; N 1/2 of lot 6, con. III (Neiml).	ODM map 50e.	Cu, Au, Ag	Quartz vein, well mineralized with chalcopryrite and tetrahedrite.
Todd Tp.; Lake Rowan Mine.	ODM, 1940, Vol.49, pt.2, p.149-152.	Au,Cu,Pb,Zn	Minor chalcopryrite, galena, sphalerite with auriferous quartz veins in silicified greenstone.
Todd Tp.; 4000 ft. NW of W end of Martin Bay.	ODM, 1935, Vol.44, pt.6, p.40-41.	Zn, Pb, Cu	Minor sphalerite, galena and chalcopryrite with iron sulphides in and contiguous to quartz-carbonate stringers in a 3 to 6-ft. shear zone.
Todd Tp.; approx 1/2 mi. SE of SE end of Scott Bay.	ODM, Red Lake files.	Pb, Zn	Galena and sphalerite reported in trench.
Todd Tp.; approx. 1 mile NNW of W end of Martin Bay.	Crull, E., Dickenson Mines Ltd., pers. com. M.R.B., Ottawa, mineral files.	Cu,Zn,Pb,Ag	Chalcopryrite, sphalerite, galena, arsenopryrite and pyrite in metabasalt. Grab sample gave 2.48% Pb, 12.80% Zn, 14.30 oz./ton Ag.
Tustin Tp.; 22 mi. W of Vermilion Bay	ODM, 1967, M.P. 16, p.17. M.R.B., Ottawa, mineral files.	Cu, Mo	Massive pyrrhotite with minor molybdenite and chalcopryrite.
Van Horne Tp.; S 1/2 of lot 6, con. I.	ODM, 1917, Vol.26, p.182-183	Cu, Au, Ag	Minor chalcopryrite in gold-quartz vein.
Vermilion Tp.; S shore of Vermilion Lake.	ODM, 1932, Vol.41, pt.6, p.28-30. ODM map 41h.	Cu,Pb,Au,Ag	Mineralized vein with disseminated pyrite, galena, chalcopryrite and sphalerite.
Willans Tp.; NE side Gullrock Lake.	Crull, E., Dickenson Mines Ltd., pers. com.	Pb, Zn, Ag	Lead-zinc-silver sulphides present.
49°00' - 91°15'; 600 ft. S of N bay of Redpaint Lake (C.A. Alcock).	ODM, 1960, Vol.69, pt.5, p.47. ODM map 1960g.	Cu	Chalcopryrite associated with quartz-carbonate vein.
49°00' - 91°15'; Blowout Lake.	ODM, 1960, Vol.69, pt.5, p.43. ODM map 1960g.	Cu	. . .
49°00' - 92°30'; Entwine Lake.	ODM map P.292.	Cu	Disseminated sulphides in diorite.
49°15' - 92°15'; Kawashegamuk Lake.	ODM, Kenora files. ODM map 2115.	Cu, Ni	Disseminated chalcopryrite and pyrrhotite in sheared andesite.
49°15' - 92°15'; Kawashegamuk Lake.	ODM map 2115.	Pb, Zn	. . .
49°15' - 92°30'; Boyer Lake.	ODM map 2115.	Cu	. . .
49°15' - 92°45'; Manitou Island, Lower Manitou Lake.	ODM, 1933, Vol.42, pt.4, p.27. ODM map 42c.	Cu, Au	Pyrite and chalcopryrite in quartz monzonite.
49°15' - 92°45'; Frenchmen Island, Upper Manitou Lake.	ODM, 1933, Vol.42, pt.4, p.31. ODM map 42c.	Cu	Pyrite and chalcopryrite in sericite schist.
49°15' - 92°45'; 4 mi. NW of Upper Manitou Lake.	ODM, 1902, Vol.11, p.248.	Cu, Zn, Au	Pyrite, chalcopryrite and sphalerite associated with quartz veins in hornblende to chlorite schist.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
49°15' - 93°30'; 2 mi. SW of Atikwa Lake (Shawkey).	ODM, Kenora files.	Cu	Minor disseminated chalcopyrite occurs in pillowed andesites.
49°15' - 93°30'; Denmark Lake (Anderson).	ODM, 1957, M.R.C. 2, p.23.	Cu, Ni	Disseminated chalcopyrite and nickeliferous pyrrhotite in gabbro.
49°15' - 93°30'; Denmark Lake (Thomson).	ODM, 1957, M.R.C. 2, p.23.	Cu, Ni	Disseminated chalcopyrite and nickeliferous pyrrhotite in gabbro.
49°15' - 93°30'; NE of Isinglass Lake.	ODM map 2115.	Cu	. . .
49°15' - 93°30'; 500 ft. NE of NE end of Tillie Lake (Nina Mine).	ODM, 1933, Vol.42, pt.4, p.79. ODM map 42b.	Cu, Au	Mineralized granular quartz vein in a shear zone containing chalcopyrite and bornite.
49°15' - 93°45'; Caviar Lake (Gold Panner Mine).	ODM, 1933, Vol.42, pt.4, p.80. ODM map 42b.	Cu, Au, Mo	Mineralized quartz veins in sheared porphyry dike.
49°15' - 93°45'; Kakagi Lake.	ODM map 2115.	Cu, Zn	. . .
49°15' - 93°45'; Kakagi Lake (Kenty Group).	ODM, Kenora files.	Cu, Au, Mo	Quartz-carbonate veinlets with chalcopyrite and MoS ₂ in shear zone in volcanics.
49°15' - 93°45'; Kakagi Lake, W end (Noranda).	M.R.B., Ottawa, mineral files.	Cu, Mo	Chalcopyrite, pyrite, and molybdenite in shear zone in granite.
49°15' - 93°45'; Stephen Lake.	ODM map 2115.	Cu, Zn	. . .
49°30' - 92°15'; 6 mi. S of Dymont.	ODM map 2115.	Zn	. . .
49°30' - 92°30'; Dinorwic Lake, Stanawan Bay (Van Houten No. 1).	ODM, 1941, Vol.50, pt.2, p.46. ODM map 50e.	Cu, Au, Mo	Sulphides occur mainly in the granitic wallrock but also in quartz veins.
49°30' - 92°30'; East Godson Lake, 1 mi. E.	ODM map 2115.	Cu	. . .
49°30' - 92°45'; 1/2 mi. SE of Nabish Lake.	ODM, Kenora files.	Cu, Ni	Disseminated sulphides in gabbro.
49°30' - 92°45'; 1/2 mi. N of Nabish Lake.	ODM, Kenora files.	Cu, Zn, Ag	Mineralized zone along contact of metasediments and volcanics.
49°30' - 93°00'; Eagle Lake, Hardrock Bay (Birch Bay Gold Mines Ltd.) (W.W. Smith).	ODM, 1939, Vol.48, pt.4, p.23. ODM map 48d.	Cu, Au	Disseminated sulphides along contacts of quartz veins and quartz porphyry.
49°30' - 93°00'; Eagle Lake (Magdalena Red Lake Mines).	ODM, Kenora files.	Cu, Au	Mineralized pyrite, pyrrhotite and minor chalcopyrite in a shear zone in pillow lavas.
49°30' - 93°00'; Eagle Lake, Meridian Bay, East shore.	ODM, Kenora files.	Cu, Au, Ag	Disseminated chalcopyrite occurs in quartz vein and sheared andesite.
49°30' - 93°15'; 1/2 mi. SW of Mulcahy Lake.	ODM, Kenora files.	Cu	Two occurrences of chalcopyrite in mafic igneous complex.
49°30' - 94°00'; Lake of the Woods, Bigstone Bay (Black Jack Mine).	ODM, 1930, Vol.39, pt.3, p.58, 68. ODM map 39f.	Cu, Au	Disseminated chalcopyrite in quartz lenses in hornblende schist.
49°30' - 94°15'; Lake of the Woods, Hay Island (Keewatin Mine)	M.R.B., Ottawa, mineral files. ODM map 39f.	Cu,Pb,Zn,Au	Sulphides occur in quartz veins.
49°30' - 94°30'; Hatmaker Lake, E end.	ODM, Kenora files.	Cu, Au, Ag	Mineralized quartz veins in feldspar porphyry.
49°30' - 94°30'; Lake of the Woods, N Peninsula, S shore (Nor-Penn).	ODM, Kenora files.	Cu, Pb, Zn	Sulphides in shear zone in Keewatin volcanics.
49°30' - 94°30'; Lake of the Woods, Western Peninsula.	ODM, 1936, Vol.45, pt.3, p.38. ODM map 45b.	Cu, Au	Pyrite and chalcopyrite near gold-bearing quartz vein in agglomerate.
49°30' - 94°45'; Shoal Lake, Bag Bay (Mikado Mine).	ODM, 1930, Vol.39, pt.3, p.53. ODM map 39e.	Cu, Mo	Sulphides in gold-bearing quartz veins.
49°30' - 95°00'; Shoal Lake, Is. J.O. 177.	ODM, 1968, M.P. 22, p.14.	Cu, Ni	Disseminated pyrite, chalcopyrite and nickeliferous pyrrhotite in sheared basalt and gabbro.
49°30' - 95°00'; Shoal Lake, Is. S176.	ODM, 1968, M.P. 22, p.14.	Cu, Ni	Chalcopyrite and nickeliferous pyrrhotite near edge of gabbro.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
50°00' - 92°15'; 1/2 mi. N of E end of Tab Lake.	ODM map P.336.	Cu	Sulphides associated with iron formation.
50°00' - 92°15'; 1/3 mi. W of Vermilion Additional Tp.	ODM map P.336.	Cu, Pb, Zn	Mineralized quartz veins.
50°15' - 94°30'; Oneman Lake, E side.	ODM, Kenora files. ODM, P.R. 1948-6. ODM map P.366.	Zn, Cu, Pb	Disseminated sulphides in schist and greenstone.
50°15' - 94°30'; Oneman Lake, 5 mi. E.	ODM, Kenora files. ODM map P.366.	Zn, Cu	Sulphides occur in altered metasediment.
50°45' - 92°45'; 1/4 mi. SE at SE end Snakeweed Lake.	ODM, Red Lake files.	Cu, Ag	Assays of up to 1.18 oz./ton Ag and 4.65% Cu in trenches in sheared amphibolite.
50°45' - 92°45'; 4600 ft. E of N end of Gerry Lake.	ODM, Red Lake files.	Cu	Minor chalcopyrite with iron sulphides in trenches, in hornblende-biotite schist.
50°45' - 93°00'; approx. 3200 ft. N of SW end of Gerry Lake.	ODM, Red Lake files.	Cu, Ag	Assays of 2.5% Cu and 2.5 oz./ton Ag reported from a 4-ft. mineralized zone.
50°45' - 93°45'; 20 ft. S of Heyson Tp. line, 1100 ft. W of Hwy. 105.	ODM, Red Lake files.	Cu	Threads of chalcopyrite in quartzite fragments in a 4-foot shear zone.
51°00' - 91°30'; 1/4 mi. W of SW end of Wesleyan Lake.	ODM, 1935, Vol.44, pt.6, p.73.	Cu, Zn	Quartz veins in shear zone in metavolcanics carrying pyrite, chalcopyrite and sphalerite.
51°15' - 86°45'; approx. 2 mi. S of Kagiami Falls.	GSC map 6-1962.	Cu	Chalcopyrite with iron sulphides in amphibolite.
51°15' - 86°45'; E of Walsh Lake.	GSC map 6-1962.	Cu, Au	Chalcopyrite, pyrite and gold in gabbro.
51°15' - 87°00'; 2 mi. upstream from entrance to Walsh Lake.	GSC map 6-1962.	Cu	Chalcopyrite with iron sulphides in metasediments.
51°15' - 87°00'; N shore of Walsh Lake, Albany River.	GSC map 6-1962.	Cu	Chalcopyrite with iron sulphides in mafic dike.
51°15' - 87°30'; E end of Abazotikichuan Lake, Albany River.	GSC map 6-1962.	Cu	Chalcopyrite with iron sulphides in mafic metavolcanics.
51°15' - 88°30'; 2 mi. and 3 1/2 mi. E of Frenchman's Rapids, Albany River.	GSC map 6-1962.	Cu	Chalcopyrite in mafic metavolcanics.
51°15' - 92°15'; 1 1/2 mi. N of W end Johnson Island, Birch Lake.	ODM, 1933, Vol.42, pt.6, p.41. ODM map 42d.	Cu	5% combined chalcopyrite and pyrite and 10% arsenopyrite in quartz vein.
51°15' - 92°15'; 2 1/2 miles N of centre of Johnson Island, Birch Lake.	ODM, Red Lake files.	Cu, Zn, Ag	Low copper, zinc, and silver values from drill core in metasediments, metarhyolite and metabasalt.
51°15' - 92°15'; 3 mi. E of Casummit Lake Mine.	ODM, Red Lake files.	Cu, Zn, Ag	Low copper, zinc, and silver values from drill core in metarhyolite and metasediments.
51°15' - 92°15'; 1/4 mi. W of N end Joneston Lake.	ODM, Red Lake files.	Cu, Zn, Ag	Low copper, zinc, and silver values from drill core in metarhyolite and metasediments.
51°15' - 92°15'; S side of Mink Lake narrows.	ODM, 1933, Vol.42, pt.6, p.36. ODM map 42d.	Cu, Pb	Chalcopyrite and trace galena with minor pyrite in quartz vein.
51°15' - 92°30'; N and E of E end of Swain Lake.	ODM, Red Lake files.	Cu	Scattered occurrences of chalcopyrite with iron sulphides along a faulted contact between intermediate metavolcanics and metasediments.
51°30' - 86°45'; Gorlie Creek - about 20 mi. from Albany River.	GSC map 6-1962.	Cu	Chalcopyrite in metasediments.
51°30' - 87°45'; Fort Hope Indian Reserve (No. 64), Albany River.	GSC map 6-1962.	Cu, Pb, Zn	Several showings containing chalcopyrite and one showing with galena and sphalerite as well.
51°30' - 87°45'; N side of Reserve Creek immediately E of Indian Reserve (No. 64) boundary, Albany River.	ODM, 1942, Vol.41, pt.3, p.26. ODM map 51b.	Cu, Mo	Much chalcopyrite and some molybdenite in large quartz veins.
51°45' - 86°30'; Wabasi River about 15 miles west of the Albany River.	GSC map 6-1962.	Cu	Chalcopyrite in mafic metavolcanics.
52°00' - 93°30'; McInnes Lake, approx. 6 mi. N of S end and 1400 ft. off E shore.	ODM, Red Lake files.	Pb	Traces of galena across 75 ft. of drill core.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
52°00' - 93°30'; McInnes Lake, W side of peninsula 8 mi. N of S end of Lake.	ODM, Red Lake files.	Pb, Zn	Traces of galena and sphalerite with pyrrhotite in iron formation.
52°15' - 87°30'; approx. 1 mi. W and slightly N of E end, Lavoie Lake.	GSC map 4-1962.	Cu	Chalcopyrite and arsenopyrite in metavolcanics.
52°15' - 87°30'; N shore Lavoie Lake.	ODM, Red Lake files.	Cu	Traces of chalcopyrite with pyrrhotite in metagabbro and contiguous greenstone.
52°15' - 87°45'; SW end, Rowlandson Lake.	GSC map 4-1962.	Cu	Chalcopyrite with arsenopyrite in metavolcanics.
52°15' - 92°45'; 2 1/4 mi. E of S end of South Bay.	Desmeules, G., pers. com.	Cu, Ni	Copper-nickel bearing conglomerate containing over 1% sulphides.
52°15' - 92°45'; about 6 mi. E and slightly S of the S end of South Bay.	Desmeules, G., pers. com.	Cu	Estimated 3/4% chalcopyrite with iron sulphides in iron formation.
52°15' - 92°45'; approx. 1 1/4 mi. NW of NW end of Makataiamik Lake.	Desmeules, G., pers. com.	Cu, Ni	1 - 2% chalcopyrite, nickel-bearing pyrrhotite and pyrite in matrix of conglomerate.
52°15' - 92°45'; approx. 1500 ft. S centre part of Makataiamik Lake.	Desmeules, G., pers. com.	Cu, Ni	Estimated 1% chalcopyrite with nickel-bearing pyrrhotite and pyrite in conglomerate.
52°15' - 92°45'; two miles E of NE end of Hewitt Lake.	Desmeules, G., pers. com.	Cu	Estimated 1/2% chalcopyrite in matrix of conglomerate on N shore of pond.
52°15' - 92°45'; 2 mi. E & slightly S of NE end of Hewitt Lake.	Desmeules, G., pers. com.	Zn, Pb, Ag	Sphalerite, and argentiferous galena, in sheared metasediments.
52°15' - 92°45'; 5 1/4 mi. E of S end of Hewitt Lake.	Desmeules, G., pers. com.	Zn, Pb, Ag	Sphalerite in argentiferous galena in shear zone in metasediments.
52°15' - 92°45'; approx. 2500 ft. NNW and 2900 ft. ESE of N end Makataiamik Lake.	Desmeules, G., pers. com.	Cu, Ni	Up to 1% chalcopyrite and minor nickeliferous pyrrhotite in metasediments.
52°15' - 92°45'; Prominent point on E side of South Bay, North Spirit Lake.	ODM, 1938, Vol.47, pt.7, p.77. ODM map 47g.	Cu	Minor chalcopyrite, pyrite, and arsenopyrite in drag folded siliceous material interbedded with metasediments.
52°15' - 92°45'; NE shore of South Bay, 2 miles E of Camp Island, North Spirit Lake.	ODM, 1938, Vol.47, pt.7, p.75-76. ODM map 47g.	Cu	Chalcopyrite with arsenopyrite and iron sulphides replacing matrix in a chert-pebble conglomerate.
52°30' - 92°00'; 3500 ft. SSE of SE end McCoy Lake.	Desmeules, G., pers. com.	Cu	Estimated 1% chalcopyrite in metasediments.
52°30' - 92°15'; NE end McCoy Lake.	Desmeules, G., pers. com.	Cu	Estimated 1% chalcopyrite in metasediments.
52°30' - 93°30'; Approx. 3 mi. N of N end of Hornby Lake.	Gay, E., pers. com.	Cu	Chalcopyrite in shear zone in mafic metavolcanics.
52°30' - 93°30'; Approx. 3 1/4 mi. N of N end of Hornby Lake.	Gay, E., pers. com.	Cu, Zn	N-S shear zone in mafic metavolcanics with 2 - 3% sulphides including chalcopyrite and sphalerite.
52°45' - 91°00'; approx. 4300 ft. NE of N end of Randall Lake.	Fyrotex Mining and Exploration Co. Ltd., 1967, Prospectus.	Cu	Splashes of chalcopyrite in quartz veins and schist in a 25-ft. shear zone.
52°45' - 91°00'; NE end Agutua Arm, Weagamow Lake.	ODM, Red Lake files.	Cu	Sparse chalcopyrite with pyrite and arsenopyrite in carbonate zone.
52°45' - 91°00'; approx. 6500 ft. NE of N end Randall Lake.	Fyrotex Mining and Exploration Co. Ltd., 1967, Prospectus.	Cu	Disseminated chalcopyrite and arsenopyrite in two shear zones.
52°45' - 92°30'; approx. 3/4 mi. E of the narrows, Setting Net Lake.	ODM, 1929, Vol.38, pt.2, p.83. ODM map 38a.	Cu	Disseminated chalcopyrite and pyrrhotite along a metagabbro-greenstone contact.
52°45' - 93°30'; about 1300 ft. west of Berens River Mine.	ODM, 1929, Vol.38, pt.2, p.81-82. ODM map 38a.	Cu	Chalcopyrite and iron sulphides in shear zones or xenoliths of greenstone or metasediment within gabbro-diorite.

Location	References	Metals	Remarks
52°45' - 93°30'; 1/4 mi. NE of E end of South Trout Lake.	ODM, 1929, Vol.38, pt.2, p.81. ODM map 38a.	Cu	Iron sulphides and chalcopyrite in shear zone along a metagabbro-slaty schist contact.
53°00' - 92°45'; near shore of Sandy Lake, S of Rahill Lake.	ODM, 1938, Vol.47, pt.7, p.42. ODM map 47f.	Au, Zn	Pyrite and some sphalerite in a narrow fracture in a rhyolite dike.
53°00' - 92°45'; W side of Fishtail Bay, Sandy Lake.	ODM, 1938, Vol.47, pt.7, p.43. ODM map 47f.	Au, Zn	Sphalerite in iron formation.
53°00' - 93°15'; Sandy Lake, island SW of mouth of Stain River.	ODM, 1938, Vol.47, pt.7, p.41. ODM map 47f.	Pb	Galena in quartz stringers in silicified greenstone.
53°00' - 94°15'; S of and near the bend of the creek 18 mi. E of Azure Lake.	N. Miner, Jan. 31st, 1952. ODM map P.430.	Pb, Ag, Au	Assays ranging from 16% to 26% Pb with 20 oz./ton Ag and 0.24 oz./ton Au reported from 5 ft. zone in a quartz vein up to 30 ft. wide in a hybrid gneiss. Some chalcopyrite present.
53°15' - 91°30'; Sandhill Crane Island, Muskrat Dam Lake.	ODM, 1966, Open File Rept. 5002, p.88-89.	Cu	Trace of chalcopyrite with iron sulphides in a metaconglomerate.
53°15' - 91°30'; E end Muskrat Dam Lake.	ODM, 1966, Open File Rept. 5002, p.94.	Pb, Zn	Galena and sphalerite reported in a quartz vein.
53°15' - 91°45'; 1/2 mi. E of the Windigo River, approx. 6 mi. S of Muskrat Dam Lake.	ODM, 1966, Open File Rept. 5002, p.89-90.	Cu	Assay of 1.22% Cu from 6 in. massive pyrite-chalcopyrite lens in metagabbro sill.
53°30' - 89°30'; N shore of Bibby Bay, Big Trout Lake.	ODM, 1964, G.R.23, p.29. ODM map 2045.	Cu	Chalcopyrite in quartz veins.
53°30' - 89°45'; S end of Nemeigusabins Lake.	ODM, 1964, G.R.23, p.29. ODM map P.121.	Cu	Chalcopyrite in quartz veins.
53°30' - 89°45'; South shore of Ernie Island, Big Trout Lake.	ODM, 1964, G.R.23, p.29. ODM map 2045.	Cu	Chalcopyrite in quartz veins.
53°30' - 93°30'; S of the rapids above Sagawitchewan Lake.	Globe and Mail, Jan. 3, 1946: Precambrian, Oct., 1945.	Cu, Pb, Zn, Au, W	Copper, lead, and zinc associated with gold and tungsten.
53°45' - 89°45'; SE tip of Big Island, Big Trout Lake.	ODM, 1964, G.R.23, p.29. ODM map 2045.	Cu	Chalcopyrite with iron sulphides replacing metavolcanic rocks.
53°45' - 89°45'; S shore of Big Island, Big Trout Lake.	ODM, 1964, G.R.23, p.29. ODM map 2045.	Cu	1 in. seam of chalcopyrite in metavolcanic rocks.
53°45' - 89°45'; Small island S of Big Island, Big Trout Lake.	ODM, 1964, G.R.23, p.29-30. ODM map 2045.	Cu	Chalcopyrite with iron sulphides replacing pillow rims.
53°45' - 89°45'; E shore of Minko Bay, Big Trout Lake.	ODM, 1964, G.R.23, p.29. ODM map 2045.	Cu	Chalcopyrite in quartz veins.
53°45' - 90°30'; S shore of Southorn Lake.	ODM, 1964, G.R.23, p.31. ODM map 2045. ODM, 1969, M.P. 27, p.30.	Zn, Pb, Ag	Sphalerite in quartz-sericite schist. Assays of 1.88% Zn, and 1.13% Zn, 0.21% Pb and 0.40 oz./ton Ag.
53°45' - 92°30'; S shore Ponask Lake, 8 mi. NW of SE end.	ODM, Red Lake files.	Cu	Minor chalcopyrite with iron sulphides in graphitic tuff.
53°45' - 92°45'; 2400 ft. E of mouth of Seeber River on S shore of Seeber Lake.	ODM, Red Lake files.	Cu	Chalcopyrite with iron sulphides in iron formation.
53°45' - 92°45'; 4400 ft. E and slightly S of the mouth of the river, E end Durrell Lake.	ODM, Red Lake files.	Cu	Disseminated chalcopyrite with iron sulphides in amphibolite.
53°45' - 93°00'; approx. 1000 ft. N of the NW end of Seeber Lake.	ODM, Red Lake files.	Cu, Ni	Chalcopyrite, nickel-bearing pyrrhotite, and arsenopyrite disseminated across 6 ft. in a hornblende gneiss.
53°45' - 93°00'; approx. 2½ mi. W of the N end of Seeber Lake.	ODM, Red Lake files.	Cu, Pb, Zn	Disseminated chalcopyrite, galena, sphalerite with arsenopyrite and pyrite in silicified metabasalt.
54°00' - 90°15'; zone extending for 1 mile both NW and SE of Derniere Lake.	ODM, 1964, G.R.23, p.31. ODM map 2045. ODM, Red Lake files.	Cu	Massive sulphides in pyroclastics and metasediments containing very minor chalcopyrite.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
54°00' - 90°15'; Severn River, island 26 mi. below Severn Lake.	ODM, 1964, G.R.23, p.30. ODM map 2045.	Cu	Minor chalcopyrite with iron sulphides in amphibolite.
54°00' - 91°00'; approx. 9 1/2 miles S of the E end of Swan Lake.	ODM, 1969, M.P. 27, p.29. ODM map P.427.	Cu	Minor chalcopyrite with iron sulphides in metavolcanics.
54°00' - 92°45'; approx. 4 mi. NNW of the N end of Ponask Lake.	ODM, 1969, M.P. 27, p.20. ODM map P.426.	Cu	Chalcopyrite with iron sulphides in trench in metavolcanic rocks.
54°15' - 92°15'; island, SW end of Rapson Bay, Stull Lake.	ODM, 1969, M.P. 27, p.23. ODM map P.426.	Cu	Chalcopyrite with iron sulphides in narrow gossan zone in sheared gabbro.
54°15' - 92°30'; approx. 2300 ft. N of Wynne Bay, Stull Lake.	ODM, 1937, Vol.46, pt.4, p.29-30. ODM map 46c.	Cu	Some chalcopyrite in 3-ft. width of heavy pyrite mineralization.
54°15' - 92°30'; S side of Richardson Arm, Stull Lake.	ODM, 1937, Vol.46, pt.4, p.31. ODM map 46c.	Zn, Cu	Fine seams of sphalerite, chalcopyrite in shear zone in tuffaceous rocks.
54°15' - 92°30'; W side Rapson Bay, Stull Lake.	ODM, Red Lake files.	Cu, Zn	Minor chalcopyrite and sphalerite in siliceous greywacke and iron formation indicated by d.d. offshore.
54°30' - 90°00'; 7 mi. NE of Dadson Lake.	ODM, 1969, M.P. 27, p.34. ODM map P.428.	Cu	Chalcopyrite and pyrite in a narrow quartz stringer.
54°30' - 91°00'; 2 mi. SSW of Dadson Lake.	ODM, 1969, M.P. 27, p.34. ODM map P.427.	Cu	Chalcopyrite and pyrite in a quartz vein.
54°45' - 91°30'; approx. 10 mi. E of Yelling Lake.	ODM, 1969, M.P. 27, p.35. ODM map P.427.	Cu	Pyrite and chalcopyrite in a narrow quartz vein.

LANARK COUNTY

LAVANT TOWNSHIP

Lanark Silver Prospect

Main Metals: Cu, Ag, Hg.

Location: Lavant Tp.; lots 20-21, con. VIII, 2 mi. SW of Flower Station.
Reference: ODM map 1956-4.

Geology: A 5-foot barite vein, and some associated mineralized zones in the Grenville marble countryrock, contain disseminated tetrahedrite, chalcopyrite, pyrite, stibnite, argentite and cinnabar.

Economic Features: Mineralized zone is 600 feet long and 5-12 feet wide (The Northern Miner, Dec. 7, 1967). Significant amounts of mercury have been traced to minute cinnabar-filled cracks in the sulphides.

Ownership: West Branch Explorations and Mining Co. Ltd.

History: 1919 Stripping of the barite vein and sinking a small pit, 15 feet deep, by T.B. Caldwell.
1957-60 773 feet of d.d., geophysical surveys and soil sampling by Lanark Silver Mines Ltd.
1965-68 3921 feet of d.d., 100 feet of adit, and stream geochemical surveys, by West Branch Explorations and Mining Co. Ltd.

Remarks: Evaluated for its Ag-Cu content, and also as a source of barite; the major interest recently has been mercury.

References: Mines Branch, Ottawa, 1922, Bulletin 570, p.53-54.
ODM, Toronto, Res. Geol. files.

LANARK COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Darling Tp.; lots 20-21, con. II.	ODM, Toronto, Res. Geol. files.	Cu	Chalcopyrite-quartz stringers in gabbro.
Darling Tp.; lots 21-23, con. I-IV.	ODM, Toronto, Res. Geol. files.	Cu	Tetrahedrite-quartz stringers in marble.
Ramsay Tp.; lots 4 and 8, con. IV, (Lynch).	M.R.B., Ottawa, mineral files.	Pb	Vein deposit.
Ramsay Tp.; lot 3, con. VI-VII, (Ramsay).	ODM, 1952, P.R. 1952-4, p.14.	Pb	Galena-calcite fissure veins in Ordovician dolomite.

LEEDS COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Rear of Leeds and Lansdowne Tp.; lots 2-4 and 6, con. VIII.	GSC, 1930, Econ. Geol., Ser. 8, p. 141-42.	Pb	Galena-calcite veins in marble.
Leeds Tp.	O.B.M., 1895, Vol. 5, p.220.	Ni	Nickel values in dike rock; location unknown.

LENNOX AND ADDINGTON COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Anglesea Tp.; lots 6-7, con. III, (O'Donnell).	GSC, 1927, Econ. Geol. Ser. 4, p. 110.	Zn, Pb	Quartz vein filling shear zone in gabbro.
Denbigh Tp.; lot 21, con. XV.	ODM, Toronto, Res. Geol. files.	Cu, Ni	Disseminated sulphides in quartz-feldspar gneiss.
Kaladar Tp.; lot 23, con. V.	ODM, 1942, Vol. 51, pt. 4, p.72-73.	Cu	Quartz stringers in greenstone schist.
Kaladar Tp.; lots 24-25, con. VI, (Golden Fleece).	ODM, 1942, Vol. 51, pt. 4, p.70-71.	Cu, Au	Sulphides in volcanics and conglomerate.
Kaladar Tp.; lot 32, con. XI.	ODM, 1942, Vol. 51, pt. 4, p.72.	Cu	Quartz stringers in dolomitic marble.
Sheffield Tp.; lot 10, con. XV.	ODM, Toronto, Res. Geol. files.	Cu, Pb, Zn	Sulphides along marble-granite contact.

LINCOLN COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Clinton Tp.; lots 18-21, con. VIII, (Beamsville).	ODM, 1952, P.R. 1952-4, p.15.	Pb, Zn	Disseminated galena and sphalerite in dolomite.

MANITOULIN DISTRICT

OCCURRENCES

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Island 2198 and adjacent mainland, W of Iroquois Island (Iroquois Bay Occurrence).	ODM, 1957, M.R.C. 2, p.89. Evenlode Gold Mines, 1954, Prospectus. ODM, Sudbury files. ODM map P.442.	Cu, Co	Pyrrhotite, pyrite, chalcopyrite and cobaltite in silicified brecciated quartzite. Chip sample over length of main trench averages 0.36% Cu, 0.09% Co over 105 feet; 1,500-pound bulk sample contained 1.18% Cu, 0.20% Ni, 0.15% Co, 1.6 oz. Ag. In 1954-55 surface work and d.d. by Evenlode Gold Mines Ltd.

MUSKOKA DISTRICT

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Brunel Tp.; lots 22-23, con. XII.	O.B.M., 1902, Vol. XI, p.59.	Cu, Ni	4 d.d. holes in a pyrrhotite body.

NIPISSING DISTRICT

BEST TOWNSHIP

Acana (Granite Lake) Prospect

Main Metals: Cu, Ni.

Location: Best Tp.; S of the S tip of Gillies Limit Tp., on both sides of Highway 11.

Reference: ODM map P.321.

Geology: Ten showings of chalcopyrite, pyrite, and nickeliferous pyrrhotite, with minor amounts of galena, sphalerite and platinum, are associated with shear zones in gabbro and dacite.

Economic Features: The highest assays were 1.14 percent Ni and 0.69 percent Cu across 23 feet on claim T31459 (Reef Explorations Ltd.). The mineralized zone is exposed (by trenching) for a length of 90 feet.

History: 1952 Geol., MAG, and resistivity surveys by Acana Mines Ltd.

1953 8 d.d. holes for 2264 feet by Cheskirk Mines Ltd.

1954 9 d.d. holes by Quebec Metallurgical Industries Ltd.

1956 2 d.d. holes by Central Milner Mines Ltd.

1957 4 d.d. holes by Huclif Porcupine Mines Ltd. and EM survey and 7 d.d. holes by Reef Explorations Ltd.

1960 1 d.d. hole on claim T46975.

1961 3 d.d. holes by Danlou Mines Ltd.

1965 MAG, EM, IP, and resistivity surveys by Ajax Minerals Ltd.

1966 MAG, SP, and geol. surveys by Geophysical Engineering and Surveys Ltd.

References: ODM, 1968, Open File Rept. 5016, p.44-52.

ODM, 1957, M.R.C. 2, p.116.

BELFAST TOWNSHIP

Obabika Prospect

Main Metals: Cu.

Location: Belfast Tp.; SE of Allan Lake.

Geology: Chalcopyrite and pyrite are erratically distributed in a wide quartz-carbonate vein, which is exposed in pits along a strike length of more than 4000 feet. The vein strikes N35E and dips 30SE. It is near the lower contact of Nipissing diabase with underlying Cobalt sedimentary rocks.

History: 1956 Trenching and pitting; geol. and resistivity surveys by
Obabika Mines Ltd.
1956, 1957 16 drillholes (2884 feet).

References: ODM, Kirkland Lake files.
ODM, 1957, M.R.C. 2, p.114.

BRIGGS TOWNSHIP

Temagami Mine (Producer)
(See Phyllis Township)

CASSELS TOWNSHIP

New Athona Prospect

Main Metals: Cu, Ni.

Location: Cassels Tp.; SW of Pishabo Lake; unpatented claim T60711.
Reference: ODM map P.321.

Geology: Chalcopyrite occurs in pyrite-pyrrhotite iron formation in
Archean chert and volcanic rocks which strike N60E.

History: 1956 Stripping, trenching, and 11 holes drilled (total 3139 feet)
by New Athona Mines Ltd.
1962 EM surveys.

References: ODM, Kirkland Lake files.
ODM, 1957, M.R.C. 2, p.112.

CHAMBERS TOWNSHIP

Canadian Astoria Prospect

Main Metals: Cu, Zn, Pb.

Location: Chambers Tp.; 1/2 mile SW of Nellem Lake.
Reference: ODM map 51e.

Geology: Sphalerite, galena, and chalcopyrite in quartz veins cutting a pyrite-pyrrhotite zone 1200 feet long that is interbedded with andesite and dacite tuffs and agglomerates. The highest assays reported are 8% Cu, 17% Zn, 6.4% Pb, and 0.13 oz./ton Au.

History: Numerous old pits and trenches.
1956-63 Geol. and geophysical surveys and 10 d.d. holes totalling 2004 feet by Canadian Astoria Minerals Ltd.

References: ODM, Kirkland Lake files.
ODM, 1957, M.R.C. 2, p.106.
ODM, 1942, Vol.51, pt.6, p.38 (F.W. Thompson).
Northern Miner, July 26, 1956.

CLEMENT TOWNSHIP

Halkin Prospect

Main Metals: Cu.

Location: Clement Tp.; E boundary near NE corner; former claim T31242.
Reference: ODM map P.367.

Geology: Erratic chalcopyrite and pyrite occur in a partially brecciated, gently-dipping, quartz-carbonate vein cutting Nipissing diabase that has marked alteration and variation in composition.

Economic Features: A surface area, 80 by 30 feet, in a quartz-carbonate mass 150 feet long, 75 feet wide and with a maximum thickness of 30 feet, contains 1-2% Cu (L.J. Cunningham, 1956).

History: 1956 Trenching and packsack d.d. by Halkin Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.109.

Leger (Noranda) "Manitou Lake" Prospect

Main Metals: Fe, Cu, Zn, Pb.

Location: Clement Tp.; W boundary near NW corner.
Reference: ODM map P.367.

Geology: Minor chalcopyrite, galena, and sphalerite occur in calcareous quartzite and in iron formation that consists of pyrite, pyrrhotite, magnetite, and chert. Copper, zinc, and lead occur in a band about 1/4 mile wide that passes through claims T60959 and T60958. The magnetite zone of iron formation is 1300 feet long, with lenses 20 feet wide (maximum).

Economic Features: A bulk sample across 25 feet of quartzite contained 0.39% Zn and 0.21% Pb. The best assay is 0.54 oz./ton Au across 27 inches.

History: 1935-36 Test pits and trenches.

1955-56 Geol., MAG, and EM surveys and 2 drill holes (185 feet and 475 feet) by Noranda Mines Ltd.

1959 Geol. survey and d.d. for Claude Cook.

1964 Geol., geochemical, and MAG surveys and 1650 feet of d.d. by Leger Mines Ltd.

References: ODM, Kirkland Lake files.

ODM, 1957, M.R.C. 2, p.113.

JOAN TOWNSHIP

New Minda-Scotia Prospect

Main Metals: Cu.

Location: Joan Tp.; between the 2-mile post on the W boundary and Sand Point on Lake Timagami.

Reference: ODM map P.367.

Geology: Erratic sulphide mineralization, chiefly chalcopryrite, occurs in gently dipping, quartz-carbonate veins that occur near the lower contact of Nipissing diabase and, locally schistose, Cobalt sedimentary rocks. The vein zone is exposed in several pits along more than 2000 feet of the contact.

History: 1956-58 Geol., MAG, and EM surveys, and d.d. (9 holes totalling 3935 feet) by New Minda-Scotia Mines Ltd.

References: ODM, Kirkland Lake files.

ODM, 1957, M.R.C. 2, p.112.

Temagami Mine (Producer)

(See Phyllis Township)

PHYLLIS TOWNSHIP

Temagami Mine (Producer)

Main Metals: Cu, Au, Ag.

Location: Mutual corner of Phyllis, Yates, Joan, and Briggs Tps.

Reference: ODM map 2057.

Geology: Pyrite (low-grade) mineralization, with associated chalcopyrite, millerite, gersdorffite, and traces of Co, occurs along 5 miles of the footwall contact of a diorite sill with rhyolite. Possible ore grade material is indicated in several lenses (total length about 4000 feet) centred on Timagami Island.

Chalcopyrite (high grade) mineralization, almost free of other sulphides, occurs in the footwall rhyolite S of the pyrite (low-grade) mineralization as disseminations, veins, and lenses.

Economic Features: High-grade ore reserves at June 30, 1968 were 83,857 tons having an average grade of 5.1% Cu (Northern Miner, Nov. 28, 1968). Low-grade ore reserves (with no satisfactory process for concentrating) were 2,500,000 tons having an average grade of 1% Cu, 0.6% Ni, and 0.1% Co (J.C. Frantz, Nov. 1956).

At Sulphide Point, three drillholes indicate 0.45% Cu over 115 feet and 0.35% Cu over 240 feet (Copperfields Mining Corp. Ltd., 1967).

Total production, 1955 to 1967, was 10,155 oz. Au, 186,861 oz. Ag and 67,084,858 lb. Cu valued at \$23,837,515, from 496,561 tons milled.

Ownership: Copperfields Mining Corp. Ltd.

History: 1951 The Derosier Nickel and Copper Mines Ltd. section was drilled by H.W. Knight Jr.

1952-53 Extensive d.d. by Frontenac Exploration and Development Co. Ltd.

1954 Temagami Mining Co. Ltd. was formed amalgamating the claims of Derosier Nickel and Copper Mines Ltd., Abex Mines Ltd., Offshore Mines Ltd., Niemetz Base Metal Mines Ltd., and Geo-Scientific Prospectors Ltd.

1955-68 Mining from 2 open pits and 3-compartment shaft 2075 feet deep with 11 levels and 2 sublevels by Temagami Mining Co. Ltd. (1955-1964) and Copperfields Mining Corp. Ltd. thereafter.

1968 Shaft deepening to 2500 feet begun with 2 new levels planned.

References: ODM, Kirkland Lake files.

Copperfields Mining Corp. Ltd., 1967, Annual Rept.

Northern Miner, Nov. 28, 1968.

ODM, 1964, G.R.28, p.25, 26.

SCHOLES TOWNSHIP

Mining Geophysics Prospect

Main Metals: Cu, Fe.

Location: Scholes Tp.; Gull Lake, N shore; claims T46589 and T46592.
Reference: ODM map P.367.

Geology: Minor chalcopyrite occurs in pyritic iron formation under 50-300 feet of Cobalt conglomerate.

History: 1956-57 Resistivity surveys and at least 1340 feet of d.d. (2 holes) by Mining Geophysics.

References: ODM, Kirkland Lake files.
ODM, 1957, M.R.C. 2, p.111.

Noranda Mines "Eaglerock Lake" Prospect

Main Metals: Cu.

Location: Scholes Tp.; W shore of Eaglerock Lake.
Reference: ODM map P.367.

Geology: Minor chalcopyrite and sphalerite occur in Archean pyrite-pyrrhotite iron formation. Main copper-zinc zone is 300 feet long and 2 to 30 feet wide.

Economic Features: Best channel sample is 0.51% Cu across 3 feet. At the N end, channel samples contained an average of 0.20% Cu across 28 feet (R.S. Woolverton, 1956).

History: Old test pits, trenches and d.d.
1956 MAG and EM surveys and 2 d.d. holes by Noranda Mines Ltd.

References: ODM, Kirkland Lake files.
ODM, 1957, M.R.C. 2, p.113.

STRATHCONA TOWNSHIP

Diadem Prospect

Main Metals: Cu.

Location: Strathcona Tp.; 2 mi. SW of Timagami, claim T47114.
Reference: ODM map 51e.

Geology: Minor chalcopyrite and traces of nickel occur in pyrite, in a diorite sill near the contact with dacitic volcanics. The sill dips steeply S and strikes SW into the neighbouring Milestone prospect.

Economic Features: To 500 feet down the dip, a fairly continuous sulphide-impregnated zone about 700 feet long and 15 feet wide contains 500,000 tons of possible ore grading 0.5% Cu and 0.1% Ni (W.J. Hylands, 1956).

History: Several pits and trenches by previous owners.
1956 Geol. and geophysical surveys and d.d. (4500 feet in 13 holes) by Diadem Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.108.

Firby Prospect

Main Metals: Cu.

Location: Strathcona Tp.; 3 1/2 mi. S of Timagami; unpatented claim T59909.
Reference: ODM map P.321.

Geology: Several small showings containing erratically distributed pyrite, pyrrhotite, and chalcopyrite occur in blocky-jointed, altered andesite east of a large granite mass.

Economic Features: Best drill intersection was 0.45% Cu in 8.6 feet of core.

History: 1955 Trenching by Sylvanite Mines Ltd.; followed by MAG, EM, and resistivity surveys and 269 feet of d.d. by Newkirk Mining Corp. Ltd.

References: ODM, Kirkland Lake files.
ODM, 1957, M.R.C. 2, p.108.

Milestone Prospect

Main Metals: Cu, Zn, Au.

Location: Strathcona Tp.; 2 mi. SW of Timagami; claim TRT6979.
Reference: ODM map P.321.

Geology: Minor chalcopyrite, pyrrhotite, and sphalerite occur with pyrite in a chloritized contact phase of a diorite sill which cuts rhyolitic rocks.

Economic Features: One drill hole in 1952 intersected 0.5% Cu over 37 feet.

History: 1916-17 Many test pits, and 8 holes drilled.
1914-18 542 tons of pyritic material shipped from small open pits by J.T. O'Connor(?).
1927-28(?) Some d.d.
1952 Geol. and geophysical surveys and 4 drill holes by Candela Development Co. Ltd.

References: ODM, 1957, M.R.C. 2, p.110.

Perron Gold Mines Prospect

Main Metals: Cu.

Location: Strathcona Tp.; 4 mi. S of Timagami; unpatented claim T57248.
Reference: ODM map P.321.

Geology: Erratic disseminations and some massive lenses of pyrite and pyrrhotite contain minor chalcopyrite, galena, and sphalerite. The sulphides occur in altered and sheared andesites and tuffs cut by numerous small dikes of feldspar porphyry.

History: 1956 Trenching and pitting; geological and geophysical surveys and 5 drillholes by Trebor Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.114.

STRATHY TOWNSHIP

Cuniptau (Trebor) Mine (Past Producer)

Main Metals: Cu, Ni, Pt, Au, Ag, Pd.

Location: Strathy Tp.; 4 miles NW of Timagami; including claim TR3187.
Reference: ODM map 5le.

Geology: The property is underlain by volcanic rocks intruded by a basin-shaped body of serpentized peridotite cut by dikes of olivine diabase. Ni and Cu occur with pyrite and pyrrhotite disseminations and veins along the margin and bottom of an offset on the NW rim of the peridotite. The mineralized zone is 1000 feet long and 200-400 feet wide, and plunges 23° N30W.

Economic Features: A shipment of 30,028 lb. of ore received by the Mines Branch, Ottawa, contained 1.12% Cu, 1.02% Ni, 0.01 oz./ton Au, 0.18 oz./ton Ag, and 0.13 oz./ton Pt and Pd. Production was obtained from 3318 tons milled in 1936, from which a pilot smelter produced 99,284 lb. Cu, 65,434 lb. Ni, 37.0 oz. Au, 910.0 oz. Ag, 82.7 oz. Pt, and 196.3 oz. Pd.

Estimated reserves, in 4 zones in the vicinity of the shaft, are as follows (J.C. Dumbrille, 1953):

<u>Tons</u>	<u>% Cu</u>	<u>% Ni</u>	<u>Precious Metals (\$/ton)</u>
369,000	0.89	0.53	\$2.13
735,000	0.45	0.26	1.06
3,764,000	0.32	0.19	0.76
547,000	0.29	0.16	0.66

Ownership: Ajax Minerals Ltd., except the part of the "shaft zone" (369,000 tons) on claim TR1623.

History: 1933-36 Cuniptau Mines Development Co. Ltd., later Cuniptau Mines Ltd., sank a 245-foot shaft and completed 2200 feet of lateral work on the 100- and 225-foot levels.

1937-48 Some work by Ontario Nickel Corp. and Ontario Nickel Mines Ltd., and MAG, other geophysical surveys, and geological surveys by Trebor Mines Ltd.

1948-49 128 d.d. holes for 40,915 feet by Trebor Mines Ltd. Name changed to Ajax Minerals Ltd. in 1961.

1968 SP survey and 5 d.d. holes for 1732 feet by Ajax Minerals Ltd.

References: ODM, Kirkland Lake files.

ODM, 1957, M.R.C. 2, p.118.

ODM, 1942, Vol.51, pt.6, p.24.

Maralgo Prospect

Main Metals: Cu, Zn, Au, Ag.

Location: Strathy Tp.; 1 mi. N of Timagami; claim TRT6923.

Geology: Chalcopyrite, sphalerite, and arsenopyrite occur in sulphide facies of iron formation interbedded with greenstones, rhyolite, and carbonate rocks. The iron formation strikes N70E, dips steeply S, and is cut by diorite, peridotite, and Keweenawan olivine diabase.

Economic Features: Mineralized zone is about 400 feet long and 20 feet wide.

History: 1956 Maralgo Mines Ltd. carried out geol., MAG, and EM surveys and drilled 13 holes (4923 feet).

References: ODM, Kirkland Lake files.

ODM, 1957, M.R.C. 2, p.109.

Mayfair Prospect

Main Metals: Fe, Cu, Au, Zn.

Location: Strathy Tp.; Vermilion Lake; claim T34314.

Reference: ODM map P.321.

Geology: Minor chalcopyrite and sphalerite are contained in a pyritic facies of iron formation one mile long and 30-50 feet wide. The pyritic iron formation is northwest of and parallel to the magnetite iron formation in the bed of Vermilion Lake. Some gold-bearing quartz veins in the iron formation.

Ownership: Mayfair Mines Ltd. on lease to Tetapaga Mining Co. Ltd.

History: Several old drill holes.

1953, 1955 Mayfair Mines Ltd. carried out geol. and MAG surveys, followed by d.d.

References: ODM, Kirkland Lake files.

ODM, 1957, M.R.C. 2, p.110.

Norrie Prospect

Main Metals: Cu, Ni.

Location: Strathy Tp.; on NE shore of Net Lake, E of Goward.

Reference: ODM map 51e.

Geology: The country rock is a variable, fine- to coarse-grained, hornblendic diabase or gabbro. It is cut by granite and quartz veins, and is highly silicified. Sulphides, which occur as irregular impregnations, consist predominantly of pyrrhotite with veinlets and seams of chalcopyrite.

Economic Features: Picked samples from the old dumps yielded 0.05-0.15% Ni and as much as 3.5% Cu (R.A. Percy, 1941).

History: Before 1920 10 pits and several drillholes.

1941 225 feet of d.d. by L.B. Norrie.

References: ODM, 1920, Vol.29, pt.1, p.213.

ODM, 1942, Vol.51, pt.6, p.24.

ODM, 1957, M.R.C. 2, p.113, 114.

TORRINGTON TOWNSHIP

Cross Lake Mining Prospect

Main Metals: Cu, Pb.

Location: Torrington Tp.; island in Cross Lake.

Reference: ODM map P.394.

Geology: A vein exposed by a shaft strikes NW and dips 40SW. It consists mainly of quartz, with some sulphides, and ranges from 4 to 24 inches in width. A short heading in the hanging wall of the shaft exposes two parallel veins of similar magnitude. The wall rock throughout is Cobalt greywacke which is cut by carbonate stringers and is pronouncedly sheared in a N-S direction. There is a small outcrop of diabase (Nipissing?) on the S shore of the island.

Economic Features: Heavy mineralization of pyrite, chalcopyrite, and galena was noted at two points at the bottom of the shaft, and samples from these yielded: 5.03% Cu, 2.39% Pb, 0.03 oz./ton Au, and 2.26 oz./ton Ag across 15 inches; 0.35% Cu, 4.99% Pb, 0.01 oz./ton Au, and 2.12 oz./ton Ag across 18 inches (S.A. Pain, June, 1955).

History: About 1908 Inclined shaft, 76 feet down dip.

1955 4 d.d. holes by Cross Lake Mining Co. Ltd.

References: ODM, 1957, M.R.C. 2, p.107.

VOGT TOWNSHIP

Aubay Prospect

Main Metals: Cu, Fe, Au, U.

Location: Vogt Tp.; island No. 364 and water claims south of McLean Peninsula, Lake Timagami.

Geology: Pyrrhotite, pyrite, and chalcopyrite occur in Archean metasediments and rhyolite (iron formation) exposed at the tip of Island No. 364 when the water level in Lake Timagami is low. Drilling from the ice extended the mineralized zone to the east, under Cobalt sedimentary rocks.

Economic Features: The best d.d. intersection in 1955 was 0.40 oz./ton Au and 0.052% U₃O₈ in a 2-foot length of core.

History: 1955 5 d.d. holes for 874 feet by Aubay Uranium Mines Ltd.
1958 8 d.d. holes for 1400 feet and geol. survey by Aubay Uranium
Mines Ltd.
1964 1 d.d. hole for 308 feet by K.V. Ristimaki.

References: ODM, Kirkland Lake files.
ODM, 1957, M.R.C. 2, p.105.

YATES TOWNSHIP

Temagami Mine (Producer)

(See Phyllis Township)

NIPISSING DISTRICT
OCCURRENCES

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Askin Tp.; NE $\frac{1}{2}$, central pt.; Sutherland.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in green siliceous carbonate rock.
Aston Tp.; SE $\frac{1}{4}$, SW corner; Derosier.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Belfast Tp.; NE $\frac{1}{4}$, NE corner; White.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in greenstone.
Best Tp.; James Lake area; Northland Pyrite.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in granite; minor chalcopyrite in massive pyrite and pyrrhotite.
Best Tp.; Rib Lake.	ODM, Kirkland Lake files.	Cu, Zn	Chalcopyrite and galena in carbonate vein in Nipissing diabase.
Briggs Tp.; N side Northeast Arm, Timagami Lake; Bunker Hill Extension.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in sulphide zone.
Briggs Tp.; SW $\frac{1}{4}$, S central pt., S side Timagami Lake; Frontenac.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in rhyolite.
Briggs Tp.; SW $\frac{1}{4}$, E central pt.; Murray.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Butler Tp.; NE $\frac{1}{4}$, near N central shore Crogan Lake (Poster Occurrence).	ODM, Sudbury files.	Cu	Quartz veins containing chalcopyrite in amphibolite. In 1963, 5 d.d. holes for 546 feet.
Butt Tp.; Algonquin Park at W boundary.	ODM, Toronto, files.	Cu, Ni	Disseminated chalcopyrite and pyrrhotite in norite.
Calvin Tp.; lots 28 and 31, con. IX.	Satterly, J., 1945, ODM Unpubl. Rept.	Cu	Two 50 foot shafts.
Cassels Tp.; S $\frac{1}{2}$, N central pt.; Aldage.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in Nipissing diabase.
Cassels Tp.; SW $\frac{1}{4}$, central pt.; Brochu.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz-carbonate vein.
Cassels Tp.; SW $\frac{1}{4}$, central W pt.; Hermes.	ODM, Kirkland Lake files.	Cu, Zn	Chalcopyrite and sphalerite in andesite.
Cassels Tp.; SW $\frac{1}{4}$, E pt.; Riopel.	ODM, Kirkland Lake files.	Cu	Sphalerite in chert in Nipissing diabase.
Cassels Tp.; Net Lake; Temagami.	ODM, Kirkland Lake files.	Cu, Ni	Chalcopyrite in silicified andesite.
Chambers Tp.; E $\frac{1}{2}$, central pt.; Goldray.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Sphalerite, galena and chalcopyrite in quartz vein.
Champagne Tp.; central pt.; North Bay.	ODM, 1934, Vol.43, pt.3, p.63.	Cu	Pyrrhotite, chalcopyrite and pyrite in granitic rock.
Clement Tp.; SW $\frac{1}{4}$, NW pt.; Nichol.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in andesite.
Clement Tp.; E $\frac{1}{2}$, central pt.; Niemetz.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in diorite.
Clement Tp.; SW $\frac{1}{4}$, NW pt.; Walsh.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Connaught Tp.; NE pt.; Mataris.	ODM, 1934, Vol.43, pt.3, p.67.	Cu	Pyrite, chalcopyrite and bornite in felsic volcanics.
Crerar Tp.; lot 5-9, con. IV, V; (Tomrose Occurrence).	ODM, Sudbury files. Tomrose Mines Ltd., 1963, Prospectus. ODM map 2148.	Cu, Ni	Minor amounts of disseminated pyrrhotite and chalcopyrite in gabbro in scattered areas. Numerous pits and 16 d.d. holes for 5224 feet, 1963-66, by Tomrose Mines Ltd.; EM and magnetometer surveys and 4 d.d. holes for 552 feet, 1964-65, by Falconbridge Nickel Mines Ltd.
Cynthia Tp.; Coppersand Lake; Derosier.	ODM, Kirkland Lake files.	Cu, Ni, Pb	Chalcopyrite and galena in quartz vein in Nipissing diabase and Cobalt greywacke.
Joan Tp.; central pt.; Island 1104, Lake Timagami.	ODM, Kirkland Lake files. ODM, 1957, M.R.C. 2, p.119.	Cu	Chalcopyrite in quartz vein.
Joan Tp.; N of Timagami Island; Myteque.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz-carbonate vein.
Phyllis Tp.; N $\frac{1}{2}$, central pt.; Abex.	ODM, Kirkland Lake files. ODM, 1957, M.R.C. 2, p.119.	Cu, Ni	Chalcopyrite in diorite.
Phyllis Tp.; SW $\frac{1}{4}$, central pt.; Byberg.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Phyllis Tp.; central pt.; International Copper & Cobalt.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in calcite vein in fragmental rhyolite.
Phyllis Tp.; central pt.; Key Mineral Investigations.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in quartz-carbonate vein.
Phyllis Tp.; N½, central pt.; Min-Ore.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in granite stringer in slate.
Phyllis Tp.; Skunk Lake; Temagami Mining.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in diabase.
Riddell Tp.; central pt.; Burke.	ODM, Kirkland Lake files.	Pb	Galena in quartz diabase.
Scholes Tp.; NE½, NE pt.; Abex.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartzite.
Scholes Tp.; W½, W central pt.; Abex.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Chalcopyrite, sphalerite and galena in silicified breccia.
Scholes Tp.; SW½, NW pt.; Geo-Scientific.	ODM, Kirkland Lake files.	Cu	Pyrite, pyrrhotite and chalcopyrite in andesite.
Scholes Tp.; NW½, SW pt.; New Athona.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in pyrrhotite-bearing iron formation.
Scholes Tp.; SW½, NW pt.; Rochshield.	ODM, Kirkland Lake files.		Pyrite and sphalerite in siliceous greywacke.
Scholes Tp.; NW½, SW pt.; Saville.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Pyrrhotite, chalcopyrite, galena and sphalerite in silicified breccia.
Scholes Tp.; E½, E central pt.; Temagami Mining.	ODM, Kirkland Lake files.	Cu	Sphalerite and pyrite in green soapy talc.
Strathcona Tp.; S½, central pt.; Andoney.	ODM, Kirkland Lake files.	Cu	Pyrite, pyrrhotite and sphalerite in greenstone.
Strathcona Tp.; SE½, central pt.; Cobalt Consolidated.	ODM, Kirkland Lake files. ODM, 1957, M.R.C. 2, p.119.	Cu	Pyrite and chalcopyrite in quartz vein.
Strathcona Tp.; N½, central pt.; Copperfields.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in quartz vein.
Strathcona Tp.; N½, central pt.; Geo-Scientific Prospectors.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in carbonate veins.
Strathcona Tp.; NW½, central pt.; New Minda-Scotia.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in quartz-carbonate veins.
Strathcona Tp.; N½, central pt.; O'Connor.	ODM, Kirkland Lake files.	Cu, Ni	Chalcopyrite in diorite.
Strathcona Tp.; S½, N central pt.; Smith, Danielson, Lee.	ODM, Kirkland Lake files.	Cu	Pyrrhotite and chalcopyrite in graphite schist.
Strathy Tp.; central pt.; Beanland.	ODM, Kirkland Lake files. ODM, 1942, Vol.51, pt.6, p.27.	Cu, Pb, Zn	Sphalerite, galena and chalcopyrite in quartz vein.
Strathy Tp.; SE½, NE pt.; Big Dan.	ODM, Kirkland Lake files. ODM, 1942, Vol.51, pt.6, p.26.	Cu	Pyrite and chalcopyrite in quartz porphyry and basalt.
Strathy Tp.; E½, central pt.; Big Three.	ODM, Kirkland Lake files.	Cu	Pyrite, pyrrhotite and chalcopyrite in andesite.
Strathy Tp.; SW½, NE pt.; Clenor.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in greenstone.
Strathy Tp.; central pt.; Goldfields.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in carb stringers.
Strathy Tp.; claim WD264, just W of railroad on Net Lake; INCO.	ODM, Kirkland Lake files. ODM, 1942, Vol.51, pt.6, p.24.	Cu	Pyrite, chalcopyrite and pyrrhotite in greenstone and altered diabase.
Strathy Tp.; SE½, central pt.; Mining Geophysics.	ODM, Kirkland Lake files.	Cu, Zn	Pyrite, chalcopyrite and sphalerite in rhyolite.
Strathy Tp.; NW½, SE pt.; MacVeigh.	ODM, Kirkland Lake files.	Cu	Pyrite, pyrrhotite and chalcopyrite in fractured greenstone.
Strathy Tp.; E½, central pt.; Sey-Bert.	ODM, Kirkland Lake files. ODM, 1942, Vol.51, pt.6, p.38.	Pb, Zn	Pyrite, galena and sphalerite in quartz vein.
Strathy Tp.; N½, S central pt.; Strathy Basin.	ODM, Kirkland Lake files.	Cu, Ni	Chalcopyrite, pyrrhotite in quartz stringers.
Strathy Tp.; NE½, SW pt.; Temagami.	ODM, Kirkland Lake files.	Cu	Chalcopyrite, pyrrhotite and pyrite in quartz-carbonate vein.
Vogt Tp.; NW corner; Bradex.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in quartz-carbonate vein.
Vogt Tp.; NW½, W central pt.; Halkin.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Vogt Tp.; E½, central pt.; Malartic Goldfields.	ODM, Kirkland Lake files. ODM, 1957, M.R.C. 2, p.119.	Cu	Pyrrhotite, pyrite, chalcopyrite and bornite in Keewatin rhyolite and iron formation.
Yates Tp.; NW½, NW pt.; New Minda-Scotia.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in light grey schistified volcanic rock.

PARRY SOUND DISTRICT

COWPER TOWNSHIP

Bayshore Prospect

Main Metals: Zn.

Location: Cowper Tp.; N 1/2 lot 17, con. IV; 8 mi. SW of Parry Sound.
Reference: ODM map 2118.

Geology: Pyrite, sphalerite, and minor chalcopyrite, occur as disseminations and as lenses of massive sulphides in a zone 380 feet long in garnet-biotite gneiss.

Economic Features: Cores from 5 d.d. holes spaced over a distance of 220 feet assayed 2 89-9.67% Zn for core lengths of 5.2-16.7 feet (ODM, Toronto, Res. Geol. files).

History: 1942-44 Geophysical survey in the vicinity of the Wilcox Mine led to discovery of this zone 1/2 mile east of the old workings; about 30 d.d. holes by Bayshore Zinc and Copper Mines Ltd.
1951 7 d.d. holes totalling 721 feet by Kalbrook Mining Co. Ltd.

References: ODM, 1957, M.R.C. 2, p.38.
ODM, Toronto, Res. Geol. files.

Wilcox Mine (Past Producer)

Main Metals: Cu.

Location: Cowper Tp.; S 1/2 lots 18-22, con. IV, N shore of Spider (formerly Cowper) Bay, 9 miles SW of Parry Sound.
Reference: ODM map 2118.

Geology: Disconnected lenses containing chalcopyrite, pyrrhotite, pyrite and sphalerite occur in garnet-biotite gneiss over a length of 2500 feet.

Economic Features: Best drill core assays gave 2.98% Cu and 0.44 oz./ton Ag over 20 feet, or 2.26% Cu and 0.34 oz./ton Ag over 40 feet, all with minor Au (ODM, 1942, Vol.51, pt.2, p.25).

History: 1893-1904 Discovered and developed by Henry Harris and Thomas Wilcox, and by the Parry Sound Copper Mining Co. Ltd. (from 1899). Development included 2 shafts, 175 and 35 feet deep, an open cut 135 feet long, and 8 pits. Production in 1903-4 was reported to be 192,000 lbs. Cu.
1939 9 d.d. holes totalling about 1700 feet by Waterways Copper Mines Ltd.
1951 4 d.d. holes totalling 324 feet by Kalbrook Mining Co. Ltd.

References: ODM, 1967, G.R.52, p.23-27.
ODM, 1957, M.R.C. 2, p.38.
ODM, 1942, Vol.51, pt.2, p.22-26.

FOLEY TOWNSHIP

McGown Mine (Past Producer)

Main Metals: Cu, Au.

Location: Foley Tp.; lot 146, con. B; 1 1/2 miles SE of Parry Sound.
Reference: ODM map 2118.

Geology: Chalcocite and bornite occur disseminated and in lenses in quartz veins and in the hornblende gneiss (or metagabbro) country rock.

Economic Features: Drillcore assay gave 2.48% Cu over 5 feet (ODM, 1967, G.R. 52, p.33).

History: 1894 100-foot open cut and adit by Thomas McGown.
1897 Inclined shaft sunk to 160 feet at E end of open cut by McGown Gold Mining Co. of Parry Sound Ltd.
1898-1908 Mine development consisted of 3 vertical shafts to 238, 33, and 87 feet, crosscutting and drifting on several levels, and an open cut 60 by 25 feet, more than 20 feet deep. Production in 1899 was reported to be 167 tons grading 15.68% Cu, \$5 in Au and a little less than 1 oz. Ag per ton, by Parry Sound Copper Mining Co. Ltd.
1951 4 d.d. holes totalling 409 feet drilled by Kalbrook Mining Co. Ltd.
1959 5 d.d. holes totalling 1649 feet drilled by Kalbrook Mining Co. Ltd.
1964-65 1 shaft and 2 open cuts dewatered; 53 tons milled to produce 3218 lbs. Cu, 2 oz. Au, and 6 oz. Ag, by R.M. Clarke Mining Co. Ltd.

References: ODM, 1967, G.R.52, p.31-33.
ODM, 1957, M.R.C. 2, p.38.
ODM, 1942, Vol.51, pt.2, p.31-32.

HARDY TOWNSHIP

Memesagamesing Lake Prospect

Main Metals: Cu, Ni.

Location: Hardy Tp.; part lots 23-29, con. VII-IX; on Memesagamesing Lake, 6 miles N of Loring.
Reference: ODM maps 51A, P.381.

Geology: An oval-shaped norite body 2 miles long is enclosed by granite and metasedimentary rocks. Diabase and pegmatite intrude both norite and metasediments. Mineralization occurs in the norite as disseminations and small lenses of pyrrhotite, chalcopyrite and pyrite.

Economic Features: Best assays from surface and drill core are about 1% combined Ni and Cu (ODM, Toronto, Res. Geol. files).

History: 1899 30 foot shaft sunk on Kelcey claim by Parry Sound Mining Co. Ltd.
1952 2 X-ray d.d. holes by P. Hermiston.
1955 MAG and EM surveys, and 1739 feet of d.d. by Sudbury Midzone Mines Ltd. and Midrim Mining Co. Ltd.
1967-68 MAG and EM surveys; 1587 feet of d.d. by North Rankin Nickel Mines Ltd.

References: ODM, 1942, Vol.51, pt.2, p.34-35.
ODM, Toronto, Res. Geol. files.

McCONKEY TOWNSHIP

Caribou Lake Nickel Prospect

Main Metals: Cu, Ni.

Location: McConkey Tp.; part lots 8-21, con. I-VI, 4 miles NW of Loring on W arm of Caribou Lake.
Reference: ODM map 51A.

Geology: A large body of norite gabbro intrudes granite and granite paragneiss in the Caribou Lake area. Granite pegmatites and trap dikes cut the mafic intrusion. Mineralization occurs as pyrrhotite, pyrite and chalcopyrite disseminated and in small veinlets in the norite.

Economic Features: Assay of a surface sample gave 1.33% Ni (OBM, 1900, Vol.9, p.170). Best drill core assay was 0.226% Cu and 0.151% Ni over 45 feet (ODM, Toronto, Res. Geol. files).

History: Pre-1900 Several pits and trenches.

1950-51 MAG survey and 1795 feet of d.d. by P.A. Chubb Syndicate.

1954 Aeromagnetic survey by Newkirk Mining Corp. Ltd.

1955 Electrical resistivity, EM, SP, and soil surveys; 5333 feet of d.d. by Aumaque Gold Mines Ltd.

1956 3000 feet of d.d. by Twin Basin Nickel Ltd.

1963-64 IP, resistivity, and MAG surveys by Loring Syndicate.

1968 Some d.d. by Hudson Bay Exploration and Development Co. Ltd.

References: OBM, 1900, Vol.9, p.170-171.

ODM, Toronto, Res. Geol. files.

Friedman, G.M., 1957, GSA Bull., Nov.

PARRY SOUND DISTRICT

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Armour Tp.; lot 17, con. VIII, (Nickel Cliff).	ODM, 1942, Vol. 51, pt. 2, p.33-34.	Cu, Ni	Grab samples assayed 1.37% Cu, 1.40% Ni.
Armour Tp.; lot 18, con. VIII.	ODM, 1942, Vol. 51, pt. 2, p.34.	Cu, Ni	Pyrrhotite and chalcopyrite in amphibolite.
Carling Tp.; lots 40-41, con. VII.	ODM, 1942, Vol. 51, pt. 2, p.21.	Cu	Disseminated chalcopyrite in pegmatite.
Cowper Tp.; lot 15, con. IV.	ODM, 1942, Vol. 51, pt. 2, p.22.	Cu, Ni	Pyrrhotite and chalcopyrite in garnet-biotite gneiss.
Cowper Tp.; lot 16, con. IV.	ODM, 1942, Vol. 51, pt. 2, p.22.	Cu	Pyrite and chalcopyrite in quartz-garnet pegmatite.
Cowper Tp.; lot 23, con. IV.	ODM, 1942, Vol. 51, pt. 2, p.26.	Cu, Ni	Pyrrhotite and chalcopyrite in amphibolite.
Cowper Tp.; lot 9, con. V.	ODM, 1942, Vol. 51, pt. 2, p.26.	Ni	Pyrrhotite disseminated in amphibolite.
Cowper Tp.; lot 13, con. V.	ODM, 1942, Vol. 51, pt. 2, p.26.	Ni	Pyrite-pyrrhotite in a zone 4-5 ft. wide.
Cowper Tp.; lot 14, con. V.	ODM, 1942, Vol. 51, pt. 2, p.26.	Ni	Pyrrhotite disseminated in amphibolite and pegmatite.
Cowper Tp.; lot 20, con. V.	ODM, 1942, Vol. 51, pt. 2, p.26.	Ni, Fe	Disseminated magnetite, pyrrhotite, pyrite in gneiss.
Cowper Tp.; lot 9, con. VI.	ODM, 1942, Vol. 51, pt. 2, p.26-27.	Cu, Ni	Disseminated chalcopyrite and pyrrhotite in biotite gneiss.
Ferguson Tp.; lot 5, con. V.	ODM, 1942, Vol. 51, pt. 2, p.27.	Ni, Cu	Pyrrhotite and chalcopyrite in rusty amphibolite.
Foley Tp.; lot 14, con. II.	ODM, 1942, Vol. 51, pt. 2, p.27.	Cu, Ni	Chalcopyrite and pyrrhotite disseminated in amphibolite.
Foley Tp.; lots 12-15, con. IV.	ODM, 1942, Vol. 51, pt. 2, p.27-28.	Cu, Ni	Several sulphide occurrences in biotite gneiss.
Foley Tp.; lot 33, con. V, (Big Four).	ODM, 1942, Vol. 51, pt. 2, p.28.	Cu	Chalcopyrite in hornblende gneiss.
Foley Tp.; lot 33, con. VI, (Mountain).	ODM, 1942, Vol. 51, pt. 2, p.28.	Cu	Chalcopyrite, bornite, and magnetite in hornblende gneiss.
Foley Tp.; lots 25-26, con. VII.	ODM, 1942, Vol. 51, pt. 2, p.28.	Cu	Copper sulphides in granitized hornblende gneiss.
Foley Tp.; lot 15, con. IX, (Vankoughnet).	ODM, 1942, Vol. 51, pt. 2, p.29.	Cu	Bornite and chalcopyrite in hornblende gneiss.
Foley Tp.; lot 35, con. IX, (Lafex).	ODM, 1942, Vol. 51, pt. 2, p.29.	Cu, Ni	Pyrrhotite and chalcopyrite in hornblende gneiss.
Foley Tp.; lot 15, con. X.	ODM, 1942, Vol. 51, pt. 2, p.29.	Cu	Pyrrhotite and chalcopyrite in hornblende gneiss.
Foley Tp.; lot 19, con. X.	ODM, 1942, Vol. 51, pt. 2, p.29.	Cu	Pyrrhotite and chalcopyrite in hornblende gneiss.
Foley Tp.; lot 13, con. XI.	ODM, 1942, Vol. 51, pt. 2, p.29.	Cu	Chalcopyrite in quartz lenticles in amphibolite.
Foley Tp.; lots 16-17, con. XI.	ODM, 1942, Vol. 51, pt. 2, p.30.	Cu	Chalcopyrite sparsely disseminated in hornblende gneiss.
Foley Tp.; lot 27, con. XI.	ODM, 1942, Vol. 51, pt. 2, p.30.	Cu	Copper sulphides in pegmatitic hornblende gneiss.
Foley Tp.; lot 137B, con. A.	ODM, 1942, Vol. 51, pt. 2, p.30.	Cu	Copper sulphides in pegmatitic hornblende gneiss.
Foley Tp.; lot 145, con. A.	ODM, 1942, Vol. 51, pt. 2, p.30.	Cu	Copper sulphides in pegmatitic hornblende gneiss.
Foley Tp.; lot 123, con. B.	ODM, 1942, Vol. 51, pt. 2, p.30.	Cu	Minor chalcopyrite and pyrrhotite.
Hagerman Tp.; lot 61, con. A.	ODM, 1942, Vol. 51, pt. 2, p.36.	Cu	Pyrite, pyrrhotite, and chalcopyrite in granite pegmatite.
Lount Tp.; lot 28, con. I.	ODM, 1955, Vol. 64, pt. 6, p.25.	Ni, Cu	Minor pyrrhotite and chalcopyrite in skarn.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Lount Tp.; lot 35, con. II.	ODM, Toronto, Res. Geol. files.	Cu, Ni	Disseminated sulphides in 3 d.d. holes.
Lount Tp.; lot 14, con. III.	ODM, 1955, Vol. 64, pt. 6, p.25.	Cu	Chalcopyrite in hornblende gneiss.
Lount Tp.; lot 14, con. V.	ODM, 1955, Vol. 64, pt. 6, p.25-26.	Cu	Chalcopyrite and pyrrhotite in skarn.
Lount Tp.; lot 13, con. XII.	ODM, 1955, Vol. 64, pt. 6, p.26.	Cu	Chalcopyrite in garnet-hornblende gneiss.
Lount Tp.; lot 124, con. A.	ODM, 1955, Vol. 64, pt. 6, p.26.	Cu	Pyrrhotite and chalcopyrite in amphibolite.
Lount Tp.; lot 124, con. B.	ODM, Toronto, Res. Geol. files.	Cu	Geophysical surveys and 4 d.d. holes in 1963.
McDougall Tp.; lot 18, con. I.	ODM, 1942, Vol. 51, pt. 2, p.33.	Cu	Minor bornite and chalcopyrite in amphibolite.
McDougall Tp.; lot 13, con. XII.	ODM, 1942, Vol. 51, pt. 2, p.33.	Zn, Cu	Sphalerite-chalcopyrite band in garnet-hornblende gneiss.
Mills Tp.; lot 10, con. II.	ODM, 1942, Vol. 51, pt. 2, p.35.	Ni	Disseminated pyrrhotite in garnet amphibolite.
Monteith Tp.; lot 19, con. IX.	ODM, 1942, Vol. 51, pt. 2, p.33.	Cu	Chalcopyrite streaks in granite gneiss.
Ferry Tp.; lot 35, con. XIII.	ODM, 1942, Vol. 51, pt. 2, p.35.	Ni, Cu	Pyrrhotite in amphibolite.
Proudfoot Tp.; lot 3, con. X.	ODM, 1942, Vol. 51, pt. 2, p.35.	Ni, Cu	Pyrrhotite and minor chalcopyrite in amphibolite.

PETERBOROUGH COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Belmont Tp.; lots 27-29, con. I.	ODM, Toronto, Res. Geol. files.	Cu, Zn	10-20% pyrrhotite in slates.
Belmont Tp.; lot 8, con. V.	ODM, 1943, Vol. 52, pt. 2, p.21.	Cu	Chalcopyrite in quartz-chlorite aggregates.
Galway Tp.; lot 20, con. A, (Union Creek).	ODM, 1952, P.R. 1952-4, p.15.	Pb	100 ft. shaft on 2-ft. galena-barite-calcite vein.
Galway Tp.; lot 18, con. IX.	ODM, 1943, Vol. 52, pt. 2, p.49.	Pb	Galena-calcite fissure vein in marble.
Galway Tp.; lot 17, con. X, (Hopkins).	ODM, 1943, Vol. 52, pt. 2, p.49-50.	Pb	6-inch pyrite-galena vein.
Methuen Tp.; lot 2, con. I.	GSC, 1930, Econ. Geol. Ser. 8, p.163.	Pb	18-inch galena-barite-calcite vein.

RAINY RIVER DISTRICT

DOBIE TOWNSHIP

Emo Prospect

Main Metals: Ni, Cu.

Location: Dobie Tp.; lot 9, con. I, main showing; extensive work between Barwick and Emo.
Reference: ODM map 2148.

Geology: Disseminated and massive pyrrhotite, chalcopyrite and pentlandite with associated cobalt values occur in a norite-gabbro complex, which forms part of an intrusive body over 9 square miles in extent.

Economic Features: A grab sample of massive sulphides from the original discovery gave 2.52% Ni and a trace of Cu. Grab samples of disseminated sulphides yielded 0.31% Ni and 0.30% Cu. Dimensions of the deposit as outlined by d.d. are not known.

History: 1952-53 Extensive geophysical surveys and d.d. by Falconbridge Nickel Mines Ltd.
1955-56 Some d.d. by Stratmat Ltd.

Remarks: Total d.d. is in excess of 50,000 feet.

References: ODM, 1954, Vol.63, pt.5, p.23-4.
ODM, Kenora files.

FLEMING TOWNSHIP

Off Lake Prospect

Main Metals: Cu.

Location: Fleming Tp.; N end of Off Lake.

Geology: Disseminated chalcopyrite mineralization occurs in rhyolite porphyry cut by numerous diabase dikes.

Economic Features: Mineralization is reported to be widespread but of low grade. No assays are available.

History: 1967-68 EM, MAG, and IP surveys, plus d.d. by Noranda Mines Ltd.

References: ODM, Kenora files.

SENN TOWNSHIP

Off Lake Prospect

(See Fleming Township)

HALKIRK TOWNSHIP

Redgut Bay Prospect (Hupchuk - Mironsky)

Main Metals: Cu.

Location: Halkirk Tp.; W central part, E side of Highway 11, 1/2 mile S of its intersection with C.N.R. tracks.

Reference: ODM map 2115.

Geology: Disseminated pyrite, chalcopyrite and minor pyrrhotite occur over a horizontal width of 50 feet in a tabular zone of biotite quartzite, which rests on a thick sequence of mafic metavolcanics and is overlain by gabbro and anorthosite. The quartzite strikes NE and dips about 30NW.

Economic Features: A chip sample across approx. 60 feet of quartzite assayed 0.76% Cu (Harris).

Drill hole 55-7 intersected a 58-foot section that assayed 1.01% Cu.

History: 1963 Surface work, geol. survey and 12 d.d. holes aggregating 3,759 feet by Phelps-Dodge Corp. of Canada Ltd.

References: ODM, Port Arthur files.

ODM, 1963, P.R. 1963-2, p.40.

ODM, F.R. Harris, pers. com.

Redgut Bay Prospect (Noranda)

Main Metals: Cu.

Location: Halkirk Tp., N central part, 1 mile W of Redgut Bay, Rainy Lake.

Geology: Mafic metavolcanics intruded by a sill of hornblende gabbro are situated on the eastern flank of a regional dome structure. Disseminated chalcopryite, pyrite and pyrrhotite occur in narrow, nearly flat-lying bands in gabbro. One mineralized zone was traced by drilling for a strike length of 4,000 feet and across a width of approximately 50 feet.

History: 1959 MAG and EM surveys by Murray Mining Corp. Ltd.
1966-67 12 d.d. holes aggregating 3,566 feet by Noranda Mines Ltd.

References: ODM, Port Arthur files.

South Grassy Portage Prospect

Main Metals: Cu.

Location: Halkirk Tp.; W central part, 1/4 mile S of Grassy Portage Bay, Rainy Lake.
Reference: ODM map 2115.

Geology: NE-trending mafic metavolcanics are intruded by a sill-like mass of hornblende gabbro. Mineralization consists of pyrrhotite and chalcopryite disseminated in the gabbro. The main mineralized zone is 400 feet in length, 17 feet in maximum width and occurs in the gabbro close to the metavolcanic contact.

Economic Features: Samples from the main zone contained from 1.5 to 4.5% Cu, and averaged about 2.0% (Hodgson).
Exploration by Noranda Mines Ltd. indicated a small, potential orebody.

History: 1958-59 Trenching, geol. and geophysical surveys, and d.d. by Noranda Mines Ltd.
1959 EM and MAG surveys over part of the property by PCE Explorations Ltd.
1966-68 Considerable d.d. by Noranda Mines Ltd.
1969 Option granted to Seemar Mines Ltd. for further exploration and possible development.

Ownership: Noranda Mines Ltd.

References: ODM, Port Arthur files.
Hodgson, C.J., 1961, M.Sc. thesis, McGill Univ.

HUTCHINSON TOWNSHIP

Kawene Prospect

Main Metals: Cu, Ni.

Location: Hutchinson Tp.; SE corner.

Reference: ODM map 2065.

Geology: Sedimentary gneisses of ENE strike and steep N dip, are intruded by a mafic body of amphibolite and pyroxenite. The intrusive is conformable and attains a maximum width and length of 400 feet and 1,000 feet, respectively.

Pyrrhotite and chalcopyrite occur as fine to coarse disseminations, and as coatings along joints.

History: 1958 4 d.d. holes aggregating 580 feet by Sogemines Development Company Ltd.

1966 Geol., MAG and EM surveys by The Hanna Mining Company.

TROTTIER TOWNSHIP

Abiwin Prospect

(See Weaver Township)

WATTEN TOWNSHIP

Nickel Lake Prospect

Main Metals: Cu.

Location: Watten Tp.; SE part, NW end of Nickel Lake.

Reference: ODM map P.523.

Geology: Metasediments and mafic metavolcanics are intruded by hornblende gabbro. Mineralization consists of pyrite, pyrrhotite and minor chalcopyrite as disseminated grains and small stringers in the metasediments near their contact with gabbro. Some disseminated sulphides also occur within the gabbro.

History: 1964-67 Trenching and 31 d.d. holes aggregating 3,707 feet by T. Daly and J. Galbraith.

References: ODM, Port Arthur files.

Paramaque Prospect

Main Metals: Cu.

Location: Watten Tp.; lot 2, con. III.

Reference: ODM map P.523.

Geology: Chalcopyrite, pyrite and pyrrhotite occur in disseminated bands within mafic metavolcanics and metasediments, with an approximate E-W strike and vertical dip. The rocks are locally intruded by granite and gabbro and form part of the S limb of a regional structural dome.

Economic Features: Chalcopyrite was intersected in drilling, but the tenor of copper over mineable widths was too low (Zurowski).

History: 1966 Geol., MAG and EM surveys and 6 d.d. holes aggregating 2,012 feet by Paramaque Mines Ltd.

References: ODM, Port Arthur files.

Young Prospect

Main Metals: Cu.

Location: Watten Tp.; NW shore of Rocky Islet Bay, Rainy Lake.

Reference: ODM map P.523.

Geology: Archean metasediments and iron formation, with a NE strike and vertical dip, are cut by felsic to mafic intrusions. Sulphide mineralization is widespread. Massive pyrrhotite, with pyrite stringers, is associated with iron formation. Disseminated and massive pyrrhotite, with lesser pyrite and chalcopyrite, occurs in the mafic to intermediate intrusive rocks.

Economic Features: Sulphide deposits are wide and extensive but contain low metal values. Copper, across good widths, does not exceed 0.35% Cu and nickel, gold, silver or cobalt are not present (H.D. McLeod).

History: 1955-56 Geol., MAG and EM surveys and 17 d.d. holes aggregating 2,902 feet by Stratmat Ltd.

References: ODM, Port Arthur files.

WEAVER TOWNSHIP

Abiwin Prospect

Main Metals: Cu.

Location: Weaver Tp., SW corner; and Trottier Tp., SE corner.

Reference: ODM map 2065.

Geology: Disseminated chalcopyrite, pyrrhotite and pyrite form three separate lenses in amphibolite, along a contorted E-W contact with quartz-mica schist. The largest, most easterly lens has been traced for a length of 80 feet and attains a width of 35 feet. It strikes N60E and dips 75N.

A second lens, located 90 feet W of the first strikes NW and is exposed over a width of 10 feet. A third lens, situated 150 feet W of the second, has been traced in an E-W direction for a length of 50 feet and is exposed over widths of up to 10 feet.

History: 1955-56 Geol. and MAG surveys, and 5 d.d. holes aggregating 88 feet.

References: ODM, 1957, M.R.C. 2, p.10-11.

ODM, Port Arthur files.

48°45' - 91°30'

Addicks Prospect

Main Metals: Cu, Ni.

Location: 48°45' - 91°30'; N part of Finlayson Lake, NW shore.

Geology: Sheared felsic to intermediate metavolcanics enclose a 10-foot thick band of iron formation. The formations strike N70E and dip vertically. Mineralization consists of massive pyrrhotite, massive to nodular pyrite and various amounts of chalcopyrite, in the metavolcanics, close to the iron formation. The mineralized zone has been traced for a length in excess of 100 feet and over widths of up to 30 feet.

History: 1965-67 Trenching, EM and MAG surveys by Canadian Addicks Mining Corp.

References: ODM, Port Arthur files.

ODM, E.G. Pye, unpubl. rept.

Kuhner Prospect

Main Metals: Cu.

Location: 48°45' - 91°30'; S part of Finlayson Lake, W shore.
Reference: ODM map 2065.

Geology: Sheared, mafic metavolcanics associated with tuff, agglomerate, iron formation and felsic metavolcanic flows occur in the area. The rocks strike N30E and dip vertically. The mineralized zone is tabular, conformable and consists of massive to disseminated pyrrhotite, pyrite and minor chalcopyrite distributed erratically over a strike length of 1,600 feet. Massive sulphides, over widths up to 16 feet, have been outlined.

History: 1955 Trenching and 3 d.d. holes aggregating 150 feet by W.H. Cranston.
1966-67 MAG and EM surveys and 11 d.d. holes aggregating 5,364 feet by Cyprus Exploration Corp. Ltd.

References: ODM, Port Arthur files.
ODM, K.G. Fenwick, pers. com.

48°45' - 92°30'

Plateau Lake Prospect

Main Metals: Cu, Ni.

Location: 48°45' - 92°30'; 1/4 mile S of Plateau Lake and 6 miles SE of Atikokan; claim R760.
Reference: ODM map 2065.

Geology: Archean metasediments, with a NE strike and vertical to steep N dips, are intruded by an oval-shaped body of gabbro and pyroxenite, about 400 feet wide and 800 feet long. Chalcopyrite and pyrrhotite occur within the intrusion as disseminated grains intergrown with, and localized along, cleavage planes in pyroxene.

Economic Features: Picked samples assay up to 1.0% Ni and 1.5% Cu; the average grade is low (M.R.C. 2).

History: Three old shafts.
1948 Geophysical survey and limited d.d. by Andowan Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.10.
ODM, 1965, E.G. Pye, unpubl. rept.

Port Arthur Copper Mine (Past Producer)

Main Metals: Cu, Zn.

Location: 48°45' - 92°30'; 3 miles W of Mine Centre; claim HP 187.
Reference: ODM map 2115.

Geology: Sericite schist is partly replaced by pyrite, chalcopyrite and sphalerite. The Cu and Zn sulphides occur as lenses lying in a pyrite zone 75 feet by 800 feet.

Ownership: E. Corrigan.

History: 1916-17 Surface work, shaft 100 feet deep, 200 feet of lateral development and limited diamond drilling. 26,509 pounds of copper produced by Port Arthur Copper Mines.
1951 Limited d.d. by Noranda Mines Ltd.
1955 Geol., MAG and EM surveys, and 5,000 feet of d.d. by Stratmat Ltd.
1963 Limited d.d. by Satellite Metal Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.11.
ODM, Port Arthur files.

Rhonda Prospect

Main Metals: Zn, Pb, Cu, Ag.

Location: 48°45' - 92°30'; One mile S of Olive station.

Geology: Galena, sphalerite and chalcopyrite occur in a 2-foot wide shear zone in andesite, exposed in a rock cut on the S side of Highway 11. Geophysical surveys indicated an anomalous zone approximately 2,800 feet long and 800 feet wide.

Economic Features: The best of 3 grab samples taken along the shear zone gave 3.06 oz./ton Ag, 0.65% Cu, 6.60% Pb and 16.10% Zn.

History: 1966-67 MAG, EM and IP surveys, and 5 d.d. holes aggregating 2,469 feet by Rhonda Copper Mines Ltd.

RAINY RIVER DISTRICT

OCCURRENCES

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Halkirk Tp.; W central part, approx. 1 mi. ENE of Nickel Lake station (East Grassy Portage - Hupchuk-Armstrong).	ODM, Port Arthur files.	Cu	Disseminated pyrite and chalcopyrite in mafic metavolcanics and gabbro. 1967 3 d.d. holes by North 60 Explorers; 1 d.d. hole by G. Armstrong and M. Hupchuk.
Halkirk Tp.; central part, 1½ mi. E of Nickel Lake station (Redgut Bay-Hupchuk).	ODM, Port Arthur files. ODM map 2115.	Cu	Chalcopyrite disseminated in hornblende gabbro. Limited d.d. by Phelps-Dodge Corp. of Canada Ltd. in 1963, and by M. Hupchuk in 1967.
Halkirk Tp.; SW part, ¾ mi. N of Swell Bay (Swell Bay).	ODM, Port Arthur files.	Cu	Widely-scattered and sparsely disseminated pyrite, pyrrhotite and chalcopyrite in gabbro. 1966-67 Geol., MAG, IP and resistivity surveys by Cominco Ltd.; 1968, 2 d.d. holes for 1,294 ft. by M. Hupchuk and G. Armstrong.
Potts Tp.; lot 7, con. VI, W shore of Off Lake.	ODM, Kenora files.	Cu	Mineralized andesite-diorite contact.
Richardson Tp.; S¼, sec. 1.	ODM, 1954, Vol.63, pt.5, p.24.	Cu, Ni	Minor sulphides along a contact of dacite and monzonite.
Schwenger Tp.; NW part, 1¼ mi. S of Marmion Lake (Falls Bay).	ODM, 1939, Vol.48, pt.2, p.33.	Zn, Pb, Cu	Sphalerite, galena, pyrite and chalcopyrite, associated with quartz, in sheared mafic metavolcanics.
Watten Tp.; N shore of Reef Point, Rainy Lake (Reef Point).	ODM, Port Arthur files. ODM, 1963, P.R. 1963-2, p.41. ODM map 2115.	Cu	Disseminated pyrrhotite, chalcopyrite and subordinate pyrite as a sulphide replacement zone in mafic tuff. 1960, 2 d.d. holes totalling 342 ft. by G. Armstrong and M. Hupchuk.
Watten Tp.; ¼ mi. S and ¼ mi. W of Sims station (Sims).	ODM, Port Arthur files. ODM map 2115.	Cu	Massive pyrrhotite, pyrite and minor chalcopyrite as part of a sulphide-bearing iron formation bounded by gabbro. 1958, 1967: 6 d.d. holes totalling 1,128 ft. by Noranda Mines Ltd.
48°00' - 91°00'; N shore of Cache Bay, Saganaga Lake (Ambrose).	ODM map 2065. ODM, 1957, M.R.C. 2, p.10. ODM, Port Arthur files.	Cu	Copper mineralization along and near a contact between granite and metavolcanics. Trenching and limited d.d. in 1956.
48°00' - 91°00'; Saganaga Lake, S side of peninsula in Cache Bay (Cache Bay).	ODM, F.R. Harris, pers. com.	Cu	Minor pyrite and chalcopyrite disseminated in granite and in a quartz diabase dike.
48°15' - 92°15'; 1¼ mi. E of Red Horse Lake (Red Horse Lake).	ODM, Port Arthur files.	Cu, Ni	Three small lenses of disseminated chalcopyrite, pyrrhotite and pyrite in a 200-foot wide pyroxenite dike.
48°30' - 91°45'; ¾ mi. NW of Banning station (Banning).	ODM map 2065. ODM, 1957, M.R.C. 2, p.12.	Cu, Au	Quartz, carbonate, pyrite and chalcopyrite fill NE-striking shear zones in schistose mafic metavolcanics. Trenching before 1928; 1956, Geol. and MAG surveys.
48°30' - 92°30'; 4 mi. SSW of Mine Centre; S shore of Island Bay, Bad Vermillion Lake (Island Bay).	ODM, 1963, P.R. 1963-2, p.42. ODM map 2115. GSC map 334A.	Cu	Disseminated pyrite, chalcopyrite and pyrrhotite, along and close to fractures, in anorthosite. Some trenching.
48°30' - 92°30'; 2 mi. SW of Mine Centre; E shore of Bad Vermillion Lake (Mathieu).	ODM, 1918, Vol.27, pt.1, p.173. ODM map 2115. GSC map 334A.	Cu	Pyrite and chalcopyrite in sericite schist. 1917, test shafts by J.A. Mathieu.
48°45' - 91°30'; middle part of Finlayson Lake, W shore (Nic-Cop).	ODM map 2065. ODM, 1957, M.R.C. 2, p.12.	Cu	Pyrite and chalcopyrite occur with quartz veins in schistose mafic metavolcanics. Limited d.d., 1954-55.
48°45' - 92°30'; 2 mi. ESE of Mine Centre (Hedburg).	ODM, 1918, Vol.27, pt.1, p.175. ODM map 2115. GSC map 334A.	Cu	Chalcopyrite associated with quartz occurs in intermediate metavolcanic schist.
48°45' - 92°30'; 1 mi. SSE of Mine Centre (International).	ODM, 1918, Vol.27, pt.1, p.176. ODM map 2115. GSC map 334A.	Cu	Minor chalcopyrite in sericite schist.
48°45' - 93°30'; N of Jackfish Lake at approx. lat. 48°58', long. 93°36'.	ODM, Kenora files. ODM map 2148.	Cu, Bi	Sulphide zone at contact of granodiorite with a greenstone remnant.

RENFREW COUNTY

ADMASTON TOWNSHIP

Renfrew Zinc Prospect

Main Metals: Zn.

Location: Admaston Tp.; W 1/2 lots 1-2, con. III, and E 1/2 lot 1, con. IV,
4 miles W of Renfrew.

Reference: ODM map 53b.

Geology: Small lenticular banded replacement deposits containing sphalerite
and minor galena and pyrite in Grenville marble.

Economic Features: 16,000 tons averaging 10.5% Zn (ODM, 1957, M.R.C. 2, p.5).

Ownership: Cadieux Mines Ltd.

History: 1922-25 Discovery and opening of a pit by J. Legree and W. Dean.

1925 Stripping, trenching, and 5 d.d. holes totalling 1483 feet by
Coniagas Mines Ltd.

1926 4 d.d. holes totalling 1187 feet by Ottawa Valley Mines Ltd.

7 d.d. holes totalling 1487 feet by British Metal Corp. (Canada) Ltd.

1947 1987 feet of d.d. by New Calumet Mines Ltd.

1950 Some d.d. by Cadieux Mines Ltd.

1951 60 tons of concentrate (44% Zn) produced from 1500 tons taken
from west end of deposit by Renprior Mines Ltd., no shipments.

References: ODM, 1944, Vol.53, pt.3, p.114-118.

ODM, 1957, M.R.C. 2, p.5.

GSC, 1930, Econ. Geol. Ser. 8, p.132-135.

ODM, Toronto, Res. Geol. files.

LYNDOCH TOWNSHIP

Harvey Simon Prospect

Main Metals: Cu, Fe (minor Zn).

Location: Lyndoch Tp.; lot 1, range B; 5 1/2 miles N of Denbigh.

Reference: ODM map 1953-2.

Geology: Two lenticular copper showings in amphibolite are 900 feet apart. The north zone is mineralized with massive pyrite, magnetite, and some chalcopyrite. The south zone varies 2-30 feet thick and contains pyrrhotite, chalcopyrite, pyrite and sphalerite as the ore minerals.

Economic Features: South zone contains 250,000 tons of 1.1% Cu to a depth of 350 feet (Canadian Mines Handbook 1968-69, p.350).

Ownership: Young-Davidson Mines Ltd.

History: 1956 Several test pits and 6 d.d. holes totalling 1077 feet by Eugene Simon.
1961 EM and geol. surveys and 13 d.d. holes totalling 2502 feet by Noranda Exploration Co.
1965 3807 feet of d.d. and geophysical work by Young-Davidson Mines Ltd.

References: ODM, 1964, G.R.26, p.35-36.
Canadian Mines Handbook, 1968-69, p.350.
ODM, Toronto, Res. Geol. files.

RAGLAN TOWNSHIP

Raglan Nickel Prospect

Main Metals: Ni, Cu.

Location: Raglan Tp.; lots 19-20, con. IV; 1 1/2 miles SW of Hardwood Lake.
Reference: ODM map 1953-2.

Geology: Disseminated pyrrhotite and chalcopyrite occur in metagabbro over a length of about 500 feet and a width of 15-100 feet on surface.

Economic Features: Two small flat-lying lenses containing about 1% combined Ni and Cu, the largest being 300 by 500 feet and 20-50 feet thick.

History: 1956 MAG, EM and SP surveys; surface trenching and 7070 feet of d.d. by Raglan Nickel Mines Ltd.

References: ODM, 1953, Vol.62, pt.5, p.15-16.
ODM, Toronto, Res. Geol. files.

RENFREW COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Brougham Tp.; lots 14-15, con. X-XI.	ODM, Toronto, Res. Geol. files.	Ni, Cu	2,000 ft. of d.d. in 1955.
Lyndoch Tp.; lot 30, con. IV.	ODM, 1953, Vol. 62, pt. 5, p.46.	Cu	Chalcopyrite stringers in paragneiss.
Lyndoch Tp.; lot 24, con. VI.	ODM, Toronto, Res. Geol. files.	Cu	Electromagnetic survey and d.d. in 1963-65.
Lyndoch Tp.: lot 5, con. VIII, (Jamieson).	ODM, 1953, Vol. 62, pt. 5, p.74-76.	Cu, Mo	Calcite-mica pyroxenite-pegmatite.
Raglan Tp.; lots 4-5, con. I-II.	ODM, Toronto, Res. Geol. files.	Cu, Ni	Disseminated pyrrhotite and chalcopyrite.
Raglan Tp.; lots 9-10, con. II-III.	ODM, Toronto, Res. Geol. files.	Cu, Ni	Magnetic and self-potential surveys in 1956.
Raglan Tp.; lot 11, con. VI.	ODM, Toronto, Res. Geol. files.	Cu, Ni	Disseminated pyrrhotite-chalcopyrite in metagabbro.
Raglan Tp.; lot 17, con. VI.	ODM, Toronto, Res. Geol. files.	Cu, Ni	Disseminated pyrrhotite-chalcopyrite in metagabbro.
Raglan Tp.; lots 19-22, con. VI.	ODM, Toronto, Res. Geol. files.	Cu, Ni	3 sulphide anomalies in metagabbro.

SUDBURY DISTRICT

AFTON TOWNSHIP

Emerald Lake Prospect

Main Metals: Cu, Co.

Location: Afton Tp.; SE 1/4, on peninsula N of SE bay of Emerald Lake.
Reference: ODM, Sudbury files.

Geology: Disseminated and massive pyrrhotite with minor pyrite, chalcopyrite and smaltite in Archean metasediments.

Economic Features: Drill core samples assayed up to 0.5% Cu. A small lens of Co and Cu bearing mineralization was exposed in trenching.

History: 1934 Trenching and 2 d.d. holes.
1956 Electrical resistivity survey and 7 d.d. holes for more than 2868 feet by Wabico Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.102.
ODM, Sudbury files.

BALDWIN TOWNSHIP

Andrews Prospect

Main Metals: Ni, Cu.

Location: Baldwin Tp.; N 1/2, lot 2, con. I.
Reference: ODM map 1952-1.

Geology: Scattered areas of stringers and disseminations of pyrrhotite, pyrite and chalcopyrite in gabbro.

Economic Features: Chip sample over 15 feet assayed 1.16% Ni; grab samples assayed 0.20% Cu, 0.93% Ni and 0.51% Cu, 0.34% Ni.

History: 5 pits.
1 d.d. hole for 50 feet by V. Piispanen.
1957 Dip needle, EM and MAG surveys by Proscro Limited.

References: ODM, 1952, Vol.61, pt.4, p.30-31.
ODM, Sudbury files.

Baldwin Prospect

Main Metals: Cu.

Location: Baldwin Tp.; lot 7, con. VI; near N shore of Agnew Lake.

Reference: ODM map 1952-1.

Geology: Stringers and disseminations of chalcopyrite with minor pyrite and pyrrhotite in a silicified shear zone trending N83E dipping 70S and up to 75 feet wide in Bruce quartzite and greywacke. Mineralization forms a near vertical body, 650 feet deep and plunging about 25SW, with a strike length of about 1500 feet. A second zone occurs some 1500 feet to the W and has been traced for a strike length of nearly 1000 feet.

Economic Features: Reserves are estimated at 1,094,328 tons averaging 1.49% Cu (without dilution) over an average width of 18.5 feet. This includes a lens containing 703,899 tons averaging 1.58% Cu with an average width of 23.9 feet (Spanish River Mines, 1968). The western zone contains an estimated 1000 tons per vert. foot of 1.5% Cu (Northern Miner, 1968).

Ownership: Spanish River Mines Limited.

History: 1929 13 trenches and 10 d.d. holes for 5,665 feet.
1956-57 19 d.d. holes for 7321 feet by Federal Kirkland Mining Co. Ltd.
1962-63 7 d.d. holes for 3940 feet by Brismil Mines Ltd.
1965 7 d.d. holes for 3253 feet by Brismil Mines Ltd.
1966-67 14 d.d. holes for 6809 feet by Globe Explorations and Mining Co. Ltd.
1968 Shaft sinking by Spanish River Mines Ltd.

References: ODM, 1952, Vol.61, pt.4, p.30.

ODM, 1957, M.R.C. 2, p.91.

Globe Exploration and Mining Co. Ltd., 1965, Prospectus.

Northern Miner, 1968, July 18.

ODM, Sudbury files.

Jellicoe (Agnew Lake) Prospect

Main Metals: Cu.

Location: Baldwin Tp.; N 1/2 lot 5, con. V; near centre of NW shore of Espanola Bay.

Reference: ODM, Sudbury files.

Geology: Mineralization along the NE-trending Cameron Creek fault in greywacke and quartzite (Bruce).

Economic Features: Drilling intersected 4.19% Cu over 8 feet; 1.01, 0.65 and 0.48% Cu over 2 to 4 foot intervals.

History: 1955 5 d.d. holes by Windy Arm Mines Ltd.
1960 EM survey by Evenlode Gold Mines Ltd.
1966 2 d.d. holes for 904 feet by Consolidated Montclerg Mines Ltd.

References: ODM, Sudbury files.

Springer Prospect

Main Metals: Cu.

Location: Baldwin Tp.; N 1/2 lot 11, con. IV; 1/2 mi. S of Agnew Lake.

Reference: ODM map 1952-1.

Geology: Chalcopyrite with some pyrite and pyrrhotite occurs in a quartz vein and silicified zone, trending N70E for 1400 feet, within gabbro and quartzite. The vein is up to 15 feet thick with 2 branches to the E.

Economic Features: The best channel sample assayed 3.3% Cu over 6 feet; Ni (0.06%), Co (0.29%) and Au (0.01 and 0.09 oz./ton) were obtained in 2 character samples. Average grade of channel samples at 75-foot intervals over 1100 feet was 0.93% Cu and 0.08 oz./ton Au.

Assayed drill intersections range from 0.5 to 9.5 feet containing 0.12 to 3.63% Cu; best sample assayed 3.63% Cu over 6.5 feet.

Ownership: United Cobalt Mines Limited.

History: Before 1937 Pits and trenches by F. Springer.

1937 Trenches by Erie Canadian Mines Ltd.

1954 6 d.d. holes for approx. 1000 feet by Peter Rock Mining Co. Ltd.

1956 14 d.d. holes for 3893 feet by United Cobalt Mines Ltd.

References: ODM, 1952, Vol.61, pt.4, p.29-30.

ODM, 1957, M.R.C. 2, p.100.

ODM, Sudbury files.

BALFOUR TOWNSHIP

Errington Mine (Past Producer)

(See Creighton Township)

BLEZARD TOWNSHIP

Junior Frood Prospect

Main Metals: Ni, Cu.

Location: Blezard Tp.; lot 8, and N 1/2 lot 9, con. I.

Geology: Two zones of nickel-copper sulphides with strike lengths of 500 and 600 feet.

Economic Features: In No. 1 zone, 2 d.d. holes intersected 5-foot sections assaying 1.09 and 1.40% Ni. In No. 2 zone, 3 d.d. holes intersected 23 feet of 0.70% Ni and 0.15% Cu, 1 foot of 1.93% Ni and 0.15% Cu, and 14 ft. averaging 1.29% Ni and 0.25% Cu.

Ownership: Frood Deep Nickel Mines Ltd.

History: 1930-31 Surface work and d.d. by Junior Frood Mines Ltd.
1953-58 17 d.d. holes from 846 to 4835 feet in depth by Falconbridge Nickel Mines Ltd.

References: M.R.B., Ottawa, mineral files.

Other Blezard Township Deposits

(See Sudbury Area)

BOTHA TOWNSHIP

Venetian Lake (Holmstrom) Prospect

Main Metals: Pb, Zn, Ag.

Location: Botha Tp.; central part, claims 80132-4, at NW end of bay on W central side of Venetian Lake.
Reference: ODM map P.287.

Geology: Mineralized zone traced about 300 feet in altered volcanics.

Economic Features: A small area of massive sulphides in main pit and scattered mineralization containing Pb, Zn, Ag with a little Cu and traces of Au.

History: 1938 Geophysical survey by T.H. Holmstrom and Associates.
1951 7 d.d. holes for 3172 feet by Osisko Lake Mines Ltd.

References: ODM, 1952, P.R. 1952-4, p.16.
ODM, Sudbury files.

BOWELL TOWNSHIP

(See Sudbury Area)

CAPREOL TOWNSHIP

(See Sudbury Area)

CASCADEN TOWNSHIP

(See Sudbury Area)

CHESTER TOWNSHIP

Clam Lake Prospect

Main Metals: Au, Ag, Cu.

Location: Chester Tp.; NW 1/4, N end of Clam Lake.
Reference: ODM map 41d.

Geology: Pyrite, chalcopyrite and gold in quartz veins and shear zone
trending N60W. Mineralized zones up to 24 feet wide.

Economic Features: Channel samples from a localized zone of concentrated
sulphides assayed \$2.80 Au and 5.32% Cu over 9 feet and \$22.40 Au
over 46 inches (1932).

Bulk samples assayed 3.40 oz./ton Ag, 3.40 oz./ton Au and 4.68% Cu.

Ownership: Young-Shannon Gold Mines Limited.

References: ODM, 1932, Vol.41, pt.3, p.32-3.

Gosselin (Weeduck) Lake Prospect

Main Metals: Cu, Au, Ag.

Location: Chester Tp.; NW 1/4, beneath SW part of Gosselin Lake.
Reference: ODM, Sudbury files.

Geology: Disseminated pyrite, pyrrhotite and chalcopyrite in granite and mafic volcanics along the NNW-trending Three Ducks Lake fault.

Economic Features: The best 5-foot section intersected in drilling assayed 0.42 oz./ton Ag, 0.50% Cu over 3.5 feet and 0.01 oz./ton Au, 1.16 oz./ton Ag, 2.30% Cu, 0.25% Zn over 1.5 feet.

History: 1965-67 MAG, EM, geol. and geophysical surveys, trenching and 4 d.d. holes for 2227 feet by Beaverbridge Mines Ltd.

References: ODM, Sudbury files.
Beaverbridge Mines Ltd., 1965, 1966, Prospectus.

Lawrence Prospect

Main Metals: Cu, Au.

Location: Chester Tp.; NE 1/4, approx. 1/2 mi. E of Mesomikenda Lake on claim 32044.
Reference: ODM map 41d.

Geology: Pyrite and chalcopyrite in quartz-carbonate vein, 3 feet wide and approx. 200 feet long along a 5-foot wide shear zone trending N30W dip 70NE in granite.

Economic Features: 60 tons of ore shipped in 1916 averaged 7% Cu and \$3.50 Au per ton. A selected sample from dump assayed 20.44% Cu, 6.02 oz./ton Ag.

History: 1916 60 tons shipped from pit 200 feet long and 8 feet deep.

References: ODM, Sudbury files.
ODM, 1932, Vol.41, pt.3, p.26-7.

Shannon Island Prospect

Main Metals: Au, Ag, Cu.

Location: Chester Tp.; W central part, on Shannon Island near S end of Clam Lake.
Reference: ODM map 41d.

Geology: Pyrite, chalcopyrite and arsenopyrite in 3-foot wide quartz vein.

Economic Features: Highest and lowest assays obtained on vein where cut by the shaft are 1.82 oz./ton Au, 1.18 oz./ton Ag and 6.63% Cu, and 0.32 oz./ton Au and 1.61% Cu.

Ownership: Chester Minerals Limited.

History: 1934 2-compartment shaft, 125 feet deep, and 110 feet of lateral work by Young-Shannon Gold Mines Ltd.

References: ODM, 1934, Vol.43, pt.3, p.77-80.
Chester Minerals Ltd., 1965, Prospectus.

CRAIG TOWNSHIP

Stralak Prospect

Main Metals: Zn, Cu, Pb, Ag.

Location: Craig Tp.; NE corner, near Stralak Station; includes claims S5042 and S5043.

Reference: ODM map P.287.

Geology: Two E-trending zones of pyrite, pyrrhotite with varying amounts of sphalerite, chalcopyrite and galena at the contact of mafic volcanics and sheared and altered quartzite. The East zone about 1500 feet long is mineralized in widths up to 10 feet including massive sulphides in widths up to 6 feet; the West zone lies 1 mile to the west and is about 600 feet long and 1 to 6 feet wide.

Economic Features: Reserves in the East zone were estimated at 363,680 tons grading 3.18% Zn, 0.32% Cu, 0.68 oz./ton Ag over an average width of 8.6 feet calculated to a depth of 157 feet (Preston East Dome Mines Ltd., 1952).

Ownership: J.A. Dawson.

History: About 1886 Trenching and stripping.

1927 6 d.d. holes for 1018 feet by Sudbury Concentrating and Mining Company.

1948-49 MAG survey and 9 d.d. holes for 1859 feet by Area Mines Ltd., Bankfield Consolidated Mines Ltd., Broulan Porcupine Mines Ltd. and Moneta Porcupine Mines Ltd.

1951 MAG survey by B.W. Lang.

1952 18 d.d. holes for 5143 feet by Preston East Dome Mines Ltd.

1964-65 MAG, EM and geol. surveys and 11 d.d. holes for 3595 feet by Mining Corp. of Canada (1964) Ltd.

References: ODM, 1957, M.R.C. 2, p.101.

ODM, 1929, Vol.38, pt.7, p.63-5.

ODM, Sudbury files.

CREIGHTON TOWNSHIP

Errington and Vermilion Mine Deposits (Past Producer)

Main Metals: Zn, Cu, Pb.

Location: Errington Mine; No. 1 shaft is on N 1/2 of lot 9, con. VI, Creighton Tp.; No. 2 shaft is on N 1/2 of lot 8, con. VI, Creighton Tp.; No. 3 shaft is on S 1/2 of lot 4, con. I, Balfour Tp.

Vermilion Mine; N 1/2 of lot 5, con. V, Fairbank Tp.
Reference: ODM maps 2170 and 1956-1.

Geology: The orebodies at the Errington Mine are in a complexly folded and faulted zone on the crest and south limb of a south-dipping anticline. This structure is further complicated by south-dipping strike faults that slice the anticline and orebodies into at least four blocks. The ore is believed to be a replacement of a chert and carbonate horizon that lies between the overlying slate and underlying tuffs. The ore consists of very fine-grained pyrite, sphalerite, chalcopyrite, pyrrhotite and galena in a carbonate matrix.

The geology at the Vermilion Mine is more complex than that at the Errington Mine. The strata dip about 40S. The more steeply dipping thrust faults slice the flatter ore horizon causing repetition of orebodies in an imbricate structure.

Economic Features: Ore reserves: Based on pyrite content and including only ore opened up by underground and closely spaced drill holes (a) Low pyrite ore, 4,418,500 tons averaging 1.33% Cu, 1% Pb, 3.97% Zn, 0.026 oz./ton Au, 1.61 oz./ton Ag; (b) High pyrite ore, 9,038,317 tons averaging 1.14% Cu, 0.99% Pb, 3.82% Zn, 0.023 oz./ton Au, 1.58 oz./ton Ag (Can. Mines Handbook 1968-1969, p.144).

Ownership: Giant Yellowknife Mines Ltd.

History: 1924-30 Errington Mine was operated by the Treadwell Yukon Company Ltd. No. 1 shaft extends to the 500-foot level; No. 2 shaft to the 1500-foot level; No. 3 shaft is 409 feet deep. Production (1928-30) - 142,994 tons of ore were treated and 2,156,626 lbs. Cu, 1,079,167 lbs. Pb, and 9,103,424 lbs. Zn were produced. 1952-54 Property was owned by Ontario Pyrites Ltd. 1954-60 Property held by Consolidated Sudbury Basin Mines Ltd. Total underground work at Errington Mine to end of 1955 was over 41,000 feet on 4 levels. At Vermilion Mine a shaft was sunk to 1250 feet with lateral work at 450-, 600-, 750- and 900-foot levels. A concentrating plant was built and planned to commence production in 1957 at 1000 tons daily, but was never operated. 1960 Consolidated Sudbury Basin Mines Ltd. was incorporated into Giant Yellowknife Mines Ltd.

References: ODM, 1956, Vol.65, pt.3, p.46-54.
CIMM, 1956, Jubilee Volume, Vol.2, p.363-376.

Other Creighton Township Deposits

(See Sudbury Area)

Sturdy Prospect

Main Metals: Cu, Pb, Zn, Ag.

Location: Creighton Tp.; lot 11, 12, con. VI; Fairbank Tp., lot 1, 2, con. VI.
Reference: ODM map P.287.

Geology: Disseminated sphalerite, chalcopyrite, galena and pyrite with a carbonate matrix at a slate-tuff contact zone.

Economic Features: Intersections of commercial-grade Cu-Pb-Zn mineralization were obtained at two places but close drilling failed to establish orebodies; 23 holes showed 47 intersections, ranging from 0.5 to 24.3 feet of core length, that assayed over 1% in any one metal. Eight intersections, ranging from 1.0 to 9.0 feet of core length, contained over 10% combined Cu, Pb and Zn (Eckman, 1953).

History: 1925-28 Total of 33,800 ft. of d.d. by National Lead Company in 1925 and Creighton-Fairbank Mines Ltd. in 1928.
1952-53 35,786 ft. of d.d. by Sudbury Midzone Mines Ltd.
1956-57 12,874 ft. of d.d. by Sturdy Mines Ltd.

References: ODM, 1956, Vol.65, pt.3, p.54-6.
ODM, 1957, M.R.C. 2, p.101-2.

CUNNINGHAM TOWNSHIP

Aldra (Sootheran - Paul) Prospect

Main Metals: Cu, Zn.

Location: Cunningham Tp.; central part; includes claims 34944, 34946, 34947, 57538, and 57539.
Reference: ODM map 2116.

Geology: Pyrite, pyrrhotite, chalcopyrite and sphalerite in N to NE-trending, synclinally-folded, cherty and graphitic sediments interbedded with Archean volcanics. Cu and Zn confined mainly to 2 brecciated chert beds, in a zone about 2100 feet long.

Economic Features: A total of 18 drill intersections from the main zone averaged 1.2% Cu and 1.3% Zn over a true thickness of 30 feet and a strike length of 550 feet.

Ownership: Consolidated Shunsby Mines Ltd.

History: Before 1929 Trenching by Aldra Mining Syndicate.

1954 EM survey and 4 d.d. holes for 1499 feet by the Consolidated Mining and Smelting Co. of Canada Ltd.

1955-57 Trenching, geol. survey and 74 d.d. holes for 20,336 feet by Shunsby Gold Mines Ltd.

1960-61 Geol. survey and 9 d.d. holes for 3605 feet by Shunsby Mines Ltd.

1965-66 13,500 feet of d.d., geophysical and geochemical surveys by Franc R. Joubin Prospecting Syndicate.

References: ODM, 1957, M.R.C. 2, p.100.

ODM, Sudbury files.

ODM, 1942, Vol.51, pt.7, p.22.

Northern Miner, 1966, Nov. 3.

Anglo-Sudbury Prospect

Main Metals: Zn, Pb.

Location: Cunningham Tp.; W central part, near S end of SE part of Peter Lake.

Reference: ODM map 51f.

Geology: Sphalerite, galena and some chalcopyrite in pyrite-bearing iron formation near an Archean mafic volcanic contact to the S. Also 4 narrow veins, up to 2 inches wide, of calcite with up to 50% sphalerite and galena.

Economic Features: Sample of best mineralization from trench over a width of 3 feet assayed 5.79% Zn, 1.00% Pb, and 0.21% Cu (Bannerman, 1929).

History: 1927 and 1952 Surface work and some d.d. by Anglo-Sudbury Mining and Metals Corp. Ltd.

1965 MAG survey by Shunsby Mines Ltd.

References: ODM, 1942, Vol.51, pt.7, p.19-20.

ODM, 1957, M.R. 2, p.84.

ODM, Sudbury files.

GSC, 1929, Summ. Rept., pt.C, p.12.

Ridout Cunningham Prospect

Main Metals: Pb, Zn, Cu, Ag.

Location: Cunningham Tp.; NW 1/4, includes claims 57669-72, 57914-5; approx. 1 mi. SW of Mink Lake.

Reference: ODM map 51f.

Geology: Sphalerite, galena, pyrrhotite and chalcopyrite as disseminations and stringers in E-trending iron formation, 50 to 500 feet in width.

Economic Features: Best drill intersections (in 1952) are 1.63% Pb and 5.02% Zn over 60 feet (core length), and 0.86% Pb and 2.51% Zn over 50.5 feet (core length). Best trench sample assayed 2.02 oz./ton Ag, 3.00% Cu, 5.25% Pb and 15.46% Zn over 30 inches.

Ownership: Maneast Uranium Mines Ltd.

History: 1928-29 Trenching and d.d. by Ridout Cunningham Mines Ltd.
1952 18 d.d. holes for 5916 feet by Page-Harley Mines Ltd.
1953 Some d.d. by Page-Harley Mines Ltd.
1956 Some d.d. by Maneast Uranium Mines Ltd.

References: ODM, 1942, Vol.51, pt.7, p.20-2.
ODM, 1957, M.R.C. 2, p.95.
ODM, Sudbury files.
Page-Harley Mines Ltd., 1953, Prospectus.

DAVIS TOWNSHIP

Norstar Lake Mine Prospect

Main Metals: Cu, Au.

Location: Davis Tp.; SW 1/4, S 1/2 lot 10, con. III.
Reference: ODM map 2037.

Geology: Brecciated argillite cemented by quartz-carbonate veins and disseminated to massive chalcopyrite, pyrite and arsenopyrite, associated with a gabbro dike trending N50E, in the Gowganda Formation.

Economic Features: Reserves are estimated at 275,000 tons grading 0.41 oz./ton Au and 1.5% Cu in a zone 225 feet long and averaging 25 feet wide to a depth of 400 feet (Kirkland Minerals Corp. Ltd., 1959).

Ownership: Berkeley Mines Limited.

History: Before 1916 87-foot shaft.
1917 Shaft deepened by International Copper Limited.
1927-30 Shaft deepened to 135 feet by Mount Aetna Gold Mines Ltd.
1941 31 d.d. holes for 13,000 feet by Wright-Hargreaves Mines Ltd.
1959 277-foot shaft with 2 levels, 8000 feet of d.d., and approx. 2000 tons stockpiled by Kirkland Minerals Corp. Ltd.
1964 Some d.d. by Berkeley Mines Ltd.

References: ODM, 1963, G.R.15, p.14-16.
Mines Branch, Ottawa, 1959, I.R. 59-73.
ODM, Sudbury files.

DELHI TOWNSHIP

Delhi Prospect

Main Metals: Pb, Ag, Au.

Location: Delhi Tp.; N part, claim 4090, near SW shore Wakimika Lake.
Reference: ODM map 1954-1.

Geology: Argentiferous galena, with a little pyrite and chalcopyrite, and erratic native gold in five quartz-carbonate veins trending E to NE within sheared Nipissing diabase and Gowanda greywacke.

Economic Features: Reserves estimated at 54,000 tons, from surface to 200 feet below adit level, with net value of \$20.25 per ton (Pb at \$0.11 per lb., Ag at \$0.90 per oz., Au at \$35.00 per oz.), in four shoots with a total length of 381 feet, average widths from 2.87 to 4.52 feet and containing 0.007 to 0.262 oz./ton Au, 1.65 to 3.65 oz./ton Ag, and 6.35 to 12.17% Pb (Simard, 1951).

A 21,692 lb. sample assayed 7.13% Pb, 5.58 oz./ton Ag, and 0.25 oz./ton Au.

Ownership: Delhi Pacific Mines Limited.

History: Before 1933 2 adits, 50 and 240 feet, and 30-foot shaft.
1946-47 Some d.d. by Delhi (Temagami) Gold Mines Ltd.
1949-51 Geol. survey, 7 d.d. holes for 1500 feet, and 880 feet of drifting by Delhi (Temagami) Gold Mines Ltd.
1956 Surface and underground work and some d.d. by New Delhi Mines Ltd.

References: ODM, 1954, Vol.63, pt.4, p.15-9.
ODM, 1968, M.R.C. 10, p.56.
ODM, Sudbury files.

DENISON TOWNSHIP

Kidd Copper Mine (Past Producer)

Main Metals: Ni, Cu, precious metals.

Location: Denison Tp.; lot 12, con. II and III.
Reference: ODM maps 2170 and 2119.

Geology: There are 4 mineralized areas in the Worthington offset. From southwest to northeast these are the Howland pit, Robinson zone (shaft zone), Rosen zone, and Z zone. The dike contains inclusions of actinolite, surrounded by quartz diorite. Most of the sulphides are in the actinolite areas. The ore is typical Sudbury mineralization of the breccia type. Pipe-like zones range from 10 to 50 feet in width and 150 to 200 feet in length.

Economic Features: Ore reserves estimated at 497,744 tons to the 800 foot level averaging 0.71% Cu and 0.62% Ni, with 10% dilution in Robinson zone. 274,560 tons of similar grade in Rosen zone (No. 2 shaft). (1968-1969 Can. Mines Handbook).

Ownership: Kidd Copper Mines Ltd. (lease).

History: 1926, 1937-39 Drilling and underground exploration by Denison Nickel Mines Ltd.
1946 Surveys and drilling by North Denison Mines Ltd. Taken over by Pacolund Mines Ltd., then in 1955 by Aer Nickel Corporation Ltd.
1959 Company renamed Associated Arcadia Nickel Corp. Ltd. Taken over on 10 year renewable lease by Kidd Copper Mines Ltd. from Aer Nickel Corporation Ltd. There are two shafts, 1075 and 985 feet in depth connected on 3 levels with lateral work on 6 levels. 1000 ton mill started in November, 1966.

<u>Production</u>		<u>1967*</u>	<u>Total to end of 1967</u>
Ore Shipped	tons	218,547	230,279
Nickel		1,241,092	1,270,885
Copper		1,889,675	1,932,686
Cobalt		35,923	36,726
Total Value	\$	\$2,148,103	\$2,194,674

*Preliminary figures, subject to revision.

Reference: ODM, 1968, G.R.60, p.49-52.

Other Denison Township Deposits

(See Sudbury Area)

DIEPPE TOWNSHIP

Stony Bay Prospect

(See Truman Township)

DRURY TOWNSHIP

(See Sudbury Area)

FAIRBANK TOWNSHIP

Sturdy Prospect

(See Creighton Township)

Vermilion Mine Deposit

(See Creighton Township)

FALCONBRIDGE TOWNSHIP

(See Sudbury Area)

FOSTER TOWNSHIP

Foster Township Tungsten Prospect

Main Metals: W, Cu.

Location: Foster Tp.; centre part, lot 7-9, con. III; near NW shore of St. Leonard Lake.

Reference: ODM map P.390.

Geology: Scheelite, powellite, pyrrhotite, pyrite, chalcopyrite, sphalerite, molybdenite and arsenopyrite as disseminations in quartz veins and skarn within carbonate and clastic sediments. Six parallel, NE-trending zones defined ranging from a few inches to 30 feet in width and from 1200 to 2500 feet in length.

Economic Features: Mineralization is erratic, with assays over 1% W₃ obtained over mineable widths but only over short sections. Selected samples assayed 0.13 to 0.39% W, 1.81% Zn, 0.06% Cu.

History: 1966-67 Geol. and MAG surveys, surface work and 6 d.d. holes for 3079 feet by Texas Gulf Sulphur Company.

References: ODM, 1968, Open File Rept. 5017, p.22-4.
ODM, Sudbury files.

FOY TOWNSHIP

Nickel Offsets Mine (Past Producer)

Main Metals: Ni, Cu, Co, platinum metals.

Location: Foy Tp.; N 1/2 of lots 5 and 6, con. III.
Reference: ODM maps 2170 and 2133.

Geology: The mine is located on the Foy offset from the north margin of the Sudbury nickel irruptive. Sulphides occur in a band of quartz diorite breccia that averages 200 feet wide; ore shoots show typical Sudbury mineralization of massive and disseminated sulphides.

Economic Features: Mining and milling operations were discontinued in January, 1957, when ore reserves were exhausted.

Ownership: Nickel Offsets Ltd.

History: At No. 1 shaft there are ten levels, the deepest of which is at 1550 feet; at No. 2 shaft there are seven levels, the deepest is at 1056 feet. Much surface and underground drilling.

A concentrator of 300 tons daily capacity commenced production in 1953. Production totalled 216,397 tons averaging 1.03% Ni and 0.74% Cu (Ann. Rept. of Company, 1968).

Value of production (1943-1944, 1953-1957) was \$3,384,243 from 225,983 tons of ore hoisted. 4,576,138 lbs. Ni and 3,327,299 lbs. Cu were produced.

References: ODM, 1969, G.R.65, p.34-36.
Annual reports of the company.

FRECHETTE TOWNSHIP

Thorlake Prospect

Main Metals: Cu.

Location: Frechette Tp.; W centre part, 1 1/4 mi. SW of Thorlake Station.

Reference: ODM map 2148.

Geology: Chalcopyrite, pyrite and minor pyrrhotite in Huronian sediments along a silicified zone, 1 to 4 feet wide and extending sporadically over a length of 1200 feet with a strike of N20E. Some disseminated sulphides in adjacent sediments and a nearby felsite and syenite intrusion.

Economic Features: Channel samples across zone assayed up to 10.3% Cu over 3 feet; one d.d. hole intersected dominantly low grade Cu values over 230 feet but includes values up to 1.81% Cu over 4 feet in felsite and syenite.

History: 1929 4 d.d. holes for 1400 feet by Clericy Consolidated Mines Ltd.

1954 3 d.d. holes for 86 feet, 7 d.d. holes for 3098 feet and geol. survey by Armour Uranium and Copper Mines Ltd.

1968 13 d.d. holes for 3899 feet by Teco Mines and Oils Ltd.

References: ODM, Sudbury files.

GARSON TOWNSHIP

(See Sudbury Area)

GENOA TOWNSHIP

Pady Creek Prospect

Main Metals: Cu, Pb, Zn, Ag.

Location: Genoa Tp.; NW 1/4, 1/2 mi. N of NW end Pady Lake.

Reference: ODM, Sudbury files.

Geology: Magnetite-pyrite-pyrrhotite iron formation in Archean metavolcanics locally containing minor amounts of chalcopyrite and sphalerite.

Economic Features: One drill hole intersected 1.2, 3.1 and 1.1 foot mineralized sections which assayed from Nil to 0.94% Cu, 0.14 to 0.24% Pb, Nil to 0.14% Zn and trace to 1.22 oz./ton Ag.

History: 1962-63 Geochem., geol., EM and MAG surveys and 6 d.d. holes for 1236 feet by R.J. Jowsey Mining Company Ltd.

References: ODM, Sudbury files.

Stackpool (Jefferson) Prospect

Main Metals: Pb, Zn.

Location: Genoa Tp.; NW 1/4, on claims W.D.717 and S62096.
Reference: ODM map 2067.

Geology: Lenses of galena, sphalerite and some chalcopyrite in and adjacent to magnetite-pyrite-pyrrhotite iron formation. The main lens has a length of 350 feet, is 6 to 12 inches wide at surface widening to 34 inches at a depth of 8 feet. Drilling the iron formation here and to the SW outlined 51,580,000 tons averaging 34% Fe, 13.9% S and 0.05% Mn.

Economic Features: Reserves estimated at 49,500 tons grading 2.04% Pb and 4.02% Zn in the main lens to a depth of 300 feet (General Engineering Co. Ltd., 1952).

Ownership: Excelsior Mining Company Limited.

History: 1910 pits and 4000 feet of d.d.
1928 10 d.d. holes by Rush Lake Mining Company.
1929 4 d.d. holes by Canam Metals Limited.
1950-52 23 d.d. holes for 6300 feet and magnetometer survey by Central Sudbury Lead-Zinc Mines Ltd.
1957-61 EM survey and 27,747 feet of d.d. (for iron) by Stackpool Mining Company Ltd.

References: ODM, 1965, G.R.38, p.51-55.
ODM, 1957, M.R.C. 2, p.85.
Central Sudbury Lead-Zinc Mines Ltd. 1952, Prospectus.
Stackpool Mining Co. Ltd., 1958, Prospectus.
ODM, Sudbury files.

GRAHAM TOWNSHIP

McVittie-Graham Prospect

Main Metals: Ni, Cu.

Location: Graham Tp.; lot 12, con. V.

Geology: The mineralized zone lies in quartz diorite of the nickel irruptive about 1000 feet from the contact with the Creighton granite. Mineralization consists of disseminations, patches, and stringers of pyrrhotite, pentlandite, and chalcopyrite in a zone trending SSW.

Economic Features: Conwest Exploration Co. Ltd. drilled 6 holes, totalling 5253 feet, in 1960-1961. Best value was approximately 1% Ni and 0.65% Cu over a 50-foot core length. Several intersections averaged 1% combined Ni and Cu over core lengths of 100 to 200 feet.

Ownership: West Graham Mines Ltd.

History: Originally owned by McVittie-Graham Mining Company Limited. Geophysical survey and drilling by Conwest Exploration Company Ltd. in 1960-1961.

References: ODM, 1968, G.R.60, p.58.

Other Graham Township Deposits

(See Sudbury Area)

GROVES TOWNSHIP

Eveco Prospect

Main Metals: Ni, Cu.

Location: Groves Tp.; between Shuller and Geoffrion lakes.
Reference: ODM map 2046.

Geology: Pyrrhotite, pentlandite, millerite, and chalcopyrite are concentrated along part of the sheared footwall of a quartz diorite to gabbroic sill 6500 feet long that is intruded into Archean volcanics and altered Ridout sediments. Weak disseminations of sulphides occur also in adjacent rocks.

Economic Features: 9054 feet of drilling to 1956 indicated about 500,000 tons grading 1.5 to 2% combined Ni and Cu.

Ownership: Nickel Rim Mines Ltd.

History: To 1956 MAG and geol. surveys, and 9054 feet of d.d. Of this, Ontario Nickel Mines Ltd. drilled 4 holes for about 1000 feet in 1953, and Consolidated Regcourt Mines Ltd. drilled 14 holes for more than 3000 feet.
1963 12 d.d. holes for about 4000 feet by Nickel Rim Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.34.
ODM, Vol.63, pt.3, map 43c.
Toronto Stock Exchange, 1963, Filing statement 962, Aug. 29.

HALLAM TOWNSHIP

Hallam Prospect

Main Metals: Cu.

Location: Hallam Tp.; S centre part, N 1/4 lot 7, con. II.
Reference: ODM, Sudbury files.

Geology: Chalcopyrite in E-trending quartz breccia in greywacke and quartzite forming S flank of fault scarp.

Economic Features: A zone at least 100 feet long and 3 feet wide, to a known depth of 120 feet, contains an estimated average grade of over 3% Cu (Kirwan, 1968).

History: About 1965 EM survey and trenching by Pleasant Valley Mines Ltd.
1966 SP and magnetic surveys by Keevil Mining Group.
1967-68 7 d.d. holes for 1963 feet by Consolidated Bellekeno Mines Ltd.

References: ODM, Sudbury files.
Northern Miner, 1968, Feb. 8, Mar. 14.

HART TOWNSHIP

Hart Township Prospect

Main Metals: Co, Pb, Zn, Ni (Au, Bi, Cu, Fe).

Location: Hart Tp.; lot 7, 8, con. V.
Reference: ODM map P.287.

Geology: Mineralized zone in Espanola limestone near Nipissing diabase. At contact magnetite-sulphide skarn occurs sporadically over 1000 feet; veins of ferriferous and nickeliferous cobaltite, and lenses, layers and disseminations of galena, sphalerite, pyrite and chalcopyrite occur farther away from the contact.

Economic Features: Sampled drill intersections (1955) include 3 to 4.5 foot sections containing 1.46 to 8.06% Zn, 0.11 to 1.30% Pb, 0.03 to 0.12% Cu and 0.02% Co.

A sample from a 5 foot vein mainly of smaltite assayed 7.32% Ni, 16.9% Co, 3.3% Bi, 0.03% Cu, and 0.06 oz./ton Au.

History: 1929-30 Trenching and about 2000 feet of d.d. by Nickel Hill Syndicate Ltd.
1955 13 d.d. holes for 3052 feet by Mogul Mining Corp. Ltd.
1965 EM survey and 4 d.d. holes by Salem Explorations Ltd.

References: ODM, 1929, Vol.38, pt.7, p.65-6.
ODM, 1968, M.R.C. 10, p.55.
Northern Miner, 1965, Sept. 2.
ODM, Sudbury files.

HESS TOWNSHIP

Lake Geneva Mine (Past Producer)

Main Metals: Pb, Zn.

Location: Hess Tp.; lot 7, con. VI.
Reference: ODM maps 2170 and P.287.

Geology: The deposit is sheet-like in form and conforms with the bedding of sedimentary host rocks. The mineralization is partly replacement and partly fracture filling. The ore is chiefly sphalerite with lesser galena, pyrite, etc. The ore is cut by diabase dikes. The average grade of 80,588 tons ore milled from 1941-44 was 9.21% Zn and 3.34% Pb with 22 oz./ton Ag in the lead concentrate. The ore zone is 700 feet long, averages 5 feet in width and has been tested to a depth of 1000 feet.

Economic Features: Ore reserves - 114,000 tons averaging 10% Zn and 3% Pb across an average width of 5.3 feet, plus 24,000 tons containing 8% combined metals over an average width of 4 feet, plus 32,000 tons averaging 6% combined metals over a width of 3 feet (S.L. MacDonald, May, 1951).

Ownership: Irvington Mining Co. Ltd. (in bankruptcy).

History: 1927-44 The mine was operated by Lake Geneva Mining Company. A shaft and winze were sunk to 640 feet with lateral work on 5 levels. Mine closed May, 1944. Production from 1941 to 1944 was 10,389,646

lbs. Zn and 3,598,411 lbs. Pb, valued at \$528,003; the value of Ag produced was \$28,416.

1949-52 The mine was developed by Bidgood Kirkland Gold Mines Ltd. Surface drilling was done in 1950-51. A 100 ton mill was installed in 1952 but did not go into production.

1956 Genex Mines Ltd. succeeded Geneva Lake Mines Ltd.

1966 Irvington Mining Co. succeeded Genex Mines Ltd.

References: ODM, 1929, Vol. 38, pt.7, p.61-63.

CIMM, 1948, Jubilee Volume, Vol.1, p.590-6.

HUFFMAN TOWNSHIP

Jess-Mac Prospect

Main Metals: Pb, Zn, Au.

Location: Huffman Tp.; centre part, NE part of East Arm of Opeepeesway Lake.

Reference: ODM, Sudbury files.

Geology: Narrow E-trending zones containing galena, sphalerite and traces of chalcopyrite within quartz veins or sheared porphyry.

Economic Features: Best drill intersections are 4.97% Pb, 3.78% Zn, 4.39 oz./ton Ag and 0.21 oz./ton Au over 4 feet; 1.03% Pb, 2.61% Zn, 0.51 oz./ton Ag and 0.02 oz./ton Au over 5 feet.

Ownership: Jess-Mac Gold Mines Ltd.

History: To 1949 MAG survey and 21 d.d. holes by Jess-Mac Gold Mines Ltd.

1950-51 Extensive d.d. by Jess-Mac Gold Mines Ltd.

1965-66 EM and MAG surveys by Rio Tinto Canadian Exploration Ltd.

References: ODM, 1957, M.R.C. 2, p.94.

ODM, Sudbury files.

Sunova Prospect

Main Metals: Cu.

Location: Huffman Tp.; SW 1/4, includes claim 32384, approx. 1.5 mi. E of Boundary Lake.

Reference: ODM, Sudbury files.

Geology: Pyrrhotite, pyrite and chalcopyrite in iron formation and graphitic schists interbedded with metavolcanics.

Economic Features: Assayed drill intersections, from 1.1 to 5 foot lengths, ranged from tr. to 0.04% Ni, 0.05 to 2.02% Cu, nil to 0.02 oz./ton Au.

History: 1966 3 d.d. holes for 1343 feet by Falconbridge Nickel Mines Ltd.

References: ODM, Sudbury files.

HYMAN TOWNSHIP

Keba (Gauthier) Prospect

Main Metals: Ni, Cu.

Location: Hyman Tp.; S 1/4 lot 8, and SE 1/4 lot 9, con. I, and Nairn Tp.,
N 1/4 lot 9, 10, con. VI.

Reference: ODM maps 2055, 2062.

Geology: Disseminated pyrrhotite and chalcopyrite in 3 discontinuous zones,
500 feet apart, in metagabbro.

Economic Features: Grab samples assayed 0.68% Ni; and 0.80% Ni, 1.5% Cu.

History: 1928-29 Trenching and 3 d.d. holes by Spanish Basin Mines
Syndicate and Nairn Copper Corp. Ltd.

1953-54 Geol., MAG and EM surveys by Falconbridge Nickel Mines Ltd.

1955 2 d.d. holes for 469 feet by Arcadia Nickel Corp. Ltd.

References: ODM, 1965, G.R.34, p.31.

ODM, 1965, G.R.35, p.36.

ODM, Sudbury files.

Kordal Prospect

Main Metals: Ni, Cu.

Location: Hyman Tp.; lot 3, 6, con. I and lot 5, con. II.

Reference: ODM map 2055.

Geology: Pockets of disseminated or massive pyrrhotite, pyrite and
chalcopyrite within alteration zones in metagabbro in 4 scattered
areas.

Economic Features: The main zone outlined is 10 feet wide, at least 220
feet long and 60 feet thick plunging 50NE. Its estimated approx.
grade is 0.4% Cu, 0.4% Ni.

A 17-foot chip sample assayed 1.03% Cu, 0.45% Ni, 0.12% Co,
trace of Pd.

History: Old pits.

1959 Geol. and MAG surveys and 6 d.d. holes for 522 feet by Kordal Explorations Ltd.

1960 EM survey and 12 d.d. holes for 3781 feet by Kordal Explorations Ltd.

References: ODM, 1965, G.R.34, p.31.

Kordal Explorations Ltd., 1960, Prospectus.

ODM, Sudbury files.

JANES TOWNSHIP

Janes Township Prospect

Main Metals: Cu, Ni.

Location: Janes Tp.; lot 4, 5, con. V.

Reference: ODM map P.367.

Geology: Disseminated chalcopyrite and pyrrhotite in quartz diorite and gabbro along a NE zone, 1400 feet long, within 100 feet of a quartzite contact to the N.

Economic Features: Best assays in drilling were 0.74% Ni, 0.11% Cu, 0.18 oz./ton Au over a 2.7-foot interval; best average assay was 0.77% Cu, 0.28% Ni, 0.035 oz./ton Au over 15 feet (Tagseth, 1965).

History: 1965 5 d.d. holes for 958 feet and MAG survey by PCE Explorations Ltd.

References: ODM, Sudbury files.

KELLY TOWNSHIP

Kukagami Lake Prospect

Main Metals: Cu, Pb, Ag.

Location: Kelly Tp.; SW corner, former lot 13, 14, con. I.

Reference: Kelly-K Mines Ltd., 1967, Prospectus.

Geology: Four quartz-carbonate veins in gabbro near Gowganda conglomerate contact. Main vein is 18 inches wide and was traced for 330 feet. It follows a 4-foot wide shear zone.

Economic Features: Composite assays of surface and core samples gave:
0.09 oz./ton Au, 1.0 oz./ton Ag, 0.73% Cu and 5.18% Pb over 18 inches for main vein; 0.01 oz./ton Au, 3.84 oz./ton Ag, 0.49% Cu and 14.37% Pb over 9 inches from No. 3 vein; and a 6-inch core section from No. 2 vein assayed 0.24 oz./ton Ag, 1.40% Cu and 0.58% Pb.

History: Old pits and trenches.

1964 EM survey by Mid-Nation Developments Ltd.

1966-67 MAG and self potential surveys and 9 d.d. holes for 1752 feet by Kelly-K Mines Ltd.

References: Kelly-K Mines Ltd., 1967, Prospectus.
ODM, Sudbury files.

KENOGAMING TOWNSHIP

Akweska Lake Prospect

Main Metals: Ni.

Location: Kenogaming Tp.; near junction of Akweska Lake and Kamiskotia River.

Reference: ODM map P.465.

Geology: Peridotite sill intrudes intercalated felsic flows, pyroclastics and iron formation. Disseminated pentlandite occurs in the serpentinized peridotite for approximately 500 feet adjacent to the felsic volcanic rocks.

Economic Features: A channel sample across a 40-foot wide trench averaged 0.73% nickel. Disseminated pyrite-sphalerite are present in the sheared volcanic rocks, 1000 feet E of the Ni occurrence.

History: 1952-54 Geol. and geophysical surveys, and 11,500 feet of d.d.

by Falconbridge Nickel Mines Ltd. and Dunvegan Mines Ltd.

1960 Packsack drilling by Jonsmith Mines Ltd.

1966 Geophysical and geol. surveys, and 2743 feet of d.d. in 9 holes by Falconbridge Nickel Mines Ltd.

References: Northern Miner, 1951, Oct. 4.

Northern Miner, 1952, Jan. 17, Nov. 15, Dec. 11.

Northern Miner, 1956, Aug. 2, Sept. 26, Dec. 13.

ODM, 1957, M.R.C. 2, p.98.

ODM, Timmins, file T-622.

Norduna Prospect

Main Metals: Ni.

Location: Kenogaming Tp.; claim S.58335.
Reference: ODM map P.465.

Geology: Nickel mineralization is associated with E-trending lenses of serpentinite which intrude felsic volcanics.

Economic Features: The best mineralization from a vertical drill hole, between 35 and 40 feet, assayed 1.25% Ni, and 0.24% Cu in a 5-foot section. The same hole from a depth of 15 to 40 feet averaged 0.88% Ni, and 0.14% Cu.

Ownership: Falconbridge Nickel Mines Limited.

History: 1952-54 Geol., geophysical and geochem. surveys, aeromagnetic surveys and 11,500 feet of d.d. by Falconbridge Nickel Mines Ltd. (includes Akweska Lake prospect).

References: ODM map P.465.
ODM, Timmins, file T-527.
Northern Miner, 1951, Oct. 4, Nov. 15.
Northern Miner, 1956, Aug. 2, July 19.

LEVACK TOWNSHIP

(See Sudbury Area)

LORNE TOWNSHIP

Fensom Prospect

Main Metals: Zn, Cu.

Location: Lorne Tp.; centre part lot 10, con. II, approx. 1/2 mi. NW of Ella Lake.
Reference: ODM map 2062.

Geology: Sphalerite, pyrrhotite, chalcopyrite and pyrite as several massive and disseminated zones striking N30E dipping 75SE, over a total width of 200 feet and length of 550 feet, within greywacke forming the footwall of the Fensom "B" fault.

Economic Features: Reserves estimated at 156,000 tons grading 5.17% Zn, 0.30% Cu over an average width of 8.86 feet; and 49,000 tons grading 4.8% Zn in narrower bodies (1952, Teck-Hughes Gold Mines Ltd.).

History: 1928 Trenching and 4 d.d. holes by Sudbury Mines Ltd.
1952-54 Geochemical survey and 29 d.d. holes for 18,977 feet by Teck Exploration Co. Ltd.

References: ODM, 1965, G.R.35, p.38-40.
Teck-Hughes Gold Mines Ltd., 1952, Annual Report.

MCCARTHY TOWNSHIP

Sirola Prospect

Main Metals: Cu, Ni.

Location: McCarthy Tp.; near NE corner of Tp.
Reference: ODM map 2148.

Description: Pyrrhotite and chalcopyrite as disseminations and blebs in numerous irregular areas, over a strike length of 240 feet, within Nipissing diabase near a contact with Huronian sediments to the west.

Economic Features: Best section intersected in drilling was 17.2 feet assaying 0.28 to 0.85% Cu and 0.04 to 0.20% Ni.

History: 1956 Geol., SP and MAG surveys and 7 d.d. holes for 538 feet by Prospectors Airways Co. Ltd.
1957 10 d.d. holes for 284 feet by J. Sirola.

References: ODM, Sudbury files.

McKIM TOWNSHIP

(See Sudbury Area)

MACLENNAN TOWNSHIP

Nickel Rim Mine (Past Producer)

Main Metals: Ni, Cu, Precious metals.

Location: Maclellan Tp.; lot 11, con. IV.

Reference: ODM, maps 2009 and 2170.

Geology: The mine is located on the eastern rim of the Sudbury nickel irruptive. Sulphides occur in a zone of quartz diorite and quartz-diorite breccia that lies between the norite and footwall granite. The orebodies contain typical Sudbury mineralization, which may be massive, disseminated, or breccia-type ore. Narrow diabase dikes cut the ore.

Economic Features: As of January 1, 1959, ore reserves were 747,624 tons averaging 0.35% Cu and 0.90% Ni before dilution (Annual report of Nickel Rim Mines Ltd. for 1959).

Ownership: Falconbridge Nickel Mines Ltd.

History: Mine was originally developed by Ontario Nickel Mines Ltd.; later the name was changed to East Rim Nickel Mines Ltd. and then to Nickel Rim Mines Ltd.

No. 1 Shaft is 265 feet deep; No. 2 Shaft was sunk to 1415 feet with lateral work on 7 levels. Operations were discontinued in May, 1958.

From 1952 to 1958, 1,275,633 tons of ore were mined. 6,218,000 lbs. Cu and 14,068,600 lbs. Ni were produced, valued at \$10,056,516.

References: ODM, 1960, G.R.2, p.25.

Other Maclellan Township Deposits

(See Sudbury Area)

McNISH TOWNSHIP

Ozhway Lake Prospect

Main Metals: Cu, Pb, Zn, Ag, (Ni, Co, Au).

Location: McNish Tp.; NW 1/4, lot 9-12, con. V, VI.

Reference: ODM map P.367.

Description: 15 separate showings of galena, sphalerite, chalcopyrite, pyrrhotite or pyrite within quartz veins or shear zones in Huronian sediments.

Economic Features: The best showing is an exploration shaft in mineralized conglomerate. An average of 6 selected grab samples gave 0.75% Cu, 6.79% Pb, 13.53% Zn, 1.37 oz./ton Ag.

Another zone exposed over a 20-foot width contained Cu mineralization, 4 samples from which averaged 1.81% Cu.

History: 1938-39 16-foot shaft by G. Waltenbury.
1956-57 Geol., gravity and EM surveys and 2 d.d. holes for 81 feet by Palston Mining and Development Co. Ltd.

References: ODM, 1957, M.R.C. 2, p.99.
Palston Mining and Development Co. Ltd., 1956, Prospectus.
ODM, Sudbury files.

MARSHAY TOWNSHIP

Zinc Lake Prospect

Main Metals: Pb, Zn, Ag, Cu.

Location: Marshay Tp.; SW corner, and Shelley Tp., SE corner, claims S6812-3, S6816-7, S82192.

Reference: ODM map P.300.

Geology: Sphalerite, galena, pyrite and pyrrhotite occur as discontinuous lenses in a narrow band of greywacke striking N60E within chlorite schist. Main zone is 2 to 18 feet wide and at least 1 1/4 mi. in length. Two parallel zones intersected in drilling.

Economic Features: Drilling indicated a shoot 550 feet long and 6.2 feet wide averaging 5.02% Zn, 1.91% Pb and 0.31 oz./ton Ag. One intersection in a parallel zone to N, gave 10 feet assaying 5.92% Zn, 1.51% Cu, 1.76% Pb, and 0.67 oz./ton Ag (Christopher, 1952).

Ownership: Zenmac Metal Mines Ltd.

History: Early shaft to 50-foot depth.

1928-29 Some d.d.

1952-53 Resistivity survey and 12 d.d. holes for 3000 feet by Zinc Lake Mines Ltd.

1955 Geochemical survey and 10 d.d. holes for 3194 feet by West Malartic Mines Ltd. (in Shelley Tp.).

1955 EM survey by Sagamore Explorations Ltd.

1955 15 d.d. holes for 3754 feet by Rockwin Mines Ltd.

1958 6 d.d. holes for 1170 feet by Zenmac Metal Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.99.

ODM, Sudbury files.

Zinc Lake Mines Ltd., 1953, Prospectus.

MONGOWIN TOWNSHIP

Owen Prospect

Main Metals: Ni, Cu.

Location: Mongowin Tp.; NW 1/4, N 1/2 lot 11, con. VI, claim S16448.
Reference: ODM map P.391.

Geology: Pyrrhotite, chalcopyrite and pyrite as sparse disseminations and massive patches in peridotite portions near the north and south contacts of a small composite intrusion.

Economic Features: Mineralization intersected in drilling ranged from 0.21% Ni and 0.44% Cu in disseminated material to 3.82% Ni and 2.38% Cu in massive material.

History: 1951 4 d.d. holes for 1028 feet by Falconbridge Nickel Mines Ltd.
1952 2 d.d. holes for 1009 feet by Ontario Nickel Mines Ltd.

References: ODM, 1968, Open File Rept. 5017.
ODM, 1957, M.R.C. 2, p.98-9.
ODM, 1968, M.P.14, p.24.

Wallace Mine Prospect

Main Metals: Cu, Ni.

Location: Mongowin Tp.; claim S116062, on N shore of Bay of Islands.
Reference: ODM map P.391.

Geology: Disseminated to massive pyrrhotite, chalcopyrite and pyrite occur at and near the contacts of two small gabbroic dikes in sheared and silicified argillite. The mineralized zone is probably less than 200 feet in length; sulphides generally form less than 10 percent of the rock.

Economic Features: Four selected grab samples assayed 0.52 to 0.94% Cu, 0.18 to 2.22% Ni.

History: 1847 2 shafts up to 90 feet deep by Upper Canada Mining Co.
1961 9 d.d. holes for 837 feet by Ivan Tulgiske.
1962 4 d.d. holes for 980 feet by Falconbridge Nickel Mines Ltd.
and 6 d.d. holes for 1380 feet by Huron Nickel Basin Mining Ltd.

References: ODM, 1968, Open File Rept. 5017, p.8-9.
Hesperola Mines Ltd., 1956, Prospectus.
ODM, Sudbury files.

NAIRN TOWNSHIP

Keba (Gauthier) Prospect

(See Hyman Township)

Peterson Prospect

Main Metals: Cu, Ni.

Location: Nairn Tp.; N 1/2 lot 9, con. I.

Reference: ODM map 2062.

Geology: Disseminated pyrite, chalcopyrite and pyrrhotite in metagabbro intruded by olivine gabbro.

Economic Features: Assayed core intersections range from 0.06 to 1.33% Cu; one sample assayed 0.05% Ni.

History: Pits and trenches.

1955 EM and MAG surveys and 13 d.d. holes for 4146 feet by Mogul Mining Corp. Ltd.

References: ODM, 1965, G.R.35, p.36-37.

ODM, Sudbury files.

Tenho Lake Prospect

Main Metals: Ni, Cu.

Location: Nairn Tp.; S 1/2 lot 8, con. II.

Reference: ODM map 2062.

Geology: Disseminated pyrite, chalcopyrite and pyrrhotite in metagabbro.

Economic Features: Chip samples taken from trenches over widths of 8 to 12 feet, ranged between 0.37 and 1.28% Ni, and trace to 0.92% Cu.

History: 1957-58 EM, MAG and geol. surveys by Pays-Bas Prospecting Syndicate.

References: ODM, 1965, G.R.35, p.36.

ODM, Sudbury files.

NORMAN TOWNSHIP

(See Sudbury Area)

PARKIN TOWNSHIP

Milnet Mine (Past Producer)

Main Metals: Ni, Cu, platinum metals.

Location: Parkin Tp.; N 1/2 of lot 5, con. II.

Reference: ODM maps 2170 and P.400.

Geology: Massive and disseminated sulphides occur in a quartz-diorite dike that may be an offset from the Sudbury nickel irruptive (Parkin offset). Two orebodies were located.

Economic Features: All ore was mined out.

Ownership: Jonsmith Mines Ltd.

History: 1947, 1950-51 Surface drilling.

1952-54 Milnet Mines Ltd., leased the property, and sank a shaft 477 feet with levels at 190, 300 and 465 feet. The company mined out the two orebodies and shipped the ore to Falconbridge smelter.

1955-56 Jonsmith Mines Ltd. extended the workings on the 465-foot level and drilled the diorite dike to a depth of about 1500 feet.

1952-54 Milnet Mines Ltd. produced 4,724,427 lbs. Ni, 4,861,458 lbs. Cu, (1535 oz. Au, and 7,784 oz. platinum metals) valued at \$4,266,621.

References: ODM, Open File Rept. No. 5015.

PORTER TOWNSHIP

Springer Prospect

Main Metals: Cu.

Location: Porter Tp.; N 1/2, lot 10, con. IV and S 1/2 lot 10, con. V, approx. 1/2 mi. N of Sutherland Lake.

Reference: ODM map 2011.

Geology: N35W-trending silicified fault zone 10 to 40 feet wide, in greywacke and quartzite mineralized discontinuously with disseminated and massive chalcopyrite with minor native copper, galena, sphalerite and ilmenite over a strike length of 1800 feet.

Economic Features: Trench samples assayed 0.62% Cu over 26 feet, 1.22% Cu over 22 feet, 0.91% Cu over 30 feet, 0.82% Cu over 20 feet and 0.62% Cu over 26 feet (Northern Miner, 1967).

History: 1957 6 d.d. holes for 1312 feet by Richmond Development Co.
1967 IP survey and 4 d.d. holes for 753 feet by Hanson Mines Ltd. and Crowpat Minerals Ltd.

References: ODM, 1957, M.R.C. 2, p.101.
ODM, 1961, G.R.5, p.32.
ODM, Sudbury files.
Northern Miner, 1967, Feb. 2.

Turpeinen Prospect

Main Metals: Ag, Pb, Cu.

Location: Porter Tp.; N 1/4 lots 7, 8, con. VI.
Reference: ODM, Sudbury files.

Geology: A N30 to 45W-trending shear zone in greywacke, at least 100 feet in length and 32 feet wide, contains pyrrhotite, pyrite, chalcopyrite, galena and sphalerite in quartz veins and stringers.

Economic Features: Chip samples across zone assayed 6.9 oz./ton Ag over 32 feet; 8.5 oz./ton Ag, 4.9% Pb and 0.38% Cu over 25 feet. Drilling indicated mineralization over approx. 8 feet. Small bulk samples assayed 0.39% Cu, 1.64% Pb and 2.43 oz./ton Ag, (Ferco Mines Ltd., 1963).

History: 1963 4 d.d. holes by Ferco Mines Ltd.
1964 6 d.d. holes for 1030 feet by Ferco Mines Ltd.

References: ODM, Sudbury files.
Ferco Mines Limited, 1963, Prospectus.

RATHBUN TOWNSHIP

Burton Prospect

Main Metals: Cu, Ni, Pt, Pd, Ag, Au.

Location: Rathbun Tp.; lot 9, con. IV, at S end Rathbun Lake.
Reference: ODM map P.367.

Geology: Mainly disseminated pyrite, pyrrhotite and chalcopyrite mineralization in small localized areas, elongated in a NW to W direction, at a NE-trending diabase-sediment contact. Massive sulphides occur in the shaft across 1-2 feet.

Economic Features: Two high grade samples from rock dump at shaft assayed 14.30 and 15.09% Cu, 0.28 and 0.17 oz. Ag, 0.16 and 0.09 oz. Au, 2.86 and 1.56% Ni, 0.61 and 0.72% Pt, 0.83 and 0.98% Pd.

History: Early 1900's 45-foot prospect shaft and 35 feet of drifting.
1954-55 MAG and EM surveys and 11 d.d. holes for 2000 feet by Dolmac Mines Ltd.
1957-58 Geol. survey and 12 d.d. holes for 618 feet by Dolmac Mines Ltd.
1962 6 d.d. holes for 1100 feet by Waco Petroleum Ltd.
1966 4 d.d. holes for 1911 feet by Norlex Mines Ltd.
1968 2 d.d. holes for 852 feet by Burco Explorations Ltd.

References: ODM, 1957, M.R.C. 2, p.87.
Dolmac Mines Ltd., 1958, 1959, Prospectus.
ODM, Sudbury files.

RENNIE TOWNSHIP

Conboy Lake Prospect

Main Metals: Zn, Ag, Pb, Cu, Au.

Location: Rennie Tp.; 1/4 mile south of west end of Conboy Lake.
Reference: ODM map P.404.

Geology: Stringers of sphalerite, galena, chalcopyrite, and pyrite occur in sericitic quartz-eye tuff. Mineralized zone is 400 feet long, and averages 2 feet in thickness.

History: 1964 1174 feet of d.d. in 11 holes by W.C. Martin.
1965-67 2524 feet of d.d. in 22 holes, trenching, and IP and resistivity surveys by Westfield Minerals Ltd.

References: ODM, Sault Ste. Marie files SSM-842, -1015.
ODM map P.404.

Spring Lake Prospect

Main Metals: Cu.

Location: Rennie Tp.; N shore of Spring Lake.
Reference: ODM map P.404.

Geology: Sparse chalcopyrite associated with pyrite and pyrrhotite in dacite and dacite breccia.

History: 1947 MAG survey by Wesson Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-492.
ODM map P.404.

SALTER TOWNSHIP

Hermina Mine (Past Producer)

Main Metals: Cu.

Location: Salter Tp.; NW 1/4, sec. 7, 17, 18, includes claims 133022 and 137062.
Reference: ODM map P.378.

Geology: Main zone contains disseminated and massive chalcopryrite in a NW-trending quartz vein, 3200 feet long and up to 30 feet wide, in granite and diabase. Shaft on SE 1/4 sec. 17, sunk on a few stringers of slightly mineralized quartz in diabase.

Economic Features: Drill and trench samples of main vein indicate 887,000 tons grading 0.310% Cu over a length of 1600 feet and a width of 25 feet, to the 220-foot level (Babcock, 1967).

Mining from 1903 to 1910 produced 13,134 tons of ore yielding 1,015,950 lbs. of copper for an average grade of 3.6%.

History: 1903-10 Three shafts; No. 3 is 435 feet deep with 700 feet of lateral work on 4 levels; 13,134 tons shipped by Hermina Mining Co. Ltd.
1951 2 d.d. holes for 594 feet by Teck Explorations Ltd.
1955 8 d.d. holes by East Sullivan Mines Ltd.
1957-58 MAG and EM surveys and 10 d.d. holes by Centurion Mines Ltd.
1966-68 MAG and EM surveys by G.H. Babcock.

References: ODM, 1957, M.R.C. 2, p.92.
ODM, Sudbury files.
Centurion Mines Ltd., 1958, Prospectus.

Massey Mine (Past Producer)

Main Metals: Cu.

Location: Salter Tp.; centre part, SE 1/4, sec. 16 and SW 1/4 sec. 15.
Reference: ODM map P.378.

Geology: Chalcopryrite in discontinuous quartz veins and silicified zones trending N75-90E, over a length of 1.5 miles, in greywacke and arkose. Three main zones about 2000 feet apart have been delineated.

Economic Features: In No. 1 shaft area, 7 holes over a length of 900 feet gave intersections of 1-25 feet assaying 1.00 - 2.60% Cu. In the central zone, 4 holes gave intersections of 3-10 feet with 1.5 - 7.7% Cu. In the western zone the north lens was cut in 8 holes that averaged 1.85% Cu across 7.7 feet for a strike length of 320 feet. In the south lens 5 holes gave intersections averaging 1.96% Cu across 7.5 feet for a strike length of 700 feet (Trenholme, 1956).

Ownership: Donalda Mines Limited.

History: 1900-06 3 shafts and adit, 7 levels to 700 foot depth with considerable lateral work, and mining by Massey Station Mining Company.
1915-17 Some mining by Sable River Copper Company.
1904-06, 1915-17 633,264 lbs. of Cu produced from ore grading between 2.7 and 3.5% Cu.
1956 30 d.d. holes 10,729 feet by Donalda Mines Ltd.

References: ODM, 1929, Vol.38, pt.7, p.28-30.
ODM, 1957, M.R.C. 2, p.87.
ODM, Sudbury files.

SCADDING TOWNSHIP

Alwyn Porcupine (Burda) Prospect

Main Metals: Cu, Au.

Location: Scadding Tp.; N central part, on claims C.L.M.90 and C.L.208, former NE 1/4, S 1/2 lot 7, con. VI.
Reference: ODM map 2009.

Geology: Pyrite and chalcopyrite mineralization in quartz-carbonate veins in sheared Gowganda conglomerate cut by diabase dikes near the NW-trending McLaren Lake fault.

Economic Features: The geometrical average of vein intersections was calculated at 0.022 oz. Au and 0.42% Cu over an average width of 15 feet and a length of 600 feet. Best intersections averaged 0.085 oz. Au and 1.11% Cu over an average width of 6 feet 5 inches and a length of 300 feet (Fockler, 1951).

Ownership: Alwyn Porcupine Mines Limited.

History: 1902 2 shafts, 186 and 40 feet deep, with 165 feet of drifting and about 7000 tons stockpiled.
1939 Some development work by Camilla Canadian Mining Corp. Ltd.
1950 8 d.d. holes for 3011 feet by Alwyn Porcupine Mines Ltd.
1956 3 d.d. holes for 900 feet by Alwyn Porcupine Mines Ltd.
1959 3 d.d. holes by Alwyn Porcupine Mines Ltd.

References: ODM, 1960, G.R.9, p.28
ODM, Sudbury files.

Kukagami Lake Prospect

Main Metals: Pb, Cu, Ag, Au.

Location: Scadding Tp.; former lot 1, con. V, on SW shore of Kukagami Lake.
Reference: ODM map 2009.

Geology: Scattered chalcopyrite and galena in 5 quartz veins in gabbro and Gowganda greywacke following fault zones and fractures. The largest exposed vein is 75 by 2.5 feet.

Economic Features: Main vein averaged 2.56% Pb, 1.0% Cu, 0.01 oz./ton Au, 1.0 oz./ton Ag over a width of 20 inches and length of 25 feet; No. 2 vein averaged 2.5% Cu, 0.04 oz./ton Au and 0.28 oz./ton Ag over a width of 2 feet and length of 20 feet (Dunbar, 1958). Best drill intersections are 1.9 feet assaying 4.96 oz./ton Ag and 19.7% Pb from the main vein and 0.5 feet assaying 11.30 oz./ton Au, 8.70 oz./ton Ag, 1.9% Cu from another vein (Honsberger, 1962).

History: 1958 SP survey by Midas Mining Co. Ltd.
1962 14 d.d. holes for 1435 feet by Midas Mining Co. Ltd.
1967 MAG and EM surveys and 2 d.d. holes for 1150 feet by Kayjon Minerals Ltd.

References: ODM, 1960, G.R.2, p.29.
ODM, Sudbury files.
Midas Mining Co. Ltd., 1960, Prospectus.

SHAKESPEARE TOWNSHIP

Falconbridge Shakespeare Prospect

Main Metals: Ni, Cu.

Location: Shakespeare Tp., NE 1/4; NE 1/4 lot 2, con. V and NW 1/4 lot 1, con. V.
Reference: ODM map P.105.

Geology: Blebs and disseminations of pyrrhotite, pentlandite and chalcopyrite in quartz diorite. Surface exposure trends NE for 2600 feet and is 25 to 150 feet wide.

Economic Features: Reserves estimated at 3 to 4 million tons, averaging 0.34% Ni and 0.40% Cu (Falconbridge Nickel Mines Ltd., 1952).

History: About 1920 Trenching by Sudbury Shakespeare Gold-Copper Syndicate.
1942 and 1946 Geophysical surveys and 15 d.d. holes by Falconbridge Nickel Mines Ltd.
1951 12 d.d. holes for 6000 feet by Falconbridge Nickel Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.90.
ODM, 1929, Vol.38, pt.7, p.25-6.
ODM, Sudbury files.

Noranda Shakespeare Prospect

Main Metals: Cu.

Location: Shakespeare Tp.; NE 1/4, S 1/2 lot 2, con. V.
Reference: ODM map P.105.

Geology: Chalcopyrite, pyrrhotite and pyrite with minor chalcocite and galena in N68E-trending silicified and brecciated fault zone in quartzite and greywacke. Sheared zone exposed for 1900 feet and is 5 to 30 feet wide.

Economic Features: The zone averages 0.967% Cu across 10 feet for a length of 1900 feet.

History: About 1920 Trenching by Sudbury Shakespeare Gold-Copper Syndicate.
1956 Geol. and geophysical surveys and some d.d. by Noranda Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.97.
ODM, 1929, Vol.38, pt.7, p.26-7.
ODM, Sudbury files.

SHELLEY TOWNSHIP

Zinc Lake Prospect

(See Marshay Township)

SNIDER TOWNSHIP

(See Sudbury Area)

SOTHMAN TOWNSHIP

Kirkland Minerals Prospect

Main Metals: Ni, Cu.

Location: Sothman Tp.; SE corner.

Reference: ODM map 1953-3.

Geology: Lenses of massive and disseminated nickeliferous pyrrhotite with minor chalcopyrite occur near the northern contact of an east-striking peridotite body which is more than two miles long.

Economic Features: Drilling to 1953 indicated two zones containing 210,000 tons with an average grade of 1.29% Ni, and 400,000 tons with average grade of 0.90% Ni (Canadian Mines Handbook, 1968-69, p.189, and calculations by Kirkland Minerals Corp. Ltd.).

Ownership: Sothman Mines Ltd.

History: 1950-53 MAG survey, trenching, and d.d. (37 holes totalling 16,413 feet) by Dominion Gulf Co. indicated, to a depth of 280 feet, 120,640 tons averaging 1.17% Ni. Kirkland Minerals Corp. revised these estimates to 210,000 tons (average 1.29% Ni) plus 400,000 tons (average 0.90% Ni), with 0.2 to 0.5% Cu.
1956-57 Some d.d. by Kirkland Minerals Corp.
1967-68 Some d.d. by Falconbridge Nickel Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.35.
ODM, 1953, Vol.62, pt.6, p.27.
Can. Min. Jour., Jan. 1957, p.106.
ODM, Kirkland Lake files.

SUDBURY AREA

Falconbridge Nickel Mines Limited

List of Mines: Boundary, Falconbridge, Falconbridge East, Fecunis Lake, Hardy, Lockerby, Longvack, McKim, Mount Nickel, Nickel Rim, Norduna, North Onaping, Strathcona.

Main Metals: Ni, Cu, Co, platinum metals, Au, Ag, Fe, etc.

Location: Sudbury Area; see ODM maps 2170, P.405, and 2148 (Mineral Map of Ontario).

Geology: The mines are located around the outer rim of the Sudbury nickel irruptive. The host rock of the orebodies may be various kinds of breccia, quartz-diorite, greenstone, granite, norite, etc. The main controls of mineralization are embayments, breccia zones, and faults at the lower contact of the irruptive. All deposits are similar mineralogically and consist mainly of pyrrhotite, pentlandite and chalcopyrite with lesser pyrite and arsenides. The ore types are breccia sulphide, massive sulphide, disseminated sulphide and sulphide stringers. Ore bodies may be sheet-like, pipe-like or irregular in shape.

Economic Features: Reserves of proven ore in Sudbury mines at the end of 1967 were calculated at 55,707,600 tons with a combined metal content of 1,158,000 tons. The Company's probable ore reserves within the Sudbury district at the end of 1967 totalled 19,365,200 tons with a combined metal content of 322,389 tons (Annual Report of the Company for 1967).

Ownership: Falconbridge Nickel Mines Ltd.

History: 1928 Falconbridge Mine property acquired by Ventures Ltd., and turned over to Falconbridge Nickel Mines Ltd.

For information on operations, development, and plants at Sudbury see the annual reports of the Company; Annual Review of the Ontario Department of Mines; Canadian Mines Handbook, Northern Miner Press Ltd.; Financial Post Survey of Mines.

Production of Sudbury Mines

		1967*	1930-1967
Ore Shipped	tons.	2,220,064	43,824,724
Nickel	lb.	59,714,764	1,153,652,797
Copper	lb.	30,644,491	617,534,402
Cobalt	lb.	1,263,259	14,547,175
Selenium	lb.	-	68,000
Platinum Metals	oz.	27,403	186,355
Gold	oz.	3,915	84,349
Silver	oz.	150,070	2,313,171
Iron Ore	tons	72,771	430,781
Total Value	\$	\$75,351,230	\$888,812,530

* Preliminary figures, subject to revision.

References: See History.

ODM, 1957, Vol.66, pt.6, p.22-33 (Falconbridge East, Norduna mines).
 CIMM, 1956, Trans., Vol.59, p.37-43 (Hardy mine).
 GAC, 1959, Proc., Vol.11, p.67-80 (McKim mine).
 CIMM, 1968, Bull., Vol.61, p.38-54 (Strathcona mine).

International Nickel Company of Canada Ltd., The

List of Mines and Prospects: Big Levack Mine, Blezard Mine, Capre Prospect, Chicago Mine, Clarabelle Pit, Coleman Mine, Copper Cliff Mine, Copper Cliff North Mine, Crean Hill Mine, Creighton Mine, Ellen Pit, Evans Mine, Frood Mine, Garson Mine, Gertrude Mine, Kirkwood Mine, Levack Mine, Levack West Prospect, Little Stobie Mine, Maclennan Mine, Murray Mine, North Range Mine (Exploration), North Star Mine, Sheppard Mine, Stobie Mine, Sultana Mine, Tam O'Shanter Prospect, Totten Mine, Trilabelle Mine, Vermilion Mine, Victoria Mine, Whistle Mine, Worthington Mine, and others.

Main Metals: Ni, Cu, platinum metals, Se, Te, Au, Ag, Co, Fe, S.

Location: Sudbury Area; see ODM maps 2170, P.405 and 2148 (Mineral Map of Ontario).

Geology: The ore deposits are located at the outer contact of the nickel irruptive and along offsets from this intrusive. There are a variety of host rocks for the ore, such as breccias, quartz-diorite, norite, granite, quartzite, andesite, gabbro, etc. The structures which have provided channelways for the ore are contact embayments, breccia zones, faults and less definite areas of shattering. The ore minerals consist mainly of pyrrhotite, pentlandite and chalcopyrite; there are lesser amounts of pyrite, arsenides and other minerals. The main types of ore are breccia sulphides, massive sulphides, disseminated sulphides and sulphide stringers. Ore bodies may be sheet-like, pipe-like or irregular in shape.

Economic Features: The Company's ore reserves at Sudbury are not published. The proven ore reserves of the Company's Sudbury district and Manitoba mines combined were 357,570,000 short tons at December 31, 1967, with a nickel-copper content of 9,800,000 short tons.

Ownership: International Nickel Company of Canada Ltd., The

History: For information on operations, development, and plants at Sudbury see the annual reports of the Company; Annual Review of the Ontario Department of Mines; Canadian Mines Handbook, Northern Miner Press Ltd.; Financial Post Survey of Mines.

Production of Sudbury Mines (All nickel mines owned by Company and subsidiary and predecessor companies)

		1967*	1887-1967
Ore Shipped	tons	18,374,151	420,265,618
Nickel	lb.	315,192,255	10,011,670,842
Copper	lb.	293,330,107	10,188,652,757
Cobalt	lb.	1,110,497	22,056,513
Selenium	lb.	134,800	3,707,310
Tellurium	lb.	6,500	242,970
Platinum Metals	oz.	372,495	11,294,951
Gold	oz.	38,493	1,954,943
Silver	oz.	1,476,922	61,565,399
Iron Ore	tons	799,474	5,676,599
Sulphur	tons	195,525	1,423,285
Total Value	\$	\$483,667,241	\$7,789,391,886

* Preliminary figures, subject to revision

Remarks: The Company is the world's largest producer of nickel and ranks among the principal producers of copper and platinum metals.

References: See History.

CIMM, 1949, Jubilee Vol., Vol.1, p.596-617.

CIMM, 1957, Symposium Vol., Vol.2, p.341-350.

TOOMS TOWNSHIP

Tooms Nickel Prospect

Main Metals: Cu, Ni, Zn.

Location: Tooms Tp.; E central part, 1/2 mi. E of Greenlaw Tp. near Sylvanite Creek.

Reference: ODM, Sudbury files.

Geology: Pyrite, pyrrhotite, sphalerite and chalcopyrite in graphitic slate, tuff and sediment near diorite-peridotite intrusions.

Economic Features: Assayed intersections ranged between 0.6 and 9.5 feet. Maximum values obtained were 0.06 oz. Au, 0.70% Cu, 0.79% Zn and 0.85% Ni.

History: 1967-68 Geol. and EM surveys and 9 d.d. holes for 2981 feet by Armac Securities Ltd.

References: ODM, Sudbury files.

TOWNSHIP 23, RANGE 15

Pillow Lake Prospect

Main Metals: Cu, Zn, Pb, Mo.

Location: Township 23, Range 15; N-central part of Tp.

Geology: Sulphide-bearing silicified zones strike easterly in mafic and felsic metavolcanics. Minor sulphide stringers in granitic rocks. Sulphides predominantly pyrrhotite and pyrite; minor chalcopyrite, sphalerite and galena; rare molybdenite. Magnetite and graphite commonly associated with sulphides. No assay data.

History: 1965 4028 feet of d.d. by Sutherland and Associates.

References: ODM, Sault Ste. Marie, file SSM-748.

TRILL TOWNSHIP

(See Sudbury Area)

TRUMAN TOWNSHIP

Stony Bay Prospect

Main Metals: Ni, Cu, Co.

Location: Truman Tp.; NE 1/4, Dieppe Tp.; NW 1/4, NW of Brady Lake.

Reference: ODM map P.105.

Description: Pyrrhotite and pyrite in N70E-trending quartz vein, 750 feet by 25 to 30 feet, in quartzite.

Economic Features: Massive mineralization averages 5.5 feet wide over a 260 foot length. A composite sample of the best sections assayed 0.48% Ni, 0.13% Cu, 0.31% Co.

History: Early trenches.

1957 Geol. and geochem. surveys and 14 d.d. holes for 700 feet by Hoyle Mining Co. Ltd.

References: ODM, Sudbury files.

TURNER TOWNSHIP

Perkins Lake Prospect

Main Metals: Pb, Cu, Ag.

Location: Turner Tp.; NW 1/4, claim W.R.90; N of Perkins Lake.

Reference: ODM map P.301.

Geology: Vein containing galena and chalcopyrite has been traced for 950 feet along the contact of Cobalt sediments and diabase.

Economic Features: A surface shoot, 320 feet long and averaging 14.7 feet in width, contains an average of 4.2% Pb, 1.1% Cu and 6.6 oz. Ag (Todd, 1929). Low values obtained in 1949 drilling.

History: Old shaft.

1949 9 d.d. holes for 1021 feet by the Coniagas Mines Ltd.

1956 19 d.d. holes for 3179 feet by D'Eldona Gold Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.86.
ODM, Sudbury files.

WISNER TOWNSHIP

(See Sudbury Area)

SUDBURY DISTRICT

OCCURRENCES

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Afton Tp.; NE $\frac{1}{4}$.	ODM map P.367.	Cu	
Afton Tp.; NW $\frac{1}{4}$, (Flum Creek Occurrence).	ODM map P.367.	Cu	
Afton Tp.; near Scholes Tp. boundary approx. $\frac{1}{2}$ mi. SE of New Golden Rose Mine.	ODM, Sudbury files.	Cu	Pyrrhotite and chalcopyrite in porphyry and andesite. In 1949-50 trenching and minor drilling by T.M. Church.
Afton Tp.; on Scholes Tp. boundary $\frac{1}{2}$ mi. from SE corner.	ODM, Sudbury files. ODM map P.367.	Cu	Pyrrhotite with minor chalcopyrite in silicified volcanics. Grab sample indicated traces of Ag, Au, Cu, Ni, Co. 1951-2, MAG, geol. and SP surveys by Abex Mines Ltd.
Amyot Tp.; E central pt., on Meteor Creek; Jefferson.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in greenstone.
Aylmer Tp.; NW $\frac{1}{4}$, approx. 1 mi. SE of Sam Martin Lake.	ODM, Sudbury files.	Cu	Chalcopyrite and pyrite in brecciated and silicified quartzite (Huronian). Chip sampling gave a maximum of 0.64% Cu over 8.6 feet. In 1958, 2 d.d. holes for 130 feet by Kennco Explorations (Canada) Ltd.; IP and resistivity survey in 1966 by Nova Beaucage Mines Ltd.
Baldwin Tp.; S $\frac{1}{2}$ lot 1, con. I.	ODM, 1952, Vol.61, pt.4, p.30. ODM map 1952-1.	Cu, Ni	Narrow stringers of pyrrhotite and chalcopyrite along weak N35E shear in diorite. Grab samples assayed 1.23% Cu, 0.16% Ni; 0.32% Ni.
Baldwin Tp.; S $\frac{1}{2}$ lot 1, con. II.	ODM, 1952, Vol.61, pt.4, p.31.	Cu, Ni	Test pit exposes sulphides, a grab sample of which assayed 0.37% Ni, 0.53% Cu.
Baldwin Tp.; lot 5, 6, con. VI.	ODM, Sudbury files.	Cu	Pyrrhotite and chalcopyrite in mafic host exposed by 2 pits; one sample assayed 0.05% Cu.
Baldwin Tp.; lot 6, con. IV.	ODM, Sudbury files. ODM map 1952-1.	Cu	Spotty chalcopyrite in quartz vein, 20 by 300 feet, exposed by 2 pits 160 feet apart.
Baldwin Tp.; N $\frac{1}{2}$ lot 7, 8, con. VI, and Porter Tp.; S $\frac{1}{2}$ lot 7, con. I, (Linton Occurrence).	ODM, Sudbury files.	Cu	Chalcopyrite with pyrite in sheared and silicified sediments along NNE-trending zone. In 1956, 15 d.d. holes for more than 1800 feet.
Baldwin Tp.; SE $\frac{1}{2}$ lot 8, con. II.	ODM, Sudbury files. ODM map 1952-1.	Cu	Disseminated to massive pyrrhotite with minor chalcopyrite in sheared diorite near quartzite contact.
Baldwin Tp.; S $\frac{1}{2}$ lot 8, con. III (Turpeinen Occurrence).	ODM, 1952, Vol.61, pt.4, p.31. ODM, Sudbury files. ODM map 1952-1.	Cu	Pyrite, pyrrhotite and chalcopyrite as patches in mafic volcanics. Largest zone 200 by 80 feet. 3 grab samples gave traces of Cu, Ni and Au. In 1956, 2 d.d. holes for 2196 feet by Mid-North Engineering Ltd.
Baldwin Tp.; S $\frac{1}{2}$ lot 9, 10, con. V (Springer Farm Occurrences).	ODM, 1952, Vol.61, pt.4, p.29. ODM map 1952-1.	Cu	Spotty chalcopyrite in scattered quartz veins and silicified zones in metavolcanics.
Baldwin Tp.; NW $\frac{1}{4}$ of N $\frac{1}{2}$ lot 11, con. III.	ODM, 1952, Vol.61, pt.4, p.31. ODM map 1952-1.	Cu	N70E-trending quartz vein up to 15 feet wide in diorite contains patches of sulphides. A grab sample assayed 4.54% Cu.
Baldwin Tp.; NW $\frac{1}{4}$ of S $\frac{1}{2}$ lot 11, con. V.	ODM, 1952, Vol.61, pt.4, p.30. ODM, Sudbury files. ODM map 1952-1.	Cu	Quartz vein up to 100 by 1600 feet, trending ENE in gabbro, contains patches of chalcopyrite, pyrite or pyrrhotite. Samples from pits assayed 3.69, 4.66, 7.45% Cu. In 1954, 8 d.d. holes by Peter Rock Mining Co. Ltd.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Balfour Tp.; lot 7, con. VI.	ODM, 1929, Vol.38, pt.3, p.47-8.	Zn, Pb, Cu	Quartz veins and stockwork scantily mineralized with sphalerite, galena, chalcopyrite and pyrite in slate.
Bleazard Tp.; lot 5, con. V.	ODM, 1929, Vol.38, pt.3, p.39.	Pb, Zn, Cu	Lenses of quartz with minor amounts of galena, chalcopyrite and sphalerite in a narrow rusty-weathering dike.
Bowell Tp.; SE $\frac{1}{4}$, E of S end Trout Lake; Location W.D.252 (Proulx Occurrence).	ODM, 1929, Vol.38, pt.3, p.49, 50	Cu,Pb,Zn	Two quartz veins, 8 and 5 feet wide, were mineralized with galena, sphalerite and chalcopyrite, in Onaping tuff. Early shaft.
Burrows Tp.; SE corner; Paymaster Consolidated.	ODM, Kirkland Lake files.	Cu	Disseminated chalcopyrite in diorite and gabbro.
Cabot Tp.; central pt.; Jonsmith.	ODM, Kirkland Lake files.	Cu,Ni,Pb,Zn	Chalcopyrite and bornite with associated magnetite, sphalerite and galena in banded slate and greywacke.
Cascaden Tp.; NE corner lot 4, con. IV.	Can. Min. Jour., 1957, Vol.78, No. 1, p.96.	Cu, Ni	Quartz vein, 400 feet by 1 foot, containing up to 1.23% combined Cu, Ni mineralization. Trenching in 1956 by Eastview Mines Ltd.
Chester Tp.; central pt., near W shore Three Duck Lakes (Sheppard Occurrences).	ODM, 1932, Vol.41, pt.3, p.30. ODM, 1934, Vol.43, pt.3, p.78. ODM map 41d.	Au, Cu	Gold-bearing quartz veins up to 5 feet wide, containing chalcopyrite and pyrite, in granitic rocks.
Chester Tp.; N central pt., approx. $\frac{1}{2}$ mi. E of Gosselin Lake.	ODM, Sudbury files.	Cu	Minor amounts of chalcopyrite, pyrrhotite and pyrite in altered zone, 100 feet wide in quartz-feldspar porphyry. In 1957, 5 d.d. holes for 390 feet on A. Roy holdings.
Chester Tp.; N central pt., near S end of East Arm, Bagsverd Lake.	ODM, Sudbury files. Beaverbridge Mines Ltd., 1966, Prospectus.	Cu, Au	Two NE-trending quartz veins, 300 feet apart. Drilling intersected 1.10% Cu over 0.1 feet from NW vein. In 1966, 2 d.d. holes for 208 feet by Beaverbridge Mines Ltd.
Chester Tp.; N central pt., E central shore of Gosselin Lake.	ODM, 1932, Vol.41, pt.3, p.29. ODM map 41d.	Au, Cu	Gold and chalcopyrite in E-trending quartz vein exposed for 100 feet in granite. A chip sample assayed \$8.30 Au and 0.25% Cu.
Chester Tp.; NE $\frac{1}{4}$, near E side Mesomikenda Lake, S of bridge (Eccles-Holmes Occurrence)	ODM, 1934, Vol.43, pt.3, p.75-6.	Au, Cu	Chalcopyrite, pyrite and gold in quartz veins in silicified or sheared granodiorite or diorite. Main vein 1 foot by 100 feet.
Chester Tp.; NE $\frac{1}{4}$, on E shore of Mesomikenda Lake near N boundary of Tp. (Beaver-Bethmal Occurrence).	ODM, 1932, Vol.41, pt.3, p.27. ODM map 41d.	Au, Cu	A mineralized lens containing small quantities of pyrite, chalcopyrite and carbonate at granite-sediment contact.
Chester Tp.; NE $\frac{1}{4}$, on W side of Mesomikenda Lake, N of road (Brennan Occurrence).	ODM, 1932, Vol.41, pt.3, p.27-8. ODM map 41d.	Au, Ag, Cu	A sulphide lens 4 by 60 feet containing pyrite, with some chalcopyrite and sphalerite in sericite schist. A sample assayed \$8.40 Au and 1.04 oz./ton Ag.
Chester Tp.; SE $\frac{1}{4}$, $\frac{1}{2}$ mi. E of S end Three Duck Lakes (Cryderman Occurrence).	ODM, 1932, Vol.41, pt.3, p.30.	Au, Ag, Cu	Gold-bearing quartz vein, 2 feet by 325 feet, containing pyrite, chalcopyrite, galena and sphalerite.
Chester Tp.; W central pt., between Clam and Coté Lakes (Coté Occurrence).	ODM, 1932, Vol.41, pt.3, p.33. ODM, 1934, Vol.43, pt.3, p.79. ODM map 41d.	Au, Cu	Small quartz veins carrying gold and chalcopyrite in granite.
Connaught Tp.; NE $\frac{1}{4}$, W central pt.; Badyke.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in brecciated andesite.
Connaught Tp.; $\frac{3}{4}$ mi. SW of W end of Okawekenda Lake; J. Mataris.	ODM, 1934, Vol.43, pt.3, p.67.	Cu	Disseminations and stringers of chalcopyrite, bornite and covellite in mineralized breccia several hundred feet long and 100 feet wide.
Cotton Tp.; NW $\frac{1}{4}$, near E side Burwash Lake extending to Valin Tp.	ODM, Sudbury files.	Cu	Chalcopyrite and pyrite with minor galena in N40E shear, averaging 8 feet but ranging 5 to 25 feet in width, in granite.

Location	References	Metals	Remarks
Craig Tp.; S½ lot 1, 2, 3, con. V, between Spanish River and Moncrieff Tp. boundary (Spanish River Occurrence).	ODM, 1929, Vol.38, pt.7, p.65. ODM, Sudbury files.	Pb, Zn	E-trending zone of pyrite-pyrrhotite (iron formation?) with minor amounts of sphalerite and some galena; pyrite-calcite veins exposed in 2 pits. Drilling intersected traces of Ni, Co, Cu in zone up to 127 feet wide. 8 d.d. holes for 2085 feet by Oakridge Mining Corp. Ltd.
Creighton Tp.; lot 4, con. V.	ODM, 1929, Vol.38, pt.3, p.49.	Pb, Zn	Quartz veins up to 6 inches wide with some sphalerite, galena and pyrite, in felsic pyroclastics.
Cunningham Tp.; SE part, between mile posts 4 and 5, near S boundary of Tp.	ODM, Sudbury files.	Cu, Zn	Minor Cu and Zn in sulphide-graphite zone. Airborne EM and magnetometer, EM, magnetometer and gravity surveys by Rio Tinto Canadian Explorations Ltd. in 1959.
Cunningham Tp.; SW pt., approx. 1.5 mi. S of Peter Lake (Gold Chief Occurrence).	ODM, 1942, Vol.51, pt.7, p.20. GSC, 1929, Summ. Rept., pt.C, p.12.	Zn, Pb, Cu	Some pyrite, galena, sphalerite and chalcopyrite in chert. Trenching before 1929 by Copper Chief Mining Co. Ltd.
Davis Tp.; former lot 1, 2, con. IV, S end of Murray Lake.	ODM, Sudbury files.	Cu, Ni	Patches or blebs of chalcopyrite and pyrrhotite in gabbro; assayed core sections include 7.5 feet averaging 0.89% Cu, 0.38% Ni. In 1956, 13 d.d. holes for 3207 feet by Alba Explorations Ltd.
Davis Tp.; SE¼, N½ lot 3, con. II, 1 mi. S of Washagami Lake (McLeod Occurrence).	M.R.B., Ottawa, mineral files.	Cu, Ag	Chalcopyrite in E-trending quartz veins, 25 by 65 feet at gabbro-sediment contact. A sample assayed 8.53% Cu, 0.73 oz./ton Ag and 0.002 oz./ton Au. Before 1916, 2 shafts by Canadian Copper Company.
Davis Tp.; former lot 7, con. III, ¼ mi. W of S end Washagami Lake.	ODM, 1963, G.R.15, p.17. Movado Mining Co. Ltd., 1967, Prospectus. ODM, Sudbury files. ODM map 2037.	Cu, Au	Chalcopyrite in quartz veins in gabbro. Main vein up to 45 feet wide and at least 220 feet long; 6 grab samples assayed 1.00 to 7.08% Cu, trace to 0.04 oz./ton Au. Early pits and shaft; in 1968 MAG survey and d.d. by Monado Mining Co. Ltd.
Davis Tp.; S½, lot 9, con. II.	ODM, 1963, G.R.15, p.17. ODM map 2037.	Cu, Ni	Disseminated pyrite, chalcopyrite and pyrrhotite occurs intermittently along a narrow zone in brecciated Gowganda Formation near a gabbro dike; a grab sample assayed 0.42% Cu, 0.07% Ni and trace of Au.
Davis Tp.; S½ lot 13, con. II.	ODM, 1963, G.R.15, p.17. ODM map 2037.	Cu, Au	Cherty quartz with pyrite and chalcopyrite in sheared, silicified and carbonatized Gowganda Formation; a grab sample assayed 4.09% Cu, 0.09 oz./ton Au. Numerous pits and 30-foot shaft.
Davis Tp.; former lot 13, 14, con. V.	Asher Gold Mines Ltd., 1957, Prospectus. ODM, Sudbury files.	Cu, Pb	Chalcopyrite and galena in 2 quartz veins from 6 inches to 2 feet wide and lengths of up to 500 feet.
Delhi Tp.; W pt., on E side Lahay Lake (Lahay Occurrence).	ODM, 1954, Vol.63, pt.4, p.20.	Cu	N50W-trending quartz-carbonate vein sparsely mineralized with chalcopyrite and pyrite, in diabase. Vein averages 30 inches in width and traced by pits for about 450 feet.
Denison Tp.; lot 3, con. V.	ODM, 1968, G.R.60, p.59. ODM map 2119.	Cu	Disseminated pyrrhotite and chalcopyrite in brecciated rhyolite and greenstone.
Denison Tp.; lot 3, 4, con. IV.	ODM, 1968, G.R.60, p.59. ODM map 2119.	Cu	Sulphides with small amounts of chalcopyrite in interflow sediments.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Denyes Tp.; central pt., near SW shore of Dymont Lake (Dymont Occurrence).	ODM, 1934, Vol.43, pt.3, p.29-31. ODM, 1968, G.R.63, p.40. ODM map 2120.	Au, Pb	Quartz lenses trending N40W, nearly 150 feet in length and comprising a total width of 5 feet over a 9-foot interval. Veins contain gold galena, specularite and a little chalcopyrite. Approx. 1000 feet of d.d. in 1933-4.
Denyes Tp.; E central pt., near mile post 4 on E Tp. boundary (Derraugh Occurrence).	ODM, 1934, Vol.43, pt.3, p.27-8. ODM, 1968, G.R.63, p.39-40. ODM map 2120.	Au, Cu	Two N-trending quartz veins up to 6 and 15 feet wide containing pyrite, chalcopyrite, galena, and some gold. Trenching by J.E. Derraugh in 1932; 11 d.d. holes, in 1932-3, by Kirkland Hudson Bay Gold Mines Ltd.
Dieppe Tp.; N centre pt., 2 mi. WSW of Little Panache Lake (Little Panache Lake Occurrence).	ODM, Sudbury files. ODM map 2148.	Cu	Chalcopyrite, pyrite, pyrrhotite in sheared quartzite; 40.3 continuous feet of core averaged 0.48 Cu, 0.1 oz./ton Au. In 1957, 1 d.d. hole for 40.3 feet by Chellev Mines Ltd.
Dowling Tp.; lot 12, 13, con. II.	ODM, 1929, Vol.38, pt.3, p.49.	Cu, Pb, Zn	Stringers or lenses, up to 2 inches wide, of sphalerite, galena, pyrite, pyrrhotite and chalcopyrite in coarse volcanic breccia.
Drury Tp.; lot 6, con. III.	ODM, 1965, G.R.54, p.32. ODM map 2055.	Cu, Ni	Pyrrhotite and chalcopyrite in sheared metagabbro exposed by pits and shafts; 900 ft. SW, similar mineralization in conglomerate a few feet thick and about 100 feet long.
Drury Tp.; lot 7, con. I.	ODM, 1965, G.R.34, p.32. ODM, 1929, Vol.38, pt.7, p.36-7. ODM map 2055.	Cu, Ni	Small sulphide zones in metagabbro; a sample assayed 0.49% Ni, 0.26% Cu.
Drury Tp.; lot 9, con. IV.	ODM, 1965, G.R.34, p.32. ODM, map 2055.	Cu	Disseminated chalcopyrite in brecciated metasediments along an E-trending silicified shear zone.
Drury Tp.; lot 10, con. IV.	ODM, 1965, G.R.34, p.32. ODM map 2055.	Cu, Ni	Pockets of disseminated to massive pyrrhotite, chalcopyrite and pyrite in metagabbro explored by pits.
Drury Tp.; lot 12, con. IV.	ODM, 1965, G.R.34, p.31-2. ODM map 2055.	Cu	Pyrrhotite, chalcopyrite and pyrite in quartz veins and gabbroic host.
Dryden Tp.; S½ lot 6, con. V.	ODM, 1962, G.R.9, p.22. ODM map 2017.	Ni, Cu	Small sulphide occurrence in gabbro; a grab sample from pit dump assayed 0.31% Ni, 0.42% Cu.
Dryden Tp.; approx. 2 mi. S of Wanapitei village.	ODM, 1962, G.R.9, p.22.	Ni, Cu	Small sulphide occurrence in gabbro; a selected sample assayed 0.93% Ni, 0.22% Cu.
English Tp.; central pt. and SE¼ SW pt.; Hollinger Consolidated Gold.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in pyritic iron formation.
English Tp.; E½, E central pt.; Transterre Explorations.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Ermatinger Tp.; (Dumont Occurrence).	ODM, Sudbury files.	Cu	Small pockets and blebs of chalcopyrite, pyrrhotite and pyrite within mafic intrusion and earlier granite. Best sample assayed 2% Cu; 25-foot chip sample assayed 0.20% Cu.
Falconbridge Tp.; S½, lot 6, con. III (Copper Prince Occurrence).	ODM, 1957, Vol.66, pt.6, p.22.	Cu, Au	Sulphides in brecciated quartzite and in patches along gabbro contact. Before 1957, geophysical surveys and d.d. by Copper Prince Mines Ltd.
Fawcett Tp.; SE¼ central pt.; Ogilvie Syndicate & Raylloyd.	ODM, Kirkland Lake files.	Cu, Ni, Zn	Ni in diorite; chalcopyrite stringers and disseminated sphalerite in silicic breccia.
Foster Tp.; centre pt., lot 8, con. III, lot 6, 7, con. IV (Elizabeth Lake Occurrence).	ODM, 1968, Open File Rept. 5017, p.11.	Cu	Three zones of sparsely disseminated pyrrhotite and chalcopyrite, approx. 3600 feet apart, in metagabbro. Geol. and MAG surveys in 1956 by Bellechase Mining Corp. Ltd.; some d.d. in 1967 by Texas Gulf Sulphur Co.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Foster Tp.; lot 10, con. I, N of E end Stratton Lake.	ODM, 1968, Open File Rept. 5017, p.22. ODM map P.390.	Cu	Numerous quartz veins sparsely and erratically mineralized with pyrite, pyrrhotite, chalcopyrite and arsenopyrite.
Foster Tp.; NW $\frac{1}{4}$, S $\frac{1}{2}$ lot 10, con. V (Cobaltite Occurrence).	ODM, 1968, Open File Rept. 5017, p.10. ODM, Sudbury files. ODM map P.390.	Co, Ni, Cu	E-trending, brecciated quartz-carbonate vein, containing pyrrhotite, chalcopyrite and cobaltite, 40 feet wide and approx. 1500 feet long, in quartzite. Selected grab sample assayed 9.16% Co, 3.56% Ni. MAG survey, 100-foot adit and some d.d. before 1957.
Foster Tp.; SW $\frac{1}{4}$, lot 12, con. II.	ODM, 1968, Open File Rept. 5017, p.22. ODM map P.390	Au, Ni	E-trending quartz veins, about 2 feet wide and several hundred feet long, sparsely mineralized with pyrite and pyrrhotite. Grab sample assayed 0.04 oz./ton Au and 0.3% Ni. Shaft, pits and 1 d.d. hole for 165 feet.
Foster Tp.; S $\frac{1}{2}$ lot 12, con. V, N $\frac{1}{2}$ lot 12, con. IV (Karl Occurrence).	ODM, 1968, Open File Rept. 5017, p.10. ODM, Sudbury files. ODM map P.390.	Cu, Ni	N-trending, brecciated quartz vein, containing pyrite, pyrrhotite and chalcopyrite 2 feet wide in quartzite. 10-foot chip sample along strike of vein assayed 0.13% Cu, 0.05% Ni. Geol. and geophysical surveys in 1957 by Proscio Limited.
Foy Tp.; E central pt., locations WD234, WD248 and WD233.	ODM, 1968, G.R.65, p.34. ODM map P.315.	Ni, Cu	Pyrrhotite and chalcopyrite concentrations along the Foy offset breccia dike. Geol. and geophysical surveys and some d.d.
Fraleck Tp.; SE $\frac{1}{4}$, claim 51A71, on E bank of Wanapitei River (Barry-Towers Occurrence).	ODM, Sudbury files. ODM map P.424.	Au, Ag, Cu, Pb	Quartz vein, 1 by 350 feet, trending N20W in diabase, contains galena, cerusite, anglesite, chalcopyrite, pyrite, arsenopyrite, covellite and native gold. A selected grab sample assayed 12.93% Pb, 1.50% Cu, 1.49 oz./ton Ag, 0.91 oz./ton Au. Three d.d. holes for 251 feet by H. Barry and L. Towers in 1949.
Fraleck Tp.; SE $\frac{1}{4}$, $\frac{1}{2}$ mi. E of Wanapitei River and $\frac{1}{2}$ mi. N of S boundary of Tp.	ODM map P.424.	Au, Ag, Pb, Cu	Gold-silver-copper-lead mineralization in sheared Nipissing diabase.
Garnet Tp.; NW corner (Yarwood Lake Occurrence).	ODM, Sudbury files. ODM, 1968, M.R.C. 11, p.334-5. ODM map 51f.	Cu	Traces of chalcopyrite in pyrite-pyrrhotite iron formation. In 1966, 5 d.d. holes by Canadian Nickel Co. Ltd.
Genoa Tp.; 1 mi. SE of NW corner (Burton Occurrence).	Lucky Creek Mining Co. Ltd., 1958 Prospectus. ODM, Sudbury files. ODM map 2067.	Cu, Pb, Zn	Quartz vein with low values in Cu, Pb, Zn, within Archaean metavolcanics, explored by a 55-foot shaft.
Genoa Tp.; S shore of Northcott Bay.	GSC map 290A.	Cu, Pb, Zn	Veins containing lead, zinc and copper minerals with varying amounts of quartz, calcite and pyrite occur sparingly in siliceous iron formation.
Gough Tp.; extreme SE corner of Tp.	ODM, Sudbury files.	Cu	Chalcopyrite and pyrite within a zone 4 by 25 feet, in sheared hematitic quartzite.
Graham Tp.; lot 4, con. IV (Century Occurrence).	ODM, 1968, G.R.60, p.59. ODM map 2119.	Ni	Chalcopyrite, pentlandite, danaitite and pyrite disseminated in biotite and hornblende schist; a sample assayed 0.49% Ni.
Graham Tp.; lot 6, 8, 12, con. III.	ODM, 1968, G.R.60, p.59. ODM map 2119.	Cu	Sulphides with minor amounts of chalcopyrite and locally danaitite.
Greenlaw Tp.; NW $\frac{1}{4}$, on W shore of Lee Lake (Lee Lake Occurrence).	ODM, 1968, G.R.63, p.42. ODM map 2121.	Au, Cu	Sheared porphyry dike in diorite replaced by quartz and carbonate and mineralized with pyrite and streaks of chalcopyrite. Assays of 0.25 to 0.64 oz./ton Au obtained from 4 d.d. holes. Before 1935, 250-foot shaft with 2 levels and 11 d.d. holes.

Location	References	Metals	Remarks
Greenlaw Tp.; NW $\frac{1}{4}$, near S end of Lee Lake (Greenlaw Occurrence).	ODM, 1968, G.R.63, p.41. ODM map 2121.	Cu	Porphyry dike cutting diorite with some pyrite and chalcopyrite.
Groves Tp.; E end of Pensyl Lake; Tasmigjopen.	ODM, Kirkland Lake files. ODM, 1934, Vol.43, pt.3, p.65.	Cu	Chalcopyrite in pyritic iron formation.
Hallam Tp.; NE $\frac{1}{4}$, lot 3, con. VI.	ODM, Sudbury files.	Cu	Chalcopyrite in quartz vein cutting a mafic intrusion associated with the Baldwin Creek fault. 6 d.d. holes for 3177 feet by Madsen Red Lake Gold Mines Ltd.
Halliday Tp.; NE $\frac{1}{4}$ SE pt.; Lamothe.	ODM, Kirkland Lake files.	Zn	Sphalerite and disseminated pyrite in rhyolite.
Halliday Tp.; NE $\frac{1}{4}$, E central pt.; Silam.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Hanser Tp.; SE $\frac{1}{4}$, lot 1, 2, con. II.	ODM, 1929, Vol.38, pt.3, p.48-9.	Zn, Pb	Quartz stringers and 5-foot wide lens with chalcopyrite, sphalerite, galena and graphite in pyritic, sheared slate. Trenching and d.d.
Harrow Tp.; N central pt., lot 6, con. V (Richer Occurrence).	ODM, 1968, M.R.C. 10, p.56. ODM, Sudbury files. ODM map 2108.	Cu, Ni, Co	NW-trending quartz-feldspar vein up to 2.5 feet wide in diabase. Chalcopyrite, pyrite, pyrrhotite, arsenopyrite and cobaltite in vein and host in some 5 feet wide and traced for 20 feet. A sample over 4.6 feet assayed 1.71% Co. Also small pyrrhotite showings in gabbro; a sample over 42 inches assayed 0.75% Ni, 0.05% Cu. Trenching in 1957 by Consolidated Frederick Mines Ltd.
Hess Tp.; NW $\frac{1}{4}$ lot 2, con. III and NE $\frac{1}{4}$ lot 3, con. III (Rivers Occurrence).	ODM, Sudbury files.	Cu	Pyrite, pyrrhotite and chalcopyrite in granitic rocks, sheared in part. In 1967, 18 d.d. holes by Canadian Nickel Co. Ltd.
Hess Tp.; SW $\frac{1}{4}$ lot 2, con. IV (Sterling Occurrence).	ODM, 1929, Vol.38, pt.7, p.66-7. ODM, Sudbury files.	Cu, Ni	Pyrrhotite and chalcopyrite in diabase dike, about 35 feet wide, in granite. Drilling intersected combined Cu and Ni ranging from 0.33 to 1.26% over lengths of 2 to 18.5 feet. Pits in 1928 by Capital-Rouyn Mines Ltd.; 9 d.d. holes for 404 feet and geol. survey, in 1957, by Mining Endeavor Co. Ltd.
Hess Tp.; lot 5, con. VI (Eams Occurrence).	ODM, 1929, Vol.38, pt.7, p.67.	Cu	Pyrite, pyrrhotite, magnetite and chalcopyrite in gneisses near syenite porphyry contact. Samples assayed 4.1% Cu.
Hess Tp.; SW corner, lot 10, 11, con. I (Hess Lake Occurrence).	ODM, 1968, M.R.C. 11, p.338. ODM, Sudbury files.	Fe, Cu	Magnetite skarn deposit in Huronian marble, approx. 400 by 200 feet, with chalcopyrite. Drill and pit samples range from 31.8% to 57.0% Fe and nil to 0.65% Cu. Magnetometer survey and 8 d.d. holes for 524 feet by Jaybee Landry Exploration and Mining Co. Ltd., in 1966.
Hodgetts Tp.; SE $\frac{1}{4}$, W of Waspitai River 2 mi. NW of SE corner of Tp.	ODM, Sudbury files.	Cu	Chalcopyrite in quartz breccia. Main zone up to 29 feet wide and 800 feet long, trending NE. Trenching and geol. survey in 1956 by Minada Explorations Ltd.
Horwood Tp.; W shore, Hardiman Bay.	ODM, 1937, Vol.46, pt.2, p.24, 25.	Cu, Pb	Chalcopyrite, pyrite, minor galena in quartz vein.
Horwood Tp.; S arm, Horwood Lake.	ODM, 1937, Vol.46, pt.2, p.17.	Cu, Zn, Pb	Chalcopyrite, sphalerite, minor galena in quartz vein.
Huffman Tp.; SW $\frac{1}{4}$, near NW pt. of East Arm of Opeesewasay Lake.	Northern Miner, 1962, June 28.	Ag, Pb, Zn	A 4-foot intersection of sulphide zone assayed 0.21 oz./ton Au, 4.39 oz./ton Ag, 4.97% Pb, 3.78% Zn, 0.4% Mo. Some d.d. in 1961-2 by Worthington Mines Ltd.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Hutt Tp.; NE½, N central pt.; Dominion Gulf.	ODM, Kirkland Lake files.	Cu, Ni	Chalcopyrite in rhyolite breccia.
Hutton Tp.; SE½, lot 1, con. III, 900 ft. NE of NE pt. Fraser Lake.	ODM, Sudbury files.	Cu	Cu mineralization exposed in 2 trenches within siliceous shear zones. Assays up to 9.44% Cu reported from grab samples.
Hutton Tp.; SW½, former lot 12, con. II.	ODM, 1932, Vol.41, pt.4, p.38. ODM map 41c.	Ni	Trench exposes mineralized granite gneiss and mica schist; a sample from which assayed 0.25% Ni.
Hyman Tp.; 2000 ft. N of lot 3, con. III, at W end pond (Pond Occurrence).	ODM, 1965, G.R.34, p.31. ODM map 2055.	Cu	Disseminated to massive pyrrhotite, chalcopyrite and pyrite in sheared metagabbro and metasediments.
Janes Tp.; E central pt., lot 1, 2, con. III, IV.	ODM, 1932, Vol.41, pt.4, p.27.	Cu, Pb	Pyrite, chalcopyrite and galena in quartz veins in diabase.
Joffre Tp.; NW½, on island in Ramsey Lake, 1.5 mi. W of Sheldon.	ODM, 1962, G.R.7, p.31. ODM map 2013.	Cu	Disseminated pyrite with traces of chalcopyrite in quartzite metasediment. Zone trends N40W and is about 5 feet wide.
Kelly Tp.; SW corner, former lot 13, 14, con. I.	Mid-Nation Developments Ltd., 1963 Prospectus. ODM, Sudbury files.	Cu, Ni	Two small areas of pyrrhotite and chalcopyrite in gabbro. Best material assayed 0.15% Cu, 0.50% Ni. In 1964, EM survey by Mid-Nation Developments Ltd.
Kemp Tp.; SW corner; Paymaster.	ODM, Kirkland Lake files.	Cu	Disseminated chalcopyrite in diorite and gabbro.
Kenogaming Tp.; Crawford Lake.	ODM map P.465.	Cu	Disseminated chalcopyrite in iron formation.
Kitchener Tp.; SE½, E of Copenhagen Lake (Copenhagen Occurrence).	ODM, 1932, Vol.41, pt.4, p.38. ODM, 1968, G.R.65, p.36.	Pb, Zn	N65E-trending lean iron formation mineralized with sulphides over a width of 8 feet, in a greenstone remnant. A sample containing sphalerite and galena assayed 2.01% Pb, 1.25% Zn. Shaft, test pits and some d.d., in 1928, by Copenhagen Lead Syndicate; 3 d.d. holes for 735 feet in 1957.
Lorne Tp.; N½ lot 1, con. VI (Tamminen Occurrence).	ODM, 1965, G.R.35, p.41. ODM, Sudbury files. ODM map 2062.	Ni, Cu	Disseminated pyrrhotite and chalcopyrite in narrow gabbro dike intruding quartzite. Grab samples from pit assayed 0.10% Ni, 0.19% Cu. 1956 EM, MAG and geol. surveys by Rio Canadian Exploration Ltd.
Lorne Tp.; lot 5, con. V (Turpeinen Occurrence).	ODM, 1965, G.R.35, p.38. ODM, Sudbury files. ODM map 2062.	Cu, Au	Chalcopyrite and pyrite in quartz vein, 250 feet by 1 to 2 feet, in brecciated quartzite. Two samples assayed 3.48% Cu, 0.02 oz./ton Au; 4.47% Cu, 0.04 oz./ton Au.
Lorne Tp.; lot 6, con. IV.	ODM, 1965, G.R.35, p.38. ODM map 2062.	Cu	Chalcopyrite in quartz veins, in zone 2 to 12 inches wide, in brecciated quartzite.
Lorne Tp.; lot 8, con. IV.	ODM, 1965, G.R.35, p.37. ODM map 2062.	Cu	Pyrite, pyrrhotite and chalcopyrite in NE-trending sheared zone 20 feet wide and traced for 150 feet.
Lorne Tp.; lot 9, con. VI (Proulx Occurrence).	ODM, 1965, G.R.35, p.41. ODM, Sudbury files. ODM map 2062.	Ni, Cu	Chalcopyrite and pyrrhotite in gabbro along an E-trending zone some 400 feet long in areas less than 50 feet by 6 feet. A grab sample assayed 0.77% Cu, 0.45% Ni. 1955, EM survey by Noranda Mines Ltd.; 1956, 16 d.d. holes for 2425 feet by Mining Endeavor Co. Ltd.
Lorne Tp.; NE½, S½ lot 10, con. V.	ODM, Sudbury files.	Ni, Cu	A small old pit exposed pyrrhotite and chalcopyrite in gabbro.
Lorne Tp.; lot 10, 11, con. I.	ODM, Sudbury files.	Zn	Pyrite, pyrrhotite, sphalerite and some chalcopyrite disseminated in quartzite. Best assay reported is 0.09% Zn. 1952 Geol. survey and d.d. by Teck Exploration Co. Ltd.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Lorne Tp.; N½ lot 11, con. V.	ODM, Sudbury files. ODM map 2062.	Ni, Cu	Pyrrhotite and chalcopyrite over 50-foot length in shear zone, 6 feet by 150 feet, within gabbro at silicified greywacke contact.
Lorne Tp.; S½ lot 11, con. V (Bell Lake Occurrence).	ODM, 1965, G.R.35, p.37. ODM map 2062.	Ni	Sulphides in gabbro explored by 3 pits 15 to 35 feet deep. Sample of dump material assayed 1.95% Ni.
Lorne Tp.; lot 12, con. I.	ODM, 1965, G.R.35, p.37. ODM map 2062.	Cu	Disseminations and stringers of pyrrhotite, chalcopyrite and pyrite, in shear zone 200 feet by 12 feet, within gabbro.
Lorne Tp.; lot 12, con. IV.	ODM, Sudbury files.	Cu	Scattered veins of pyrrhotite with lesser chalcopyrite in gabbro.
Louise Tp.; central pt., immediately W of fire-tower.	ODM, 1968, M.P. 22, p.42.	Cu	Two pits on zone about 15 feet across containing less than 5% pyrrhotite and chalcopyrite in Nipissing diabase.
MacMurchy Tp.; NE corner; Annett.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in carbonate zone.
MacMurchy Tp.; SW¼, SW pt.; Kingston.	ODM, Kirkland Lake files. ODM, 1926, Vol.35, pt.6, p.95.	Au, Pb, Zn	Native gold, sphalerite, galena, pyrite and pyrrhotite in a 1 ft.-6 ft. quartz vein in a shear zone in greenstone.
MacMurchy Tp.; NE corner; W.D. Sutherland.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in rhyolite tuff.
McPhail Tp.; SW¼, on W shore Ramsey Lake.	ODM, 1962, G.R.7, p.32. ODM map 2013.	Cu, Au	Pyrite, chalcopyrite, galena, malachite and hematite within quartz stockworks in diabase over a length of about 500 feet and width of 100 feet. A grab sample gave about 1% Cu, another assayed 0.12 oz./ton Au. Trenching in 1955 by J.A. McClasky.
Marshay Tp.; SE corner, W of Tramp Lake, N of C.N.R. tracks.	ODM, Sudbury files.	Cu	Chalcopyrite in quartz stringers within diabase and granite. In 1957, 4 d.d. holes for 1142 feet by W.H. Nichol.
May Tp.; NE¼, N½ lot 1, con. VI (Farmer Occurrence).	ODM, 1950, P.R. 1950-4, p.5. ODM, Sudbury files. ODM map P.105.	Cu	Disseminated pyrite and chalcopyrite in quartz vein, 250 by 120 feet, in metavolcanics. A chip sample over 30 feet assayed 0.58% Cu. In 1905, 41-foot shaft, 14-foot crosscut and 15-foot pit by Tarsas Sulphur and Copper Co.; in 1957, EM survey by Proscro Limited.
May Tp.; NE¼, S½ lot 1, con. VI.	ODM, Sudbury files. ODM map P.105.	Cu	Chalcopyrite in quartzite along and near a SW-trending fault. Shaft; resistivity survey by New Minda Scotia Mines Ltd. in 1957.
May Tp.; NE¼, lot 2, con. VI (McKee Occurrence).	ODM, 1929, Vol.38, pt.7, p.27-8.	Cu	Chalcopyrite as streaks in silicified quartzite within a zone up to 10 feet wide. Two shafts, 60 and 15 feet deep, and 1 d.d. hole about 1909.
May Tp.; NE¼, lot 3, con. VI (Scott Occurrence).	ODM, 1929, Vol.38, pt.7, p.27.	Cu	Quartz vein 100 feet wide, in sediment and diabase, mineralized sparsely with chalcopyrite. A sample over 2½ feet assayed 0.54% Cu.
May Tp.; lot 5, con. VI (McCaulley Occurrence).	ODM, 1929, Vol.38, pt.7, p.27. ODM, Sudbury files.	Cu	Chalcopyrite and pyrite in quartz veins up to 6 inches wide, along shear zone 10 feet wide, in diorite. Veins exposed by 2 pits, 12 feet deep, 450 feet apart.
May Tp.; lot 7, con. VI.	ODM, Sudbury files.	Cu	Small showing of chalcopyrite in sheared quartzite. Shear 1 foot wide and traced for 40 feet.
May Tp.; N½ lot 8, con. V.	ODM, Sudbury files.	Cu	Chalcopyrite, pyrrhotite and pyrite in sheared quartzite near diorite contact. In 1957, EM and MAG surveys by Proscro Limited.
May Tp.; NW¼, S½ lot 9, con. VI, on N shore Wilson Lake.	ODM, Sudbury files.	Cu	Chalcopyrite and pyrite in quartz veins in quartzite.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
May Tp.; NW $\frac{1}{4}$, N $\frac{1}{2}$ lot 10, con. V (Grant Occurrence).	GSC, 1925, Mem. 143, p.130. ODM, Sudbury files.	Cu	Chalcopyrite and pyrite in zone 6 by 200 feet along a 40-foot wide shear zone in quartzite and greenstone. A 3-foot core section assayed 1.1% Cu, 0.20 oz./ton Ag. An old 60-foot shaft; 1 d.d. hole for 400 feet in 1957 by Proscio Ltd.
Merritt Tp.; SE $\frac{1}{4}$, S $\frac{1}{2}$ lot 1, con. II.	ODM, 1968, Open File Rept. 5017, p.22. ODM map P.322.	Cu	Quartz veins with up to 15% pyrrhotite and minor pyrite and chalcopyrite.
Merritt Tp.; SE $\frac{1}{4}$, S $\frac{1}{2}$ lot 4, con. III (Roche Occurrence).	ODM, 1968, Open File Rept. 5017, p.21. ODM map P.322.	Cu	Several narrow quartz veins in sheared quartzite sparsely mineralized with pyrite and chalcopyrite. Trenching and 2 d.d. holes for 74 feet.
Merritt Tp.; SW $\frac{1}{4}$, N $\frac{1}{2}$ lot 11, con. I (Apsey Lake Occurrence).	ODM, 1968, Open File Rept. 5017, p.12. ODM map P.322.	Cu	Disseminated pyrrhotite, pyrite and minor chalcopyrite in quartzite and conglomerate, making up less than 5% of rock in area 100 by 300 feet.
Muskego Tp.; lot 13, 19, con. I.	GSC, 1916, Summ. Rept., p.181.	Cu	Minor chalcopyrite in volcanic schist.
Nairn Tp.; SE $\frac{1}{4}$, lot 1, con. III.	ODM, 1965, G.R.35, p.35. ODM map 2062.	Cu, Ni	Stringers and disseminations of sulphides with pyrrhotite and chalcopyrite in inclusions in metagabbro. Composite chip samples of dump material assayed 2.92% Cu, 0.41% Ni; 0.12% Cu, 0.58% Ni. Pits and 40-foot shaft present.
Nairn Tp.; NE $\frac{1}{4}$, S $\frac{1}{2}$ lot 5, con. III (Piispanen Occurrence).	ODM, Sudbury files.	Cu	Disseminated pyrrhotite and chalcopyrite in zone up to 3 feet by 50 feet in gabbro.
Nairn Tp.; lot 8, con. VI.	ODM, Sudbury files.	Cu	Disseminated pyrrhotite and chalcopyrite in gabbro. In 1955, 1 d.d. hole for 345 feet by Arcadia Nickel Corp. Ltd.
Nairn Tp.; S $\frac{1}{2}$ lot 9, con. II.	ODM, 1965, G.R.35, p.35. ODM map 2062.	Cu, Ni	Massive and disseminated pyrrhotite and chalcopyrite as N-trending vein 12 feet by 3 feet, in gabbro. A grab sample assayed 0.94% Cu, 0.74% Ni.
Nairn Tp.; lot 8, 9, con. V.	ODM, 1929, Vol.38, pt.7, p.33.	Cu	Chalcopyrite, pyrrhotite and pyrite in pegmatitic diabase as vein 14 inches wide. A sample assayed 0.82% Cu.
Natal Tp.; SE $\frac{1}{4}$, E pt.; W.D. Sutherland.	ODM, Kirkland Lake files.	Zn	Sphalerite in quartz-carbonate vein.
Natal Tp.; central pt.; Lucky Creek.	ODM, Kirkland Lake files.	Cu	Cu in brecciated quartz vein.
Natal Tp.; N $\frac{1}{2}$, S pt.; McIntyre.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Neelon Tp.; NW $\frac{1}{4}$, N $\frac{1}{2}$ lot 1, con. III.	ODM, 1962, G.R.9, p.22.	Ni, Cu	Ni-Cu mineralization exposed by test pit.
Neelon Tp.; SE $\frac{1}{4}$, N $\frac{1}{2}$ lot 2, con. IV.	ODM, 1962, G.R.9, p.22.	Ni, Cu	Small sulphide occurrence; 10.3 ft. of drill core averaged 0.56% Cu, 0.54% Ni. In 1956, 1 d.d. hole by Arcadia Nickel Corp. Ltd.
Neelon Tp.; lot 12, con. III, near N boundary.	ODM, 1962, G.R.9, p.22.	Ni, Cu	Gossan, 250 by 60 feet, in gabbro; a grab sample from test pit assayed 2.41% Ni, 0.30% Cu.
Neville Tp.; E shore of Beaver Lake approx. 1 mi. N of S Tp. boundary (Beaver Lake Occurrence).	ODM, 1926, Vol.37, pt.6, p.76.	Cu	Chalcopyrite and pyrite with quartz veins in E-trending shear in greenstone, exposed by trench 8 feet deep, 6 feet wide and more than 100 feet long.
Nursey Tp.; SE $\frac{1}{4}$, W central pt.; Miami & Hanson.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in carbonate zone.
Nursey Tp.; NE $\frac{1}{4}$, W central pt.; Sirola.	ODM, Kirkland Lake files.	Cu, Zn	Chalcopyrite and sphalerite in banded tuff.
Ogilvie Tp.; NE $\frac{1}{4}$, NE pt.; Ogilvie (Raylloyd).	ODM, Kirkland Lake files.	Cu, Ni, Zn	Ni in diorite; chalcopyrite stringers and disseminated sphalerite in silicic breccia.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Osway Tp.; NW $\frac{1}{4}$, $\frac{1}{2}$ mi. SW of Cipway Point.	ODM, 1949, Vol.58, pt.5, p.17-18. ODM map 1949-2.	Cu, Au	Pyrite, pyrrhotite, chalcopyrite and arsenopyrite in quartz veins and silicified greenstone. One vein 15 inches wide; the other zone 9 to 10 feet wide. Some d.d. and trenching.
Osway Tp.; NW $\frac{1}{4}$, approx. 2000 ft. NE of Cipway Point.	ODM, 1949, Vol.58, pt.5, p.23. ODM map 1949-2.	Cu	Pyrite and chalcopyrite in silicified greywacke over a maximum width of 2 feet. Some d.d. and trenching.
Parkin Tp.; lot 12, con. II.	ODM, 1968, Open File Rept. 5015. ODM map P.400.	Zn, Cu	Three pits in mineralized felsic tuff; 3 selected grab samples assayed up to 3.6% Zn and 0.1% Cu.
Parkin Tp.; lot 12, con. III (Rivers or Fab Occurrence).	ODM, 1968, Open File Rept. 5015. ODM map P.400.	Cu, Zn	Disseminated to massive chalcopyrite, sphalerite, pyrite and pyrrhotite in felsic tuff and andesite in two parallel zones. 1951-2, MAG and geol. surveys and 17 d.d. holes for 6165 feet by Fab Metal Mines Ltd.
Porter Tp.; lot 1, 2, 3, con. I, II, SE corner of Tp.	ODM, 1961, G.R.5, p.33. ODM, 1929, Vol.38, pt.7, p.35.	Cu	Low grade chalcopyrite and pyrite mineralization, in quartz veins and sheared zones exposed by pits and shafts.
Porter Tp.; lot 10, con. II, $\frac{1}{2}$ mi. E of Sutherland Creek (Sutherland Creek Occurrence).	ODM, 1961, G.R.5, p.32. ODM map 2011.	Cu	Pyrite and chalcopyrite in quartz veins up to 10 inches wide within E-trending fault zone traced for 700 feet and approx. 120 feet wide. Grab sample assayed 1.04% Cu.
Porter Tp.; extreme NE corner (Crazy Creek Occurrence).	ODM, 1961, G.R.5, p.32. ODM map 2011.	Cu	Chalcopyrite and pyrite in 3-foot quartz vein and along N36E shears in greywacke. A grab sample assayed 2.11% Cu.
Rayside Tp.; N $\frac{1}{2}$ lot 2, con. III.	ODM, 1929, Vol.38, pt.3, p.48.	Pb, Zn, Cu	Lenses of quartz with spotty sphalerite, galena, and chalcopyrite in volcanic fragmental.
Roberts Tp.; E central pt., approx. $\frac{1}{2}$ mi. SW of Baseline Lake.	ODM, Sudbury files.	Cu	Drilling intersected chalcopyrite mineralization in Mississagi conglomerate. In 1954, 11 d.d. holes for 3001 feet by Dyno Mines Ltd.
Roosevelt Tp.; on N shore of Little Bear Lake (Hatch or Little Bear Lake Occurrence).	ODM, Sudbury files. ODM, 1954, M.R.C. 1, p.52. ODM map P.105.	Ni	Massive lens, 3 by 4 feet, of pyrite and millerite at sediment-peridotite contact. Lens assays 7% Ni; drill intersections ranged from Tr to 0.03% Ni. In 1954, MAG and EM surveys and 1 d.d. hole for 580 feet by Falconbridge Nickel Mines Ltd.; in 1957, 7 d.d. holes for 1854 feet by Minda-Scotia Mines Ltd.
Salter Tp.; loc. 2, N of Clear Lake.	ODM map P.378.	Cu, Ni	Chalcopyrite and nickeliferous pyrrhotite as fracture fillings and disseminations in metadiabase.
Salter Tp.; NW $\frac{1}{4}$ sec. 13 and SW $\frac{1}{4}$ sec. 12, W of Salmay Lake.	ODM, Sudbury files. ODM map P.378.	Cu	Chalcopyrite and pyrite in and near numerous quartz veins in greenstone. Two veins more than 10 feet wide. Trenching and some d.d.
Salter Tp.; NE $\frac{1}{4}$ sec. 15.	ODM, Sudbury files.	Cu	Chalcopyrite in quartz veins and stringers. In 1967, 4 d.d. holes for 403 feet by R. Carlyle.
Salter Tp.; SW $\frac{1}{4}$ sec. 36.	ODM map 2108.	Cu, Ni	Copper-nickel deposit in metadiabase.
Sample Tp.; S $\frac{1}{2}$ central pt.; Dominion Gulf.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in carbonate stringers.
Sewell Tp.; NW of Beaucage Lake.	ODM, Timmins, file T-320.	Cu, Pb	Disseminated chalcopyrite, pyrite, galena in quartz veins cutting gabbro.
Shakespeare Tp.; NE $\frac{1}{4}$, lot 1, 2, con. V.	ODM, 1929, Vol.38, pt.7, p.27.	Cu	Chalcopyrite in quartz veins in quartzite.
Shakespeare Tp.; SE $\frac{1}{4}$, lot 2, con. II.	ODM, Sudbury files.	Cu	Trench exposes pyrite with some chalcopyrite in 2 narrow quartzite beds separated by 5 feet of barren rock.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Shakespeare Tp.; lot 2, con. III (Harmer Occurrence).	ODM, 1929, Vol.38, pt.7, p.24-5.	Cu	Chalcopyrite in quartz veins within a zone about 1000 feet long and up to 25 feet wide in gabbro and mica schist.
Shakespeare Tp.; SE¼ of N½ lot 3, con. II (White Occurrence).	ODM, Sudbury files.	Cu, Ni, Ag	Disseminated pyrrhotite and chalcopyrite in gabbro. Mineralization over 47 feet (core length) assayed 0.01 to 0.06% Cu, 0.01 to 0.06% Ni, 0.08 to 0.29 oz./ton Ag, 0.005 to 0.01 oz./ton Au. In 1968, 3 d.d. holes for 325 feet by The Shawinigan Mining and Smelting Co. Ltd.
Shakespeare Tp.; 3 mi. N of Webbwood.	ODM, Sudbury files.	Cu	Chalcopyrite in sheared quartzite enclosed in a mafic intrusion. Mineralization exposed in pit for 30 to 40 feet and is 6 to 7 feet wide. High grade grab sample assayed 1.58% Cu.
Sothman Tp.; W½, central pt.; Dominion Gulf.	ODM, Kirkland Lake files.	Ni	Nickeliferous pyrrhotite on N side of peridotite dike.
Sothman Tp.; S½, W boundary; Miami & Hanson.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Chalcopyrite, sphalerite and galena with pyrite in green carbonate.
Sothman Tp.; NW¼, NW pt.; Preston East Dome.	ODM, Kirkland Lake files.	Cu, Ni, Pb, Zn	Chalcopyrite, sphalerite, galena and pyrite in carbonatized rhyolitic agglomerate.
Sothman Tp.; NW¼, S centre pt.; Sirola.	ODM, Kirkland Lake files.	Cu, Zn	Chalcopyrite and sphalerite in banded tuff.
Street Tp.; N½, lot 9, 10, con. III, on W bank of Wanapitai River (McVittie Occurrence).	ODM, 1932, Vol.41, pt.4, p.47.	Cu, Au	Disseminated pyrite and chalcopyrite in quartz veins and quartzite; a selected sample assayed 1.12% Cu, 0.01 oz./ton Au. Some d.d. in 1930.
Tp. 12; SW corner (Roberts Occurrence).	ODM, 1962, G.R.7, p.31. ODM map 2013.	Cu	Disseminated and massive lenses of pyrrhotite, pyrite and chalcopyrite in metasediments. Zone strikes N50W, is about 6 feet wide and exposed by trench for 25 feet.
Tp. 23, R. 15.	ODM, Sault Ste. Marie file SSM-673.	Cu	Zones of disseminated pyrite in felsic metavolcanics. One assay gave 0.3% Cu, trace Au, trace Ag.
Trill Tp.; N of Ross Lake.	M.R.B., Ottawa, mineral files.	Cu	Pyrite, pyrrhotite, chalcopyrite and local galena in mineralized shear zone.
Trill Tp.; W of Cameron Lake.	M.R.B., Ottawa, mineral files.	Cu	Gossan zone 10 to 20 feet wide and traced for 1.5 inches; a sample assayed 2.80% Cu. In 1928, geophysical surveys and 4 d.d. holes for 2000 feet by Sudbury Lode Mines Ltd.
Truman Tp.; lot 1, con. II (Penage Lake Occurrence).	ODM, Sudbury files.	Cu	Pyrite, chalcopyrite and pyrrhotite disseminated in gabbro and quartzite. In 1954, 5 d.d. holes for 2002 feet by J.A. McClasky.
Tyrone Tp.; SW¼, and Foy Tp., NW corner (Foy Offset Extension Occurrences).	ODM maps P.249, 2133, 2170.	Ni, Cu	Sparse copper-nickel mineralization in quartz diorite breccia along the extension of the Foy offset. Some pits.
Ulster Tp.; near Stralak station on N side of Straight Lake (Turja Occurrence).	ODM, Sudbury files. ODM, 1929, Vol.38, pt.7, p.65.	Cu, Zn	Eastern extension of the Stralak prospect (Craig Tp.) offset to N. E-trending pyrite-pyrrhotite zone with minor chalcopyrite and sphalerite. A sample from shaft dump assayed 0.44% Cu, 3.55% Zn. EM, MAG and geol. surveys in 1964-5 by Mining Corp. of Canada (1964) Ltd.
Waters Tp.; lot 8, con. V.	ODM, 1968, G.R.60, p.59. ODM map 2119.	Cu	Sulphides with small amounts of chalcopyrite.
Wisner Tp.; central pt., lot 6, 7, con. III (Joe Lake Occurrence).	M.R.B., Ottawa, mineral files.	Cu, Ni	Considerable low grade sulphide mineralization along norite-micropegmatite contact. Geol., MAG and EM surveys and 28 d.d. holes for 23,300 feet by Ryanor Mining Co. Ltd., 1960-1.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Yeo Tp.; E central pt., at W centre shore of Clam Lake.	ODM, Sudbury files.	Cu	Quartz vein with chalcopyrite, in granodiorite. Three d.d. holes for 305 feet by Jonsmith Mines Ltd.
Yeo Tp.; N central pt., just S of west arm Schist Lake (Cryderman Occurrence).	ODM, 1932, Vol.41, pt.3, p.33.	Au, Cu	Pyrite, chalcopyrite and arsenopyrite in E-trending vein of silicified schist, about 450 feet long and exposed over a 13-foot width.
Yeo Tp.; NE pt., $\frac{1}{2}$ mi. S of SE end of Schist Lake (Young Occurrence).	ODM, 1932, Vol.41, pt.3, p.33.	Au, Cu	Small quantities of pyrite and chalcopyrite disseminated in sheared sediments exposed at base of 35-foot shaft. A sample assayed 60 cents in Au/ton.
Zavitz Tp.; SE $\frac{1}{2}$, central pt.; Noranda Exploration.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Chalcopyrite, sphalerite and galena with pyrite in carbonate stringers.
Zavitz Tp.; SE $\frac{1}{2}$, central pt.; Voyager Exploration.	ODM, Kirkland Lake files.	Cu	Pyrite, pyrrhotite and sphalerite in massive sulphides in banded rhyolite.

THUNDER BAY DISTRICT

ASHMORE TOWNSHIP

Wodian Prospect

Main Metals: Cu.

Location: Ashmore Tp.; 3.5 miles SE of Hardrock station.

Reference: ODM map 2102.

Geology: The area is underlain by an intrusive series of diorite, feldspar porphyry and quartz-feldspar porphyry as narrow, vertically-dipping dikes striking N80E. Three bands of feldspar porphyry are altered and bleached and portions are replaced by chalcopyrite and pyrrhotite.

Economic Features: Low-grade copper values were obtained in drilling.

History: 1962 Surface prospecting and trenching, magnetic survey and 9 d.d. holes aggregating 1,247 feet by New Bidlamaque Gold Mines Ltd.
1966 Some d.d. by H.W. Holm.

References: ODM, Port Arthur files.

CROOKS TOWNSHIP

Strickland Prospect

Main Metals: Cu, Ni.

Location: Crooks Tp.; sec. 3, 4, 5, 6, con. VI, VII.

Geology: Flat-lying shale and argillite of the Rove Formation are intruded by sills and dikes of diabase and gabbro. Cu-Ni mineralization occurs (1) as nickeliferous pyrrhotite and chalcopyrite blebs and interstitial fillings within gabbro and (2) as lensoid segregations and fracture fillings marginal to diabase dike walls.

History: 1966 Trenching, MAG survey and d.d. by Whitegate Mining Company Ltd.
1967 MAG, EM and geochemical surveys by Canex Ltd.; surface trenching by Anaconda American Brass Ltd.
1968 Geophysical survey, surface trenching and d.d. by Phelps Dodge Corp. of Canada Ltd.

References: ODM, Port Arthur files.
ODM, 1967, M.P. 22, p.23-5.

DORION TOWNSHIP

Dorion Mine (Past Producer)

Main Metals: Pb, Zn.

Location: Dorion Tp.; lot 14, con. VIII, N of Cavern Lake.
Reference: ODM map 2137.

Geology: Lead-zinc mineralization is located in a breccia zone that strikes N60E and dips 70S along the contact between footwall granite and hanging-wall sediments. The breccia zone ranges between 10 to 40 feet in width. The ore consists of galena and sphalerite associated with breccia filling of white and amethystine quartz, some barite and minor chert. Rich sections of vein material have been found at the surface, but there is only scant mineralization at a depth of 100 feet. The main galena and sphalerite mineralization is confined to a zone 1 to 4 feet wide within fault breccia and 3,500 feet in length.

Economic Features: The quantity of available ore approximates 35,000 tons grading 10% Pb. Channel and chip samples cut at approximately 50-foot intervals assayed from 4% to 28% Pb. Ore carrying 20% Zn is exposed across a width of 4 feet in a drift at the east end of the property.

Ownership: Andowan Mines Ltd.

History: Surface pits, a 210-foot tunnel, a shaft 95 feet deep and drifting on the 90-foot level.
1903 350 tons of concentrate valued at \$10,000 were produced.

References: ODM, 1957, M.R.C. 2, p.44.
ODM, Port Arthur files.

Ogema Mine (Past Producer)

Main Metals: Pb, Zn.

Location: Dorion Tp.; lot 5, con. XI, claim T.B. 30089.
Reference: ODM map 2148.

Geology: The mine is located on a fault breccia zone in biotite schist. The zone ranges from 2 to 20 feet in width and has been traced at least 1,000 feet along a strike of N65-75E. The vein breccia dips 83S. Sulphide minerals include galena, sphalerite, pyrite and chalcopyrite. Gangue minerals include fluorite, quartz, barite and calcite.

Economic Features: Selected shipment of 24.8 tons in 1948 averaged 22.85% Pb, 0.9% Zn and 0.8 oz./ton Ag (ODM, 1957, M.R.C. 2). The average grade is not known; it is reported that at the bottom of the shaft, a section 18 feet 9 inches wide ran 10% combined lead and zinc. A sample at the 125-foot level assayed 9.24% Pb, and a trace of Zn across 30 inches.

Ownership: Lake Cities Lead and Zinc Co.

History: 1929 Shaft 196 feet deep, adit 133 feet at the 44-foot level, and 68 feet drifting at the 125-foot level.

References: ODM, 1957, M.R.C. 2, p.53.

ELMHIRST TOWNSHIP

Jacobus Prospect

Main Metals: Cu, Ni.

Location: NW part of Elmhirst Tp.
Reference: ODM map 2102.

Geology: Massive intermediate to felsic metavolcanics are intruded by a sill-like complex of diorite and gabbro. Granite and granodiorite underlie parts of the sill and diabase dikes cut all rocks. The sill and its contained mineralization strike N83E and dip 40-50N.

Economic Features: Detailed d.d. has outlined a tabular zone of disseminated chalcopyrite and pyrrhotite of sub-marginal grade within which a higher grade section occurs (W.P. McGill).

History: 1957 Trenching, geol., MAG and EM surveys and 47 d.d. holes aggregating approx. 20,000 feet.

References: ODM, Port Arthur files.

GEMMELL TOWNSHIP

Geco Mine (Producer)

Main Metals: Cu, Zn, Ag, Au.

Location: Gemmell Tp.; S-central part.
Reference: ODM map 1957-8.

Geology: The Geco orebody lies in a dragfold on the S limb of the Manitouwadge syncline. The dragfold strikes E-W and plunges 45E. The ore host rock is a quartz-muscovite schist lying between biotite gneiss and quartzite to the S and biotite-garnet-amphibole gneiss to the N.

The ore deposit consists of a tabular body of sulphides (pyrite, pyrrhotite, chalcopyrite and sphalerite) surrounded by an envelope of disseminated sulphides (chiefly pyrite and chalcopyrite). The tabular body occupies a fault parallel to the axial plane of the drag fold and rakes 42E.

Pre-mineral quartz diorite dikes, pegmatite and granite and post-mineral diabase dikes, intrude the ore zone area.

The orebody is displaced left laterally about 250 feet along the N-striking Fox Creek Fault.

Economic Features: The orebody has a length of about 2,400 feet and ranges in width from 10 to 200 feet, averaging 65 feet. The dip is steep to vertical.

Ore reserves estimated to January 1, 1968 totalled 26,719,000 tons grading 2.10% Cu, 5.07% Zn, and 2.20 oz./ton Ag (Canadian Mines Handbook, 1968-69). Some Au, Pb and Cd are recovered.

Ownership: Noranda Mines Ltd.

History: 1953-57 Surface work, considerable d.d. and underground development by Geco Mines Ltd.

1957 Production began.

1964 Merger of Geco Mines Ltd. with Noranda Mines Ltd.

1957-67 Total production 13,602,800 tons milled to produce 254,490 tons Cu, 412,360 tons Zn, 19,801,600 ounces Ag and some lead and gold (Canadian Mines Handbook).

References: ODM, 1957, M.R.C. 2, p.49-50.

Geco Mines Limited, Information Folder.

Canadian Mines Handbook, 1968-69, p.244.

Hucamp Prospect

Main Metals: Cu, Zn.

Location: Gemmell Tp.; S end of Wowun Lake.

Geology: The deposit is a zone of mineralized quartzite and sericitized gneiss, up to 110 feet in width and 2 miles or more in length, which strikes N70E and dips 65S. Mineralization consists of metallic sulphides, chiefly pyrite and pyrrhotite, which occur as disseminations and as massive seams, averaging 4-6 inches in thickness, parallel to the strike.

Economic Features: Chalcopyrite and sphalerite are reported to be present throughout the zone but not in economic concentrations.

Ownership: Hucamp Mines Ltd.

History: 1954-55 EM, MAG and geol. surveys and 29 d.d. holes aggregating 16,342 feet by Hucamp Mines Ltd.
1960 2 d.d. holes aggregating 230 feet by Hucamp Mines Ltd.
1963 IP survey by Hucamp Mines Ltd.
1964 1 d.d. hole for 606 feet by Hucamp Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.51.
ODM, Port Arthur files.

Willroy Mine (Producer)

Main Metals: Zn, Cu, Ag, Pb, Au.

Location: Gemmell Tp.; SW part.
Reference: ODM map 1957-8.

Geology: The area is predominantly underlain by biotite-quartz-feldspar gneiss interlayered with bands of biotite gneiss and quartz-feldspar gneiss. Granite gneiss occurs in the extreme north. In the east, the metasediments strike N80W and dip vertically. To the west, the metasediments curve northward until they strike N65W and dip 30-50 NE. The apparent pitch of the formations is 30-40E.

All orebodies occur within the metasediments along E-striking shear zones, which parallel the granite contact. They are lensoid, show similar attitudes in strike and dip, plunge E at shallow angles and replace either iron formation or sericite schist.

The No. 1 zone consists of the north and south orebodies. The north orebody is mineralized with massive chalcopryite with some pyrrhotite in stringers in quartz and silicified biotite schist. The south orebody consists of lenses of disseminated chalcopryite and pyrrhotite contained within an 80-foot width of sericite-biotite schist.

The No. 2 orebody is made up of semi-massive sphalerite and pyrite with subordinate pyrrhotite and galena, which replaced iron formation. The orebody strikes E-W, dips 75-85N and plunges 11E.

The main, No. 3 zone is a lenticular body of pyrite, pyrrhotite, sphalerite, chalcopryite and galena contained in and which replaced iron formation. It strikes E-W, dips 70N and plunges 44E.

The No. 4 orebody is lenticular, strikes E-W and plunges E at a shallow angle. It is contained within and replaced iron formation. Mineralization consists of massive sphalerite with massive to disseminated pyrrhotite, pyrite and galena.

Economic Features: Ore reserves at the end of 1967 were 505,952 tons grading 1.10% Cu, 1.91% Zn, 0.01% Pb and 0.68 oz./ton Ag (Canadian Mines Handbook).

Ownership: Willroy Mines Ltd.

History: 1953 Surface work.

1954-56 Considerable d.d. by Willroy Mines Ltd.

1955-57 Shaft sinking, underground development, and erection of surface plant facilities by Willroy Mines Ltd.

Underground development: No. 1 production shaft sunk to a depth of 2,855 feet opening 16 working levels; No. 2 ventilation shaft sunk to 530 feet.

1957 Commencement of production.

1957-68 Total production to Dec. 31, 1967: 392,650,236 lbs. Zn, 84,697,418 lbs. Cu, 12,589,948 lbs. Pb, 4,945,262 oz. Ag and 10,186 oz. Au (Canadian Mines Handbook).

References: ODM, 1957, Vol.66, pt.1, p.101-9.

Canadian Mines Handbook, 1968-69, p.347.

GAC, 1959, Proc., Vol.11, p.55-65.

GLEN TOWNSHIP

Thunder Bay Prospect

Main Metals: Pb, Zn.

Location: Glen Tp.; S part, Mining Location 9L.

Reference: ODM map 2137.

Geology: The prospect is located on the NE extension of the Dorion Mine Fault zone. On surface the mineralized zone has been traced for 405 feet over widths ranging from 3 to 30 feet. It consists of quartz, calcite and barite irregularly mineralized with galena, sphalerite and rare chalcopyrite.

History: Prior to 1907 Trenching and test pitting.

1927 Mining plant installation, shaft sunk to a depth of 50 feet and 25 feet of drifting from the 50-foot level by Thunder Bay Lead and Zinc Company.

References: ODM, 1929, Vol.38, pt.6, p.71.

GSC, 1931, Mem. 167, p.180.

HAGEY TOWNSHIP

Shebandowan Mine Prospect

Main Metals: Ni, Cu, Pt, Co.

Location: Hagey Tp.; SW part.

Reference: ODM map 2127.

Geology: A series of replacement sulphide lenses, connected by very narrow widths of sulphides, occur in sheared peridotite. The lenses range from 800 to 1,600 feet in length and extend over a linear distance of at least 4,000 feet. The largest lens lies under the lake. The deposit averages 16 feet in width and contains pyrite, chalcopyrite, pyrrhotite and polydymite in massive and disseminated form.

Economic Features: A medium-sized orebody has been outlined. The copper and nickel content is comparable to that of the ores being mined by INCO in the Sudbury District (INCO Information Service).

Ownership: The International Nickel Co. of Canada Ltd.

History: 1937-68 Geophysical surveys, considerable d.d. particularly in latter years and a development shaft sunk to 1,124 feet from which extensive lateral development and exploration is currently in progress. Work started on a production shaft to be sunk to a planned depth of 1,975 feet. Production slated for 1971.

References: INCO, Press Information, PIR 20/68.
M.R.B., Ottawa, mineral files.

HAINES TOWNSHIP

Loch Erne Prospects

Main Metals: Cu.

Location: Haines Tp.; NE of Loch Erne.
Reference: ODM map 2128.

Geology: The area is underlain by mafic and felsic metavolcanics, with a generally E-strike and vertical dip, intruded in the N part by gabbro and in the S part by granitic rocks. A major SE-trending fault transects the area along the gabbro-metavolcanic contact. Disseminated pyrite, pyrrhotite and chalcopyrite occur in the mafic metavolcanic rocks and along the sheared gabbro-metavolcanic contact.

History: 1956 EM survey and 5 d.d. holes aggregating 1,811 feet by Consolidated Callinan Flin Flon Mines Ltd.
1966-68 MAG and EM surveys and considerable d.d. by Falconbridge Nickel Mines Ltd.

References: ODM, Port Arthur files.

Milkie Prospect

Main Metals: Cu, Ni.

Location: Haines Tp.; central part, E of the east bay of Upper Shebandowan Lake.

Geology: The area is underlain by a differentiated and foliated mafic pluton, intrusive into felsic to mafic volcanic flows. Within the intrusive mass, lens-like concentrations of magnetite, and lesser amounts of pyrite, pyrrhotite and chalcopyrite occur in narrow, discontinuous and irregularly-spaced shear zones. Elsewhere chalcopyrite, pyrite and nickeliferous pyrrhotite are disseminated within anorthosite.

Economic Features: Several trenches exposing the mineralized zones have been sampled. Samples from one trench assayed 1.49% Ni, 0.20% Cu and a trace of platinum across 2.3 feet. Analysis of 8.5 feet of drill core from hole No. 2 gave 1.11% Cu and 0.17% Ni. Low copper-nickel values were obtained from the drilling undertaken.

History: 1965-66 Trenching, EM, MAG and geochemical surveys and 5 d.d. holes aggregating 2,227 feet by McIntyre Porcupine Mines Ltd.

References: ODM, Port Arthur files.

Seemar Prospect

Main Metals: Cu, Ni.

Location: Haines Tp.; E bay of Upper Shebandowan Lake.
Reference: ODM map 2065.

Geology: Keewatin-type volcanics, consisting of felsic flows and fragmentals, are intruded in the south by a nose of a large stock of gabbro. The volcanic rocks and gabbro are displaced about 1,000 feet by a fault trending N20E. The volcanics dip steeply and strike approximately N75E. Several NE-trending electromagnetic and magnetic anomalies, occurring within the gabbro, have been diamond-drilled; pyrite, pyrrhotite and chalcopyrite mineralization was encountered in all holes, and magnetite in several holes.

Economic Features: Hole No. 2 intersected 19 feet of mineralization from footage 384.5 to 403.5; the section assayed 1.03% Cu and 0.08% Ni. Hole No. 3 intersected 22 feet of mineralization from footage 389.5 to 411.5 and this section assayed 0.75% Cu and 0.064% Ni.

History: 1957 Ground EM survey over W part of the Seemar property by Upper Shebandowan Mines Ltd.

1966-67 Ground EM and MAG surveys and 10 d.d. holes aggregating 5,128 feet by Seemar Mines Ltd.

References: ODM, Port Arthur files.

Shawmin Prospect

Main Metals: Cu, Ni.

Location: Haines Tp.; S shore of Middle Shebandowan Lake.

Geology: The area is crossed by a major fault zone trending N65-80W, laterally displaced for about 3,000 feet. Bordering the fault zone to the N, is a gabbro stock, intrusive into felsic and mafic metavolcanics of Archean age. The volcanic rocks strike NE and dip steeply N. South of the fault zone, the ground is covered by water, but the area is indicated as being underlain by mafic metavolcanics.

Economic Features: Numerous electromagnetic and magnetic anomalies associated with shear zones that carry pyrite, pyrrhotite and chalcopyrite mineralization have been trenched and tested by drilling.

An average of 8 intersections along a mineralized section of one shear zone designated N20 assayed 2.71% Cu and 0.22% Ni across 4.3 feet taken over a length of 400 feet.

History: 1956 Trenching, EM survey and 5 d.d. holes aggregating 1,548 feet by Upper Shebandowan Mines Ltd., in part on ground held by Shawmin Explorations Ltd.

1966-67 Trenching, EM and MAG surveys and 17 d.d. holes aggregating 4,735 feet by Shawmin Explorations Ltd.

References: ODM, Port Arthur files.

Smith - Parozanin Prospect

Main Metals: Zn, Cu, Au.

Location: Haines Tp.; NE part, 1 mile E of Postans.

Reference: ODM map 2128.

Geology: The area is underlain by sheared, mafic metavolcanic rocks intruded by gabbro.

Drilling has indicated a quartz vein zone, at least 325 feet long, striking N55-60W. The zone consists of metavolcanics cut by quartz stringers and mineralized with pyrite and lesser amounts of chalcopyrite and sphalerite.

Economic Features: A surface sample taken along the S side of Highway 11, opposite East Divide Lake, assayed a trace of Au, 0.48 oz./ton Ag, 0.55% Cu and 1.68% Zn across 7.0 feet.

Drilling by Tabor Lake Gold Mines Ltd. intersected a 2.3-foot section in hole T-1 which assayed 0.47 oz./ton Au, 0.38% Cu, and 0.44% Zn.

History: 1954-55 16 d.d. holes aggregating 1,910 feet by R. Smith.

1955 EM survey and 5 d.d. holes aggregating 1,324 feet by The Consolidated Mining and Smelting Company of Canada Ltd.

1957 MAG and SP surveys by Romar Mines Ltd.

1959 2 d.d. holes totalling 550 feet.

1960 6 d.d. holes by Realm Mining Corporation Ltd.

1960 12 d.d. holes aggregating 2,312 feet by Tabor Lake Gold Mines Ltd.

References: ODM, 1968, G.R.53, p.28-9.

ODM, Port Arthur files.

Whalen Prospect

Main Metals: Cu.

Location: Haines Tp.; N shore of E part of Upper Shebandowan Lake.

Reference: ODM map 2128.

Geology: The deposit consists of strongly sheared, chloritic fragmental rock carrying irregular, small lenses of quartz. It is well mineralized by disseminated pyrite and chalcopyrite across widths of up to 20 feet. The zone strikes N80E and dips steeply S.

Economic Features: The copper content appears to be higher along the north side of the zone.

Assays over a 90-foot length centred on an open cut indicate 1.61% Cu across 14.3 feet. Geophysical surveys indicate that the zone extends to the E and W.

History: 1928 Trenching.

1963 Geophysical survey by North Coldstream Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.64.

ODM, Port Arthur files.

McTAVISH TOWNSHIP

Enterprise Mine (Past Producer)

Main Metals: Pb, Cu, Ag, Au.

Location: McTavish Tp.; lot C, approx. 2.5 miles SW of Ancliff station.
Reference: ODM map 2137.

Geology: A breccia zone, traced for a length of 210 feet strikes N65E, dips 70S and cuts Sibley shaly dolomite. It has an average width of 4 feet with numerous branches ramifying throughout a shatter zone for 3 feet on either side. The zone consists of abundant white quartz and calcite with lesser amounts of barite and amethyst. Local concentrations of galena and chalcopyrite occur as lodes within the zone.

Economic Features: A large average sample of well mineralized vein material near the surface assayed 41.84% Pb, 5.40% Cu, 3.2 oz./ton Ag and 0.33 oz./ton Au (Chapman, GSC, 1931).

History: 1870-76 Trenching and sinking of No. 1 shaft to a depth of 180 feet, 142 feet of drifting at the 60-foot level; No. 2 shaft, 300 feet W of No. 1 shaft, sunk to a depth of 60 feet; 167 tons of ore shipped.
1926-27 Rehabilitation operations.

References: GSC, 1931, Mem. 167, p.168-9.
ODM, 1929, Vol.38, pt.4, p.79-81.

MAPLEDORAM TOWNSHIP

Big Nama Prospect

Main Metals: Cu, Zn, Ag.

Location: Mapledoram Tp.; SE part.
Reference: ODM map 1957-8.

Geology: The deposit lies along the contact between biotite gneiss and overlying garnet-amphibole-biotite gneiss. It strikes N50-60W, dips 45NE, and consists of biotite gneiss and intrusive pegmatite, both of which have been replaced by disseminated to massive sulphides. Mineralization consists chiefly of pyrite and pyrrhotite, abundant sphalerite, some chalcopyrite and quartz, and minor galena. The deposit has been traced by drilling for a strike length of 1,100 feet and it contains an ore shoot 700 feet long and up to 20 feet thick, which persists down dip to depths of up to 700 feet.

Economic Features: Ore reserves to January 1, 1968 totalled 828,000 tons grading 0.79% Cu, 3.25% Zn and 0.75 oz./ton Ag (Canadian Mines Handbook).

Ownership: Big Nama Creek Mines Ltd.

History: 1954-64 EM surveys and considerable d.d. by Nama Creek Mines Ltd.
1964 Property leased to Willroy Mines Ltd. by Big Nama Creek Mines Ltd.
1967-68 Incline driven from Willroy Mines property to the Big Nama orebody; metallurgical testing by Willroy Mines Ltd.

References: ODM, 1957, Vol.56, pt.8, p.95-6.
Northern Miner, 1968, September 19, p.1.
Canadian Mines Handbook, 1968-69, p.48, 347.

Willecho Mine (Producer)

Main Metals: Zn, Cu, Ag, Pb, Au.

Location: Mapledoram Tp.; E-central part.
Reference: ODM map 1957-8.

Geology: Three zones have been mined. Of the two that lie within a unit of coarse-grained gneiss with iron formation, which strikes NS and dips 20-25E, the north or No. 1 zone is up to 25 feet thick and consists of disseminated and massive pyrrhotite and pyrite with chalcopyrite, sphalerite and galena in quartz or replacing amphibole and biotite in the host rock. Wallrock alteration is slight. The second or No. 2 zone, located 700 feet S of the No. 1 zone, is similarly mineralized. It strikes NW and dips 25NE. It attains a strike length of 380 feet and ranges in width from 2 to 27 feet. Wallrock alteration includes epidotization and silicification. The No. 3 deposit, consisting of zones 3A and 3B, is located 1,600 feet SE of the No. 2 zone. It occurs in iron formation and is mineralized with pyrrhotite, pyrite, sphalerite and chalcopyrite. The zone strikes N30W, dips 25-45NE and averages 25 feet in thickness.

Economic Features: Ore reserves at the end of 1967 totalled 2,163,000 tons, proven and indicated, to the 1,350-foot level, grading 0.50% Cu, 4.43% Zn, 0.18% Pb and 1.98 oz./ton Ag (Canadian Mines Handbook).

Ownership: Jointly owned by Willroy Mines Ltd. and Lun-Echo Gold Mines Ltd.

History: 1953-64 Surface work, geophysical surveys, considerable d.d., underground development and erection of surface plant. Shaft extends to 1,360 feet opening 6 levels.
1965 Commencement of production. At the end of 1967, total production was 62,733,384 lbs. Zn, 9,731,466 lbs. Cu, 3,163,810 lbs. Pb, 1,070,449 oz. Ag and 1,798 oz. Au.

References: ODM, 1957, M.R.C. 2, p.55.
ODM, 1957, Vol.66, pt.1, p.89-92.
Canadian Mines Handbook, 1968-69, p.204.

O'MEARA TOWNSHIP

Chipman Lake Prospect

Main Metals: Cu.

Location: O'Meara Tp.; E shore of Chipman Lake.

Geology: Two mineralized zones have been located. One lies in diorite along the contact with volcanics to the south. It strikes east and consists of massive to disseminated sulphides (pyrite, pyrrhotite, and minor chalcopyrite) over widths up to, and possibly exceeding 25 feet. The massive sulphides occur north of, and parallel to, the diorite-greenstone contact, from which they are separated by a zone, up to 20 feet wide, of disseminated mineralization. The second zone lies about 160 feet south of, and parallels, the first. It is similar but lies in volcanics south of a second sill-like body of diorite. This zone has been exposed over a width of 20 feet at one point, and has been traced for a length of 300 feet.

Economic Features: Surface sampling indicated values up to 0.36% Cu over 12.0 feet in the north zone, and up to 0.29% Cu over 12.0 feet in the south zone.

History: 1954 Surface trenching, MAG, SP and geol. surveys by Mining Corp. of Canada Ltd.

References: ODM, 1957, M.R.C. 2, p.58.

PARDEE TOWNSHIP

Bordun Prospect

Main Metals: Cu, Ni.

Location: Pardee Tp.; NE part of the Stuart Location.

Reference: ODM map P.467.

Geology: Flat-lying shale and greywacke of the Rove Formation are intruded by a diabasic gabbro sill and NE-trending diabase and gabbro dikes of Upper Keweenawan age. Copper and nickel sulphides occur in disseminated form in the basal portion of the sill and marginal to the N side of a gabbro dike in the N.

Economic Features: Drill results in the west-central part of the property indicate a sulphide-enriched zone at least 1,014 feet long, having an average thickness of 294 feet.

Within this zone is contained a more concentrated zone of copper-nickel mineralization. Drill holes 4, 5 and 6 indicate that the zone persists in an ENE direction for a length of 704 feet and averages 34 feet in thickness. Assays of core material from drill holes 4, 5 and 6 indicate, respectively, 0.44% Cu, 0.25% Ni over 22 feet; 0.41% Cu, 0.21% Ni over 30 feet; and 0.39% Cu, 0.21% Ni over 50 feet.

History: 1966-67 Trenching, MAG and geol. surveys and 11 d.d. holes aggregating 7,191 feet by Bordun Mining Corporation Ltd.

References: ODM, Port Arthur files.

Great Lakes Nickel Prospect

Main Metals: Cu, Ni, Pt, Pd.

Location: Pardee Tp., central part; 4 miles SW of Pardee P.O.

Reference: ODM map P.467.

Geology: The area is underlain by relatively flat-lying argillite and greywacke of the Rove Formation, intruded by a discordant, sill-like mass of gabbro and anorthositic gabbro. The central part is occupied by an E-trending, U-shaped mesa, open toward the west. The N arm of the mesa is trough-like in N-S section, about 1,500 feet wide and at least 7,000 feet long. It plunges at approximately 20° toward the E and remains open at the down-dip end. The N and S sides of the trough dip 50S and 35N, respectively. The trough contains an upper anorthositic gabbro, a middle zone of medium- to coarse-grained anorthositic olivine gabbro pegmatite that contains the bulk of the sulphide mineralization, and a basal, fine-grained chill zone with disseminated sulphides and massive pyrrhotite stringers. Chromian spinel is disseminated throughout the sulphide zone and particularly concentrated as a thin, conformable layer of chromitite above the sulphide zone.

Syngenetic sulphide mineralization (pentlandite, pyrrhotite and chalcopyrite), with an average thickness of 100 feet, occurs in disseminated form near the base of the anorthositic olivine gabbro, and bears a Cu-Ni ratio of 2:1.

Economic Features: Diamond drilling to date has proven in excess of 40,000,000 tons of ore grading 0.40% Cu and 0.20% Ni with precious metal values (Northern Miner, 1968).

Indicated tonnage for this property and the contiguous Thunder Bay Nickel prospect is reported at 200,000,000 tons (News Chronicle).

Ownership: Great Lakes Nickel Corporation Ltd.

History: 1952-53 Surface work by Falconbridge Nickel Mines Ltd.
1954 6 d.d. holes aggregating 3,471 feet by Mattawin Gold Mines Ltd.
1956-57 Some d.d. and mill testing by Consolidated Mogul Mines Ltd.
1965-68 Considerable d.d., 100-foot adit and feasibility studies by Great Lakes Nickel Corporation Ltd.

References: ODM, Port Arthur files.
ODM, 1967, M.P. 11, p.26.
Northern Miner, 1968, May 30, p.13.
Port Arthur News Chronicle, 1969, January 3, p.1.

Thunder Bay Nickel Prospect

Main Metals: Cu, Ni, Pt, Pd.

Location: E-central Pardee Tp., E-central part, adjacent to E boundary of the Great Lakes Nickel prospect.
References: ODM map P.467.

Geology: Copper-nickel mineralization, near the base of an anorthositic gabbro sill-like mass, has been traced for approximately 3,000 feet and is believed to be a continuation of the Great Lakes Nickel prospect. The zone flattens on the Thunder Bay prospect and is believed to be at least 900 feet wide.

Economic Features: Drill hole T.B.-10 intersected a continuous section of mineralization from 3,429 to 3,856 feet which assayed 0.19% Ni and 0.38% Cu.

Ownership: Thunder Bay Nickel Mining Corporation Ltd.

History: 1966-68 Surface prospecting and considerable d.d. by Thunder Bay Nickel Mining Corporation Ltd.

References: ODM, Port Arthur files.
Northern Miner, 1968, April 11, p.3.

PIC TOWNSHIP

Kinasco Prospect

Main Metals: Cu.

Location: Pic Tp.; 2 miles E of Marathon, along Highway 17.
Reference: ODM map 2148.

Geology: Archean sediments and volcanics, are bordered and intruded to the west by a complex of augite syenite and gabbro. The intrusive contact strikes north and dips 20-30W. The mineral deposit, as indicated by the self-potential survey, has a length of 2,000 feet. It lies west of, and about 100 feet above, the contact to which it appears to conform in attitude. It consists mainly of disseminated to massive sulphides (pyrite, pyrrhotite, and minor chalcopyrite) in the intrusive complex and in inclusions of sediments therein. The mineralization appears to be continuous across a true thickness of about 350 feet at one point near the surface.

Economic Features: Of the five shallow drill holes bored in 1955, four indicated massive pyrite and chalcopyrite across widths up to 10 feet. A sample of this massive material assayed 3.5% Cu. The fifth hole intersected 32 feet of disseminated material having 1.2% Cu. One long drill hole, bored N55W at an angle of 33, intersected 495 feet of mineralized rock having an average copper content of 0.28%; a 511-foot vertical hole intersected 436 feet of mineralized rock having an average copper content of 0.19%.

History: 1955 SP survey and limited x-ray d.d. by Kinasco Exploration and Mining Ltd.
1956 10 d.d. holes aggregating 6,325 feet by Kinasco Exploration and Mining Ltd.
1964 2 d.d. holes totalling 1,007 feet by Conwest Exploration Ltd.

References: ODM, 1957, M.R.C. 2, p.53.
ODM, Port Arthur files.

PIFHER TOWNSHIP

Coleman - Gray Prospect

Main Metals: Cu, Ni, Au.

Location: Pifher Tp.; 2 miles SW of Pifher Lake.
Reference: ODM map 2102.

Geology: The main mineralized area is located on leased claim T.B. 65333. Mineralization consists of pyrite, pyrrhotite, arsenopyrite, chalcopyrite and sphalerite associated with narrow fractures in intercalated schistose tuff and intermediate volcanics. 3,000 feet SW of the main showing, pyrite, chalcopyrite, pyrrhotite and sphalerite occur associated with quartz-carbonate stringers in metavolcanics.

Economic Features: Cu, Ni, Co and Zn are reported to be present.

Ownership: J.J. Gray.

History: 1956-61 Trenching, EM and MAG surveys and intermittent d.d.
by J.J. Gray.

Remarks: 1964 24 claims leased by J.J. Gray.

References: ODM, Port Arthur files.

Crooked Green Creek Prospects

Main Metals: Cu, Au, Ag.

Location: Pifher Tp.; 2 miles SE of Pifher Lake.
Reference: ODM map 2102.

Geology: The area is underlain by metavolcanics of Archean age intruded by gabbro and diorite, granite and granodiorite. It contains two deposits, the No. 1 vein and the No. 4 zone. The No. 1 vein consists of quartz mineralized with native gold, chalcopryrite and pyrrhotite. The vein strikes NE and dips 40S and has been traced for a length of 235 feet. The vein and silicified wall-rock average 3 feet in width. The No. 4 zone, located about 100 feet E of the No. 1 vein, strikes approximately N-S along the W contact of granodiorite porphyry. The zone contains a patchwork of quartz veins carrying chalcopryrite and native gold; it is exposed for a length of 500 feet and ranges in width from 150 to 400 feet. A third vein, the No. 2, occurs 1,500 feet W of No. 1 vein. It strikes E-W, dips 45N. The vein has been traced for 70 feet in length and averages 2.5 feet in width.

Economic Features: No. 1 Vein: Sampling of the vein indicated an average of 5.8 oz./ton Au and 3% Cu across an average width of 20 inches and over a length of 152 feet. A bulk sample of 170 tons averaged 1.65 oz./ton Au, 0.44 oz./ton Ag and 1% Cu. No. 4 zone: An arithmetic average of 80 samples taken over a length of 150 feet and over a width of 80 feet gave 0.22 oz./ton Au. One channel sample gave 0.12 oz./ton Au and 0.25% Cu over a length of 30 feet.

History: Prior to 1958 Trenching and d.d. by Green Lake Gold Mines Limited. 1958-59 Trenching, stripping, sampling and d.d. by the Martin-Sturgeon Syndicate for Chellew Gold Mines Limited. 1965 Bulk sampling by T. Christianson. 1966-67 Incline shaft, 7 x 9 feet sunk at 45° for 38 feet; d.d. and sampling by Crooked Green Creek Mines Limited.

References: Northern Miner, 1967, July 6, p.13.
ODM, Port Arthur files.

RICKABY TOWNSHIP

Dickson Prospect

Main Metals: Zn, Pb, Ag, Au.

Location: Rickaby Tp.; 2 miles N of Expansion Lake.
Reference: ODM map 2102.

Geology: Values in Zn and Pb were obtained from a small surface showing in intermediate Keewatin-type volcanics.

Economic Features: Generally low values in Pb, Zn, Ag and Au were encountered in d.d. and trace amounts of chalcopyrite were noted in drill core. Highest assays in drill hole No. 1 gave 0.01 oz./ton Au, 14.30 oz./ton Ag, 4.63% Pb and 7.05% Zn over one foot.

History: 1952 Surface trenching and 14 d.d. holes aggregating 2,012 feet by Chesterville Mines Ltd.
1967-68 Geol., EM and MAG surveys by Rio Tinto Canadian Exploration Ltd.

References: ODM, Port Arthur files.

Kenty Prospect

Main Metals: Cu, Ag, Zn, Au.

Location: Rickaby Tp.; 2.75 miles N of Expansion Lake.
References: ODM map 2102.

Geology: Pyrite, pyrrhotite, some chalcopyrite and minor galena and sphalerite replace and are disseminated in felsic tuff and agglomerate. The deposit strikes N55E and dips steeply S. It has been traced for a length of 700 feet by d.d. and attains a thickness of about 40 feet.

Economic Features: Drill core samples contain up to 2.60% Cu and 2.7 oz./ton Ag over a length of 1.2 feet; and 1.08% Cu, 1.26 oz./ton Ag and 4.68% Zn over a length of 3.0 feet in d.d. hole No. 4.

History: 1950 Resistivity survey by Barymin Company Ltd.
1956 13 d.d. holes aggregating 4,040 feet by Noranda Mines Ltd.
1967-68 Geol., EM and MAG surveys by Rio Tinto Canadian Exploration Ltd.

References: ODM, 1957, M.R.C. 2, p.60.
ODM, Port Arthur files.

DAWSON ROAD LOTS

Finmark Prospect

Main Metals: Cu.

Location: Dawson Road Lots; lots 29 and 30, con. II, 1/4 mile SE of Finmark station.

Reference: ODM map 2065.

Geology: The two lots are underlain by vertical-dipping Archean mafic lavas cut by a Keweenawan diabase dike that strikes N70W and dips 70-75N. Along the north contact of the diabase, the mafic lavas are sheared and brecciated across widths up to 60 feet. The shattered zone is mineralized with abundant pyrrhotite, subordinate pyrite, and a little chalcopyrite. The zone is exposed by two pits near the east boundary of lot 30. In one pit, a 30-foot exposure shows 6 feet of massive pyrrhotite carrying abundant chalcopyrite; in the second pit, 60 feet to the east, a 20-foot exposure shows a deep gossan.

Economic Features: The mineralized zone has been traced by drill holes for a length of 1,100 feet, and is shown to have an average width of about 30 feet. A grab sample of massive sulphides from the west pit was found to contain 2.44% Cu. One diamond-drill intersection obtained in hole No. 3 below this pit, indicated 2.99% Cu over a core length of 15 feet.

History: 1956 Ground magnetic survey and 17 d.d. holes aggregating 2,689 feet by Lun-Echo Gold Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.54.

TOWNSHIP 72

Carroll Prospect

Main Metals: Zn, Pb, Cu, Ag.

Location: Tp. 72; 1/2 mile S of the White River, 1 1/2 miles W of E border of Tp.

Reference: ODM maps 41j, P.494.

Geology: Sphalerite, galena, chalcopyrite, pyrite, and pyrrhotite occur in brecciated felsic and mafic metavolcanics. Mineralized zone strikes N75W, dip is apparently N.

Economic Features: Mineralized zone has been tested by d.d. for length of 1,600 feet.

Best Zn assay was 2.4% over 2.0 feet; best Pb assay was 0.70% over 5.0 feet; best Cu assay was 0.09% over 5.0 feet; best Ag assay was 0.16 oz./ton over 5.0 feet; best Au assay was trace.

Most assays were less than 1% of combined Zn, Pb and Cu.

History: 1968 3,523 feet of d.d. in 6 holes by Mattagami Lake Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-1256.

TOWNSHIP 76

Anaconda Prospect

Main Metals: Cu, Fe, Ti.

Location: Tp. 76: approx. 6 miles NE of Marathon station.

Reference: ODM map P.114.

Geology: The area is predominantly underlain by gabbro belonging to the Port Coldwell alkalic complex. To the east, the gabbro intrudes rocks belonging to an older metavolcanic-metasedimentary assemblage.

Numerous, eastward-dipping dikes of larvikite syenite and younger, lamprophyre dikes intrude the gabbro.

Pyrrhotite, pyrite and chalcopyrite occur as interstitial fillings, and are associated with the coarser grained, ilmenomagnetite-rich phase of the gabbro.

Economic Features: A large tonnage low-grade copper deposit has been indicated by drilling. Assays indicate a variation in copper from 0.05% to about 2% (ODM, Open File Rept. 5014).

History: 1963-67 Intensive surface exploration; airborne and ground MAG and IP surveys; considerable d.d. by Anaconda American Brass Ltd.

References: ODM, Open File Rept. 5014, p.82-5.

ODM, 1967, G.R.43, p.43.

ODM, Port Arthur files.

TOWNSHIP 80

Hannam Prospect

Main Metals: Pb, Zn, Ag.

Location: Tp. 80; W side of Dead Horse Creek, 3/4 mile S of Highway 17.

Reference: ODM map 2137.

Geology: The No. 1 zone on which underground work was done, strikes N80W in trachytic volcanics. It is represented by a quartz vein carrying galena and sphalerite, with widths up to 1 1/2 feet reported. Most of the sulphides are confined to a 2-inch seam along the south wall of the vein. The zone has been traced over 400 feet along strike. The No. 2 zone lies 150 feet north of the shaft and contains values in Pb, Zn over a length of 150 feet.

Economic Features: 400 bags of ore from a pocket at the shaft, estimated at 75 tons, were sampled in 1952. This indicated a grade of 60.49 oz./ton Ag, 52.94% Pb and 15.6% Zn (ODM, M.R.C. 2, p.61). Diamond drill hole No. 3 by Saratoga Exploration Company Ltd. assayed 14.76 oz./ton Ag, 2.44% Pb and 18.35% Zn over one foot; hole No. 4 assayed 16.64 oz./ton Ag, 17.9% Pb and 17.9% Zn over one foot. Ore reserves in the No. 1 zone were estimated to be 35,000 tons assaying an average of 27.65 oz./ton Ag, 19.87% Pb and 9.08% Zn. No. 2 zone is reported to contain 36,000 tons of ore (J.W. Storer).

History: 1951 14 d.d. holes by Saratoga Exploration Company Ltd.
1952-53 50-foot drift and 250-foot adit, geophysical surveys by Saratoga Exploration Company Ltd.
1968 One d.d. hole, 280 feet, by Hannam interests.

References: ODM, 1957, M.R.C. 2, p.61.
ODM, Port Arthur files.
Northern Miner, 1965, October 21, p.27.

Mackellar Bay Mines Prospect

Main Metals: Pb, Zn, Ag.

Location: Tp. 80; central part, 3/4 mile S of McKellar Lake.
Reference: ODM map 2107.

Geology: The deposit is a narrow, fractured zone in mafic lava, and consists of quartz-calcite veins and stringers carrying abundant pyrite and sphalerite, some galena, and a little chalcopyrite. The mineralized zone strikes N85W and dips steeply north.

Economic Features: The mineralized zone has been cut in 9 diamond-drill holes, over a length of about 2,000 feet. It ranges in width from less than 2 feet to 15 feet or more. The results of the drilling have not been reported, but samples taken at the shaft collar indicated 7.14% Pb, 13.00% Zn, and 21.80 oz./ton Ag across a width of 4.5 feet; and 1.14% Pb, 10.05% Zn and 2.62 oz./ton Ag across a width of 1.5 feet. A third sample, taken in a trench about 1,500 feet west of the shaft, indicated 1.14% Pb, 32.31% Zn and 2.22 oz./ton Ag across a width of 3.5 feet (R.E. Hore, 1954).

History: 1952 Surface trenching by MacKellar Bay Mines Ltd.
1954 9 d.d. holes aggregating 2,000 feet by MacKellar Bay Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.57.

Ollman Prospect

Main Metals: Pb, Zn, Ag.

Location: Tp. 80; 2.5 miles N of Middleton station, W side of Dead Horse Creek and 1/4 mile N of Highway 17.
Reference: ODM map 2137.

Geology: Sulphuric mineralization occurs in a vein that has been traced over a length of 1,500 feet by trenches and drilling. The vein strikes N85W and dips vertically to 80N. It consists of a breccia zone, from 2 to 10 feet wide, with fillings of calcite, quartz, iron sulphides, galena and sphalerite. The host rocks are Keewatin-type intermediate to mafic metavolcanics.

Economic Features: Surface sampling indicated 7.28% Zn, 1.45% Pb and 8.27 oz./ton Ag for a length of 257 feet and a width of 3.7 feet. Low values were encountered in drill holes.

History: 1944, 1947-48 Surface exploration and 20 d.d. holes aggregating 5,022 feet by American Yellowknife Gold Mines Ltd. (now Rayrock Mines Ltd.).

References: ODM, 1957, M.R.C. 2, p.43.
ODM, Port Arthur files.

Prairie River Prospects

Main Metals: Cu, Zn.

Location: Tp. 80 / Tp. 81; along the mutual boundary between Tp. 80 and Tp. 81, 2.5 miles N of the Canadian Pacific Railway.
References: ODM map 2137.

Geology: Mineralization occurs intermittently along a strong shear zone, E-striking and with vertical to steep S dips, in metavolcanics. The zone has been traced for a distance of about one mile. It consists of quartz veins and stringers associated with pyrite and pyrrhotite and locally with chalcopyrite and sphalerite across widths up to 30 feet.

Economic Features: A small ore shoot, rich in copper, has been delineated by d.d. Grade and width are not reported.

History: 1954-55 Surface work, EM survey, geol. survey and 28 d.d. holes aggregating 11,305 feet by Marlhill Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.57.

Smith Prospect

Main Metals: Cu.

Location: Tp. 80; 1/4 mile NE of Middleton station.

Reference: ODM map P.114.

Geology: Three deposits in gabbro belonging to the Port Coldwell alkalic complex are mineralized with disseminated pyrite, pyrrhotite and chalcopyrite. One deposit, striking N20E and dipping vertically, is exposed for a length of 400 feet and a width of 80 feet. A second deposit, 600 feet NNE of the first, is exposed over a length of 1,000 feet and across widths up to 30 feet. It strikes N70W and dips vertically. The third deposit, situated 600 feet NNE of the second, strikes N-S and dips gently E. It is exposed for a strike length of 200 feet across widths of up to 60 feet.

Economic Features: A channel sample, taken along the strike of the second deposit, averaged 0.63% Cu over a length of 45 feet. Diamond drill holes, bored to intersect the three deposits, indicated low copper values (G. Perrault, 1954).

History: 1954 Surface work and 5 d.d. holes aggregating 954 feet by Moneta Porcupine Mines Ltd. and D.E. Smith.

References: ODM, 1957, M.R.C. 2, p.59.

Tomcar (Little Pic Mine) Prospect

Main Metals: Cu.

Location: Tp. 80; about 1.5 miles N of Ripple station.

Reference: ODM map 2107.

Geology: The area is underlain by mafic and felsic lavas, agglomerates, and slaty-to-schistose sediments. These have been intruded by gabbro dikes and a stock-like mass of syenite. Chalcopyrite and sphalerite are found in a zone of sheared sediments up to 200 feet in width, between a sinuous gabbro dike on the north and the syenite mass to the south. This zone strikes N75E. The best mineralization is found at points where the gabbro dike has curved outwards and away from the sheared zone.

Economic Features: According to old reports, a test shipment of 4 1/2 tons of ore to Swansea, Wales, was found to contain 10.33% Cu. This sample came from a deposit 100 feet long and about 3 1/2 feet wide. A channel sample taken from this deposit in the summer of 1952 is reported to have assayed 5% Cu and 0.12 oz./ton Au (T.W. Page, Nov. 24, 1952).

History: 1875-77 Surface work.
1968 5 d.d. holes aggregating 2,164 feet by R. Pitkanen.

References: ODM, 1957, M.R.C. 2, p.63.
ODM, 1967, G.R.50, p.35.

TOWNSHIP 81

Prairie River Prospects

(see Township 80)

47°30' - 85°45'

Bonner Prospect

Main Metals: Cu, Ni, Ag.

Location: 47°30' - 85°45'; Michipicoten Island, Lake Superior; 1/2 mile S of N coast, central part of Island.
Reference: ODM map 2148.

Geology: Cu and Ni arsenides and native Ag occur in calcite vein cutting Middle Keweenawan basalts. No dimensions reported.

History: Pre-1863 Shaft 70 feet deep, 155 feet of lateral development on 50-foot level.
1956 EM survey by Aries Copper Mines Ltd.
1965-66 Geol. survey by Advance Red Lake Gold Mines Ltd.

References: GSC, 1863, Geol. of Canada, p.506-7, 703, 737.
Rept. of the Royal Comm. on the Min. Res. of Ont., 1890, p.61.
Rept. of the Royal Ontario Nickel Comm., 1917, p.26.
ODM, Sault Ste. Marie files SSM-493, -955.

North Coast Prospect

Main Metals: Cu.

Location: 47°30' - 85°45'; Michipicoten Island, Lake Superior; N-central coast, 3 miles W of Bonner Head.

Reference: ODM map 2148.

Geology: Native copper is disseminated in Middle Keweenawan basalts, and also in carbonate veins cutting felsite. Flows strike N60-80E, dip 10-20S.

Economic Features: Best assay from core samples was 0.53% Cu over 5.0 feet (File SSM-1166).

History: 1956 EM survey by Aries Copper Mines Ltd.

1965-66 10,091 feet of d.d. in 10 holes; geol. survey, by Advance Red Lake Gold Mines Ltd.

References: ODM, 1969, M.P. 24, p.4-5.

ODM, Sault Ste. Marie files SSM-955, -1166, -493.

Quebec Mine (Past Producer)

Main Metals: Cu.

Location: 47°30' - 85°45'; Michipicoten Island, Lake Superior; NW coast, 3 miles E of W end of Island.

Reference: ODM map 2148.

Geology: Native copper occurs in interbedded Middle Keweenawan conglomerate and basalt; strike N45E to E, dip 25-55S.

Economic Features: Main deposit is disseminated in upper part of an amygdaloidal flow. Conglomerate bed 8 feet thick is mineralized across upper 2 feet.

Best intersection in drilling was 0.73% Cu over 1.1 feet (File SSM-500).

History: 1846-47 Work by Upper Canada Mining Co.

1860-75 Several shafts sunk, mill built, by H. Fletcher and the Quebec and Lake Superior Mining Association. Some production, amount not recorded.

1880-83 Work by Michipicoten Native Copper Co.

1885-87 Work by M. Curtis.

To 1888 Development resulted in several shafts; the two deepest being Main shaft (520 feet deep with 5 or 6 levels) and Butler's shaft (360 feet deep), and about 1500 feet of lateral development.

1942 7,176.6 feet of d.d. in 22 holes by M.J. O'Brien Ltd.

1951 Geol. survey by Roche Long Lac Gold Mines Ltd.

1955-56 EM survey and 2,878 feet of d.d. in 8 holes by American Metal Co. Ltd.

1959 Workings dewatered, 400 feet of drifting on 190-foot level by M.J. Boylen and Associates (Mindecon Ltd.).

References: GSC, 1863, Geol. of Canada, p.703-4.
Rept. of the Royal Comm. on the Min. Res. of Ont., 1890, p.60-1.
ODM, Sault Ste. Marie files SSM-494, -499, -495, -500, -629, -632,
-1285.

Selco Prospect

Main Metals: Cu.

Location: 47°30' - 85°45'; Michipicoten Island, Lake Superior; 1 mile S of
N coast, central part of Island.
Reference: ODM map 2148.

Geology: Native copper occurs disseminated in Middle Keweenawan basalts
and in carbonate veins cutting the basalts.

Economic Features: Best assay from core samples was 1.12% Cu over 0.5
feet. Other assays ranged from nil to 0.40% Cu over widths ranging
from 0.5 to 6.5 feet (File SSM-501).

History: 1956 EM survey by Aries Copper Mines Ltd.
1959 845 feet of d.d. in 4 holes by Selco Exploration Co. Ltd.

48°00' - 85°30'

Burrex Prospect

Main Metals: Cu.

Location: 48°00' - 85°30'; 16 miles N of Lake Superior, 9 miles W of
Algoma-Thunder Bay District border; 1 mile NW of East Pukaskwa River.
Reference: ODM map P.506.

Geology: Chalcopyrite, pyrite, pyrrhotite, galena, sphalerite and graphite
occur in shear zone at contact of mafic metavolcanics and a diabase
dike. Shear zone strikes N60W, dip is unknown. No assay data are
available.

About 1,600 feet N of shear zone, trenching upon SP anomaly revealed
heavy to massive pyrrhotite up to 35 feet wide. Minor fine-grained
chalcopyrite occurs with the pyrrhotite. Best assay, from a grab
sample, was 0.18% Cu and 0.03 oz./ton Ag. This zone appears to strike
N60E, and has been exposed in trenches 100 feet apart.

History: 1966 Trenching; SP, EM, and geol. surveys by Burrex Mines
Prospecting Syndicate.

References: ODM, map P.506.
ODM, Sault Ste. Marie file SSM-1190.

International Bibis Prospect

Main Metals: Cu.

Location: 48°00' - 85°30'; 16 miles N of Lake Superior, 9 3/4 miles W of Algoma-Thunder Bay District border; 1 1/2 miles NW of East Pukaskwa River.
Reference: ODM map P.506.

Geology: Chalcopyrite, pyrite and sphalerite occur in sheared mafic and felsic metavolcanics. Mineralized zone strikes N30W, dip not recorded but is apparently N.

Economic Features: Mineralized zone has been traced by trenches and d.d. for length of 660 feet.
Assays from trenches and d.d. core ranged from 0.42% Cu over 10.0 feet to 2.01% Cu over 5.0 feet. Most assays were less than 1% Cu, over widths ranging from 5 to 14 feet.
Highest Zn assay was 0.22% over 5.0 feet. Highest Ag assay was 0.24 oz./ton over 3.0 feet, rest were nil.

History: 1966-67 Trenching; 2,238 feet of d.d. in 7 holes, by International Bibis Tin Mines Ltd.

References: ODM map P.506.
ODM, Sault Ste. Marie file SSM-1113.

48°00' - 85°45'

Lorne Extension Prospect

Main Metals: Zn, Cu.

Location: 48°00' - 85°45' 4 1/2 miles N of NE corner of Homer Tp., 1/2 mile S of McDougall Lake.
Reference: ODM map P.506.

Geology: Pyrite, pyrrhotite and magnetite occur in veins in hornblende schist. Zone strikes N70E, dips steeply S.

Economic Features: Best assay from d.d. was 1.34% Zn, 0.05% Cu, over 5.0 feet. Other assays were less than 1% Zn, and nil to trace Cu.
Other nearby occurrences investigated returned only very low values: best assay from d.d. core was 0.51% Cu over 5.5 feet.

History: 1954 371 feet of d.d. in 13 holes and dip-needle and geol. surveys by Hollinger Consolidated Gold Mines Ltd.

References: ODM, Sault Ste. Marie file SSM-605.

48°00' - 89°15'

Renshaw - Kuneman Prospect

Main Metals: Cu, Ni.

Location: 48°00' - 89°15'; NW coast of Victoria Island in Thunder Bay.

Geology: The island is underlain by shales of the Rove Formation intruded by a diabase sill and a wide gabbroic dike, which forms a prominent ridge along the NW side of the island. Pyrrhotite and chalcopyrite are disseminated irregularly in the gabbro near the NE end of the island.

Economic Features: A grab sample taken from a trench assayed 0.53% Cu and 0.22% Ni.

History: 1964 Trenching and 12 d.d. holes totalling 1,258 feet by Z. Renshaw and N. Kuneman.

References: Pye, E.G., ODM, Unpubl. rept.
ODM, Port Arthur files.

48°15' - 90°45'

Smith Prospect

Main Metals: Cu.

Location: 48°15' - 90°45'; W shore of Discovery Lake, about 1 mile S of Moss Tp.

Reference: ODM map P.393.

Geology: Pyrite and chalcopyrite mineralization is disseminated in a sheared, silicified mafic volcanic with concentrations along shear planes. The mineralized zones are exposed over widths of up to 6 feet and occur at widely-spaced intervals.

Samples from trenches, assayed 0.32% Cu over 5 feet and 0.23% Cu over 20 feet. Sparse mineralization was encountered in drill core.

History: 1956 Trenching, ground EM survey and 7 d.d. holes aggregating 2,263 feet by Noranda Mines Ltd. and Prospectors Airways Co. Ltd.

References: ODM, Port Arthur files.
ODM, Open File Rept. 5020, p.90.

48°30' - 88°45'

Tartan Lake (Willsie) Prospect

Main Metals: Cu, Mo, Au, Se.

Location: 48°30' - 88°45'; 5 miles N of Beck siding on the C.P.R., and approx. 25 miles NE of Port Arthur.

Reference: ODM map 2137.

Geology: The area is underlain by metasediments in which two mineralized zones have been indicated. These occur as lenses separated by 400 feet of barren or sparsely mineralized rock. The two zones have widths up to 150 feet and have been traced for 800 feet. The zones consist of numerous quartz veins and stringers carrying abundant pyrite and pyrrhotite and lesser amounts of chalcopyrite.

Economic Features: A grab sample of massive pyrite from the north zone assayed 0.03% Cu and 0.08 oz./ton Au; a grab sample of massive pyrrhotite assayed 1.9% Cu and 0.02 oz./ton Au. Sampling of drill cores indicated low average values in Au and Cu. Molybdenite-bearing veins cut the south zone, but are of no economic importance. Small amounts of Pb, Zn and Se are present.

History: 1955 Trenching and d.d., 12 holes aggregating 4,917 feet, by Wright-Hargreaves Mines Ltd.

1964 Surface exploration and d.d. by Winchester Exploration Ltd. (Canadian Mines Handbook).

References: ODM, 1957, M.R.C. 2, p.43.

Canadian Mines Handbook, 1968-69, p.348.

48°30' - 90°15'

Copper Island Prospect

Main Metals: Cu.

Location: 48°30' - 90°15'; S side of Copper Island, Upper Shebandowan Lake.

Reference: ODM map 2128.

Geology: The island is underlain by gabbro which contains widespread chalcopyrite mineralization related to NE-trending shear zones.

History: 1956 Geol. and SP surveys and considerable d.d. by Jellicoe Mines Ltd.

References: ODM, 1968, G.R.53, p.24-5.

ODM, Port Arthur files.

Vanguard (Bandowan) Prospect

Main Metals: Cu, Zn, Ag, Au.

Location: 48°30' - 90°15'; Mining Locations K. 56 and Z. 71, approx. 1 mile S of Kashabowie.
Reference: ODM map 2128.

Geology: Archean greenstone is intruded by a large mass of anorthosite. Southeast of the anorthosite body is a strong shear zone up to about 60 feet in width. This zone strikes N60E and dips vertically to steeply south. It has been traced intermittently for a length of 4,300 feet on the surface, and contains two mineralized sections, known as the West and the East sections, 2,300 feet apart. Both sections consist of silicified greenstone, impregnated with disseminated to massive sulphides, chiefly pyrite, with pyrrhotite, chalcopyrite and some sphalerite.

Economic Features: The West section is exposed in trenches for a length of 1,300 feet. Twenty-three d.d. holes, bored to cut this section in 1956 indicated, to a vertical depth of 600 feet, approximately 200,000 tons having an average grade of 1.25% Cu. This tonnage occurs in a southwest-raking shoot about 150 feet in length and 22 feet in width. Zinc, gold and silver are present, but in relatively small amounts (ODM, M.R.C. 2, p.45).
The East section is exposed in trenches for a length of 700 feet and ranges in width from 5 to 60 feet and is composed of several pods. Eleven drill holes, bored to cut this section in 1956, indicated mainly low copper contents. The best intersection was 0.95% Cu over 9.5 feet.

Ownership: Vanguard Explorations Ltd.

History: 1928-40 Surface exploration and limited d.d.,
1943-49 Geophysical surveys and d.d.
1953 Geophysical survey by Mining Geophysics Corporation Ltd.
1955-56 EM and MAG surveys and considerable d.d. by Newkirk Mining Corp. Ltd.

References: ODM, Port Arthur files.
ODM, 1957, M.R.C. 2, p.45.
ODM, 1968, G.R.53, p.30.

48°30' - 90°30'

Andover Prospect

Main Metals: Cu.

Location: 48°30' - 90°30'; E of Fountain Lake, near the E boundary of Moss Tp.
Reference: ODM map 2036.

Geology: The area is underlain by mafic and felsic metavolcanics intruded by diorite, syenite and granite.

Three areas of mineralization occur. No. 3 showing is located 200 feet E of the E boundary of Moss Tp. The host rock here is chert to cherty rhyolite which strikes E and dips 80-85S. Fractures in the chert contain pyrite, chalcopyrite and quartz over a length of 27 feet and a width of 12 feet. No. 6 showing occurs about 1,600 feet S of No. 3 showing and consists of a weak shear zone, located close to the contact between rhyolite and andesite. The zone strikes N80E, dips vertically and contains pyrite and a little chalcopyrite and sphalerite over a width of 6 to 12 inches. No. 12 showing occurs about 1/2 mile E of Hermia Lake and consists of chalcopyrite and pyrite stringers and disseminations in felsic and mafic metavolcanic rocks, chert, diorite and syenite.

Economic Features: 5 d.d. holes tested the No. 12 showing. Hole M-9 cut several mineralized zones. A 4-foot section assayed 1.10% Cu and 0.03 oz./ton Au.

History: Before 1953 Geol. survey and 10 short d.d. holes by Greatlakes Copper Mines Ltd.
1954 Resistivity survey by Newkirk Mining Corp. Ltd.
1956-57 EM survey and 15 d.d. holes for 5,477 feet by Greatlakes Copper Mines Ltd.

References: ODM, 1964, G.R.19, p.23-5.

North Coldstream (Tip Top Copper) Mine (Past Producer)

Main Metals: Cu, Au, Ag.

Location: 48°30' - 90°30'; Mining Location K. 65, 9 miles SW of Kashabowie station.

Reference: ODM map 2065.

Geology: The area is underlain by felsic and mafic metavolcanics, gabbro, diorite, granite, felsic and mafic dikes and chert. The mine is situated on the S side of a gabbro intrusive occupying the contact between a felsic metavolcanic band on the north and a mafic metavolcanic band on the south. The gabbro is highly sheared, particularly along its S margin. The ore occurs in a number of relatively small lenses which are largely restricted to zones of chert. The main chert mass strikes E, dips 80-90N and plunges 50E. Laterally, it attains a maximum length of about 1,000 feet and a width of about 400 feet. It lies between a north hanging-wall of sheared gabbroic, chlorite schist and a south footwall of felsic and mafic schists. Smaller chert lenses are found in the footwall schists. Felsic and mafic dikes, including diorite, lamprophyre and feldspar porphyry, cut the chert and orebodies. The orebodies in the chert consist of massive, disseminated and vein sulphides of chalcopyrite and pyrite with subordinate pyrrhotite, replacing and filling fractures. The orebodies are lenticular in shape, range greatly in size and are randomly distributed throughout the main chert zone. Also see North Coldstream Mine - Shield Development Zone.

Ownership: North Coldstream Copper Mines Ltd.

History: Early 1870's Discovery of copper at present mine site.

1900-08 Underground development, limited copper production by New York and Canadian Copper Company Ltd. Property known as the Tip Top Copper Mine.

1916-19 Continued underground development, limited copper production.

1928-29 Some underground development, limited copper production by Shield Development Company Ltd.

1942 17 d.d. holes aggregating 2,862 feet by Frobisher Ltd.

1943 Geophysical surveys and exploration by Aldermac Copper Corp.

1946-48 Geophysical surveys and d.d. by Greatlakes Copper Mines Ltd.

1951-53 Rehabilitation of underground workings, shaft sinking and lateral development; 47 d.d. holes aggregating 10,619 feet by Coldstream Copper Mines Ltd.

1953 5,000 feet of d.d. by Moneta Porcupine Mines Ltd.

1955-58 Underground development, construction of mill and service facilities; production of copper by Coldstream Copper Mines Ltd.

1959-67 Underground and surface rehabilitation, underground development, production of copper, gold and silver by North Coldstream Copper Mines Ltd.

1957-67 2,728,000 tons of ore were treated to produce 102,300,000 lbs. Cu, plus gold and silver (Canadian Mines Handbook). Property developed by 4 shafts. All underground development and production since 1952 has been from No. 4 shaft, sunk to a depth of 1,600 feet and from which 9 levels were developed.

References: ODM, 1964, G.R.19, p.27-34.

Canadian Mines Handbook, 1968-69, p.251.

M.R.B., Ottawa, mineral files.

North Coldstream Mine - Shield Development Zone (Past Producer)

Main Metals: Cu.

Location: 48°30' - 90°30'; 9 miles SW of Kashabowie station; entirely surrounded by property of North Coldstream Mines Ltd.

Reference: ODM map 2036.

Geology: The main chert zone of the North Coldstream property extends at depth into the Shield property. The chert here is grey to dark brown in colour, with small grains of pyrite and chalcopyrite sparingly disseminated throughout.

The ore consists of pyrite, chalcopyrite and lesser pyrrhotite which fill fractures within the chert and also occur as masses and disseminations within the orebodies.

Three lenses of ore have been outlined. One adjoins the common boundary with North Coldstream and extends 100 feet above and below the 800-foot level. The second lens extends E from the boundary and continues from the 1,000-foot level downward to about 1,300 feet. The third lens is 250 feet within the Shield boundary and extends from 100 feet above to 40 feet below the 1,100-foot level.

Economic Features: 160,000 tons of ore averaging 2.63% Cu outlined by d.d. in 1961 (ODM, 1964, p.35).

Ownership: Shield Development Company Ltd.

History: 1957 Surface and underground exploration by Shield Development Company Ltd.
1961-67 Underground development, mining and milling of ore by North Coldstream Mines Ltd.

References: ODM, 1964, G.R.19, p.35.
M.R.B., Ottawa, mineral files.

Trudev Prospect

Main Metals: Cu.

Location: 48°30' - 90°30'; 1/2 mile S of Burchell Lake.
Reference: ODM map 2036.

Geology: Chalcopyrite, pyrite and pyrrhotite mineralization occurs in felsic metavolcanics intruded by granodiorite. The metavolcanic rocks strike NE and dip vertically to steeply S.

Economic Features: Diamond drill hole T2-8 intersected several narrow zones of mineralization. The best assayed 1.5% Cu and 0.02 oz./ton Au across a core length of 1.3 feet.

History: 1957 EM survey and 13 d.d. holes aggregating 4,753 feet by Mining Corp. of Canada Ltd.

References: ODM, 1964, G.R.19, p.35.
ODM, Port Arthur files.

48°45' - 85°45'

Pulfa Prospect

Main Metals: Cu, Ni, Au, Ag.

Location: 48°45' - 85°45'; approx. 20 miles S of Manitouwadge.
Reference: ODM maps 2146, 2147.

Geology: The area is underlain by mafic to intermediate metavolcanics and pyroclastics and metasediments, intruded by granodiorite in the north. Six mineral showings have been found. These occur as coarsely disseminated sulphides, including pyrite, pyrrhotite, chalcopyrite, minor sphalerite and galena, or as stringers and veinlets of sulphides in schistose rocks. Most of the showings occur near the contact of metasediments and metavolcanics, or in lenses of metavolcanics within pyroclastics.

Economic Features: Assay results of trench samples generally indicate low-grade mineralization. Assays of drill core indicate up to 3.9% Cu over 3 feet in drill hole PS-241-7, and 0.9% Ni over 1.3 feet in drill hole PS-241-1. Drill hole W1 averaged 2.94% Cu, 2.12% Zn, 0.14% Pb, 1.54 oz./ton Ag and 0.09 oz./ton Au over 7 feet. Drill hole A 2 averaged 1.05% Cu, 0.8% Zn, 0.24 oz./ton Au and 0.4 oz./ton Ag over 8 feet.

History: 1962 EM and MAG surveys and 28 d.d. holes by McIntyre Porcupine Mines Ltd.
1963 Surface exploration by C. von Klein.
1964-65 Airborne EM and MAG surveys by Carravelle Mines Ltd.
1965 Limited d.d. by Cominco Ltd.
1966 MAG and EM surveys and 6 d.d. holes aggregating 2,817 feet by Falconbridge Nickel Mines Ltd.
1968 11 d.d. holes aggregating 4,308 feet by Carravelle Mines Ltd.

References: ODM, 1968, G.R.72, p.56-60.
ODM, Port Arthur files.

48°45' - 86°00'

Beggs-Currie (Pic Nickel Mines) Prospect

Main Metals: Cu, Ni.

Location: 48°45' - 86°00'; E of Pic River, 2 miles NW of Goodchild Lake.
Reference: ODM map 2098.

Geology: The deposit consists of rusty-weathering, massive fine-grained amphibolitic and silicified metavolcanics, altered at the contact to serpentinite and containing irregularly disseminated pyrrhotite, pyrite and chalcopyrite. Sulphides occur also in joints and in widely-spaced fractures in the rock. The main showing is marked by a gossan zone 100 feet long and 50 feet wide.

Economic Features: Low grade but widespread sulphide mineralization was encountered in d.d. by several companies. Assays were generally low - in the order of 0.14% Cu and 0.07% Ni.

History: 1953-54 15 d.d. holes aggregating in excess of 3,000 feet by Pic Nickel Mines Ltd.
1954-55 Aeromagnetic survey, EM survey and d.d. by MacLeod-Cockshutt Gold Mines Ltd.
1963 7 d.d. holes aggregating about 3,000 feet by INCO.

References: ODM, 1967, G.R.43, p.45-6.
ODM, Port Arthur files.

Goodchild Prospect

Main Metals: Cu, Ni.

Location: 48°45' - 86°00'; NW shore of Goodchild Lake, 13.5 miles NE of Marathon.

Reference: ODM map 2098.

Geology: The area is underlain by a large U-shaped body composed mainly of serpentinized dunite intruding light grey-green metavolcanics. Pyrrhotite, pyrite and chalcopyrite occur as thin seams and disseminations in silicified metavolcanics at the contact. The silicified zone strikes about N70W and dips 60-75N. Outcrops of this zone occur over a distance of about 1/2 mile and the width ranges between 8 and 100 feet.

Economic Features: Assays of samples from surface trenches indicate that the grade increases towards the northwest where the zone narrows and that it attains up to about 2% Cu, 0.5% Ni and 2 oz./ton Ag across a width of 8 feet. It is understood that diamond-drilling gave inconclusive results (D.N. Jeffs, 1954).

History: 1954 Trenching and 5 d.d. holes aggregating 1,991 feet by Violamac Mines Ltd. (now Kam-Kotia Mines Ltd.).

References: ODM, Port Arthur files.
ODM, 1967, G.R.43, p.48.

48°45' - 86°15'

Anaconda Prospect

(See Township 76)

Bamoos Lake Prospect

Main Metals: Cu, Fe, Ti.

Location: 48°45' - 86°15'; E of Bamoos Lake, approx. 7 miles NNE of Marathon station.

Reference: ODM map P.114.

Geology: The area is underlain predominantly by a banded, basal olivine gabbro belonging to the Port Coldwell alkalic complex. The gabbro intrudes felsic metavolcanics situated to the east and is cut by dikes of larvikite.

Economic Features: Titaniferous magnetite and sulphide showings containing pyrite, chalcopyrite and pyrrhotite are uniformly distributed in the gabbro. Copper values are generally low.

History: Prior to 1951 Trenching and test-pitting on showings of titaniferous magnetite.
1951 Test pitting by B. and Z. Renshaw and E.C. Tripp.
1954 6,000 feet of d.d. by Bamoos Lake Mines Ltd.
1963 Airborne and ground EM and MAG surveys and geochemical survey by Empire Explorations Ltd.

References: ODM, Open File Rept. 5014, p.68-70.

ODM, 1967, G.R.43, p.43.

ODM, Port Arthur files.

Coubran Lake Prospect

Main Metals: Cu, Fe, Ti.

Location: 48°45' - 86°15'; N of Coubran Lake, approx. 11 miles NW of Marathon station.

Reference: ODM map P.114.

Geology: The area is predominantly underlain by a banded, basal olivine gabbro and larvikite belonging to the Port Coldwell alkalic complex. To the north, the gabbro intrudes metasediments and older granitic rocks. It strikes approximately N80W, dips 35S, and near Coubran Lake, attains a thickness of over 1,500 feet. Magnetite-rich lenses and sheets, with which chalcopyrite and pyrrhotite are associated, parallel the banding, range in thickness from a few inches to tens of feet and have strike lengths of up to one-half mile. The titaniferous magnetite content of the sheets ranges from 45 to 50%.

Economic Features: Disseminated pyrrhotite and chalcopyrite are associated with titaniferous magnetite lenses and sheets in the basal gabbro. A large tonnage of low-grade copper and iron has been indicated. The Lake 3 zone, 700 feet long and 500 feet wide averages 25% Fe, 0.3% Cu and 4.5% TiO₂ (Northern Miner, 1969).

History: 1954 Surface exploration and limited d.d. by Head of the Lakes Iron Ltd.
1959-60 Airborne MAG and ground EM surveys by Head of the Lakes Iron Ltd.
1961 Geological and geophysical surveys by Denison Mines Ltd.
1962-63 EM and MAG surveys, and considerable d.d. by Head of the Lakes Iron Ltd.
1964-68 Considerable d.d. and metallurgical testing by Lakehead Mines Ltd.

References: ODM, Open File Rept. 5014, p.76-8.
ODM, Port Arthur files.
Northern Miner, 1969, Feb. 27, p.24.

48°45' - 87°00'

Mitto Prospect

Main Metals: Cu.

Location: 48°45' - 87°00'; NE of Ansell Lake; 2 miles E and N of Schreiber and the C.P.R.
Reference: ODM map 47j.

Geology: The deposit consists of disseminated pyrite, pyrrhotite and chalcopyrite in schistose mafic volcanics and intrusive, NE-striking, quartz porphyry dikes.

Economic Features: Several test pits have indicated that mineralization occurs within an area 400 feet wide and over 600 feet long. Most pits are in mafic volcanics and copper values are low. One trench, which intersects a body of quartz porphyry, shows mineralization over 47 feet. Grab samples over this width averaged 1.06% Cu (ODM, Port Arthur files).

History: 1921 Surface work.
1950 Geol. mapping by East Sullivan Mines Ltd.
1954 Drilling by Ascot Metals Corp. Ltd. (now Quebec Ascot Copper Corp. Ltd.), including one hole 374 feet long.

References: ODM, 1957, M.R.C. 2, p.45.
ODM, Port Arthur files.

Ursa Major Prospect

Main Metals: Cu, Pb, Au.

Location: 48°45' - 87°00'; 7 miles N of Jackfish station.

Reference: ODM map 2107.

Geology: In the vicinity of the shaft, chlorite and mica schists strike northwest. About 400 feet NE of the shaft, a large quartz vein, 6-20 feet wide, is exposed. The vein strikes N78W for several hundred feet and is reported to contain considerable pyrite, chalcopyrite and galena. Gold is also present, but values are low.

History: 1898-1900 Shaft to a depth of 121 feet, 88-foot crosscut driven N on the 118-foot level.

References: ODM, 1957, M.R.C. 2, p.62.

48°45' - 87°15'

Anderson Prospect

Main Metals: Cu.

Location: 48°45' - 87°15'; E shore of Winston Lake.

Reference: ODM map 2023.

Geology: The mineralized zone consists of quartz stringers and disseminated iron, copper and zinc sulphides in garnetiferous biotite gneiss. The zone strikes N15-20E, dips steeply E and is up to 39 feet in true width. It has been traced for a strike length of 250 feet.

Economic Features: The best section is reported to contain 0.5% Cu over 20 feet in d.d. hole No. 34.

History: 1952 Surface work and 5 d.d. holes aggregating 424 feet by L.C. Anderson.

References: ODM, Port Arthur files.

ODM, 1961, G.R.27, p.21.

Campbell Prospect

Main Metals: Cu, Ni.

Location: 48°45' - 87°15'; 8 miles N of Schreiber and E of Rhea Lake.

Reference: ODM map 2137.

Geology: The deposit trends N70E along a contact between amphibolite on the east and granite on the west. It consists of massive sulphides, up to 3 feet wide, with disseminated sulphides in the walls for a distance of up to 10 feet. The mineralization consists of pyrite, pyrrhotite, pentlandite and chalcopyrite.

Economic Features: The deposit has a known length of 300 feet. One grab sample assayed 4.32% Ni and 1.07% Cu; a second assayed 4.88% Ni and 0.10% Cu (ODM, M.R.C. 2).

History: Formerly owned by Nicopor Mines Ltd.
1950 MAG and geol. surveys by Falconbridge Nickel Mines Ltd.
1956 Geological survey and 4 d.d. holes aggregating 1,693 feet by New Athona Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.47.
ODM, Port Arthur files.

Cleaver Lake Prospect

Main Metals: Cu.

Location: 48°45' - 87°15'; N end of Cleaver Lake.
Reference: ODM map 2023.

Geology: In the vicinity of the showings the rocks are mainly schists and granitic gneisses, which strike north and dip 40 to 45E. These schists and gneisses have been intruded by bodies of syenite porphyry. Several exposures showing chalcopyrite mineralization have been observed. One exposure consists of coarsely crystalline chalcopyrite in narrow seams that parallel the banding in a gneissic rock; another consists of disseminated chalcopyrite in a biotite schist. The showing tested by diamond-drilling, consists of disseminated chalcopyrite within syenite porphyry, and has been traced in a north-south direction for 500 feet.

Economic Features: Assays of 2 sections of core from drill hole No. 2 indicate 2.36% Cu over 0.5 feet and 0.95% Cu over 2 feet. Drill hole No. 8 intersected 5 feet of mineralized material that assayed 0.23% Cu.

History: 1953 3 d.d. holes aggregating 1,848 feet, by Zenmac Metal Mines Ltd.

References: ODM, Port Arthur files.
ODM, 1964, G.R.27, p.27.

Estell Prospect

Main Metals: Cu.

Location: 48°45' - 87°15'; S shore of Big Duck Lake.

Reference: ODM map 2023.

Geology: Estell A vein: The vein consists of alternating bands of quartz and hornblende schist carrying pyrite, chalcopyrite, malachite and a little molybdenite. It is exposed over a length of 80 feet in a trench and has been traced by 11 d.d. holes over a length of 850 feet. The vein strikes N65-70W, dips 60-65N and ranges in thickness from 10 to 20 feet.

Estell B vein: Exposed 400 feet S of the A vein, the B vein has been traced by d.d. for 350 feet; it ranges in thickness from 10 to 75 feet. The vein strikes N60W and dips 60-65NE. Sugary-textured quartz and schist are well mineralized with pyrite, subordinate chalcopyrite and pyrrhotite and a little molybdenite.

Economic Features: Estell A vein: Analysis of core samples from d.d. holes indicate the vein to contain, on the average, less than 0.5% Cu. Some Mo and Au are present.

Estell B vein: The average copper content is reported to be low.

History: 1920 Surface trenching.

1955 Resistivity surveys and 16 d.d. holes aggregating 6,775 feet by Stratmat Ltd.

1960 2 x-ray d.d. holes by KRNO Mines Ltd.

References: ODM, 1964, G.R.27, p.33.

McDonough (Little Duck Lake Mine) Prospect

Main Metals: Cu, Zn, Pb.

Location: 48°45' - 87°15'; NE shore of Little Duck Lake, about 14 miles N of Schreiber.

Reference: ODM map 2023.

Geology: Three mineral deposits have been found in the area. They are essentially calcite veins or lenses, striking north with steep easterly dips, in Keewatin-type greenstones. Mineralization consists of massive sphalerite, galena, disseminated pyrite and some chalcopyrite.

No. 1 vein on which 2 shafts have been sunk to depths of 120 and 65 feet respectively, averages about 20 feet in width and 450 feet in length.

No. 2 vein is located 1,700 feet west of No. 1. It has been investigated by a pit and a shaft, and has been exposed by trenches over a length of 75 feet and a width of up to 10 feet.

No. 3 deposit is exposed in a deep open cut about 25 feet long by 100 feet wide. It lies in hornblende schist and is a lens-like body about 15 feet in length and 8 feet in width.

Economic Features: It is reported that a bulk sample taken from the 120-foot shaft assayed: 4.94% Pb, 8.05% Zn, 0.19% Cu, 0.11 oz./ton Au and 2.06 oz./ton Ag (Northern Miner, 1954). Known results of drilling and sampling have so far not indicated anything of commercial significance.

History: 1918 Surface and underground work by Duck Lake Mining Company Ltd.
1928-29 Surface and underground work by Haslat-Duck Lake Mines Ltd.
1951 10 d.d. holes aggregating 2,939 feet by Magnet Consolidated Mines Ltd.
1954 Surface trenching and EM and MAG surveys by Bathurst Mining Corp. Ltd. and Maritimes Mining Corp. Ltd.

References: ODM, 1964, G.R. 27, p.35-7.
ODM, 1957, M.R.C. 2, p.56.
Northern Miner, 1954, March 25, p.3.

Zenmac (Zenith) Mine (Producer)

Main Metals: Zn, Cd, Cu, Ag.

Location: 48°45' - 87°15'; 13 miles NNW of Schreiber.
Reference: ODM map 2137.

Geology: Two deposits occur in massive gabbro. The main deposit consists of a fracture zone containing irregular lenses of massive sulphides. A tabular body of amphibolite occurs 150 feet below the main deposit. It strikes NW, dips 35-45NE and attains a thickness of about 60 feet. The gabbro above the amphibolitic unit is massive where mineralization is most evident, and lacks pronounced chlorite, sericite, carbonate and epidote alteration.

Economic Features: The main, or No. 1 deposit, strikes NW, dips 35-45NE and consists of three types of mineralization: (1) irregularly shaped and randomly scattered lenses of coarsely crystalline sphalerite with some chalcopyrite and pyrrhotite; (2) small veinlets of sphalerite along fractures and (3) disseminations of sphalerite in the host rock. It has a maximum lateral length of 700 feet along a NW strike, an average thickness of 17.5 feet and a down-dip depth of up to 500 feet. The No. 2 zone, located 500 feet NW of the No. 1, dips 60NE and occurs along a sheared zone that has been traced for 350 feet in a direction N70W. It consists of irregular masses and lenses of sphalerite with minor amounts of chalcopyrite and pyrrhotite. When production began in 1966, ore reserves were estimated at 141,288 tons grading 23.3% Zn and 0.25% Cu (M.R.B., files).

Ownership: Zenmac Metal Mines Ltd.

History: 1898-99 1,065 tons ore averaging 45% Zn shipped.
1899-1900 2,700 tons ore mined and concentrated by Grand Calumet Mining Company Ltd.
1952-53 Considerable diamond drilling by Zenmac Metal Mines Ltd.
1964-68 Underground development; shaft sunk to a depth of 425 feet, levels established at 150 feet, 275 feet and 400 feet, considerable lateral development and d.d. Erection of surface plant facilities. Production started in 1966.

References: ODM, 1964, G.R.27, p.39-43.
M.R.B., Ottawa, mineral files.

48°45' - 87°30'

Moffat Strait Prospect

Main Metals: Cu.

Location: 48°45' - 87°30'; North end of Moffat Strait, St. Ignace Island, Lake Superior.
Reference: ODM map 2137.

Geology: Four mineralized zones, each consisting of vertical, chalcocite-bearing, calcite stringers in flat-lying amygdaloidal lava, strike east-west. Three occur west of Moffat Strait on the shore of St. Ignace Island; a fourth is found east of the strait on Simpson Island.

History: 1954-55 Surface work by Horlac Mines Ltd. and 8 d.d. holes aggregating 510 feet.

References: ODM, 1957, M.R.C. 2, p.50.

48°45' - 87°45'

Otter Bay Prospect

Main Metals: Cu.

Location: 48°45' - 87°45'; St. Ignace Island, east of St. Ignace Harbour.
Reference: ODM map 2137.

Geology: Two mineralized zones, striking about N45E, have been located in flat-lying Keweenaw amygdaloidal lavas. The north zone, tested by three drill holes over a length of 175 feet, consists of a steeply-dipping body of calcite stringers over a width of about 30 feet. The calcite stringers contain chalcocite, which also occurs as amygdule fillings, and disseminated grains in the lava, between and bordering the calcite stringers.

The south zone lies 400 feet southeast of the north zone. It is of similar character and has been tested by five drill holes over a length of 1,000 feet. The holes were all bored from southeast to northwest at angles of 45° and intersected mineralized rock over core lengths ranging from 11 to 26 feet.

History: 1954 Surface work by Horlac Mines Ltd.

1955 8 d.d. holes, aggregating 523 feet by Horlac Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.51.

48°45' - 91°00'

Lawrence Prospects

Main Metals: Cu, Ni.

Location: 48°45' - 91°00'; Prospect No. 1: Three miles NNE of Quetico station and 1 mile S of the E end of Chief Peter Lake; prospect No. 2: Three miles NNW of Quetico station and 3/4 of a mile S of the W end of Chief Peter Lake.

Reference: ODM map 2065.

Geology: Prospect No. 1: The area is underlain by schistose metasediments, which strike NE and dip vertically, intruded by a body of gabbro and related rocks. The deposit is exposed in a rusty-weathering outcrop, 20 feet in its maximum dimension, of coarse-grained amphibolite carrying disseminated grains of pyrite, pyrrhotite, and chalcopyrite. About 800 feet to the NE is a second exposure, 40 feet in its maximum dimension, of similar mineralized material, cut by quartz veins up to 2 inches in width.

Prospect No. 2: The deposit consists of small lenses of disseminated sulphides in gabbro and granodiorite intrusive into schistose metasediments. Sampling indicated the presence of nickel and copper.

Economic Features: Prospect No. 1: Grab samples from an old trench assayed 2.22% Cu, 0.41% Ni and 0.06 oz./ton Pt. A 5-foot section from d.d. hole No. 3 assayed 0.01 oz./ton Pt, 0.01 oz./ton Pd, 0.33% Ni and 1.18% Cu.

History: Prior to 1930 Trenching and d.d. by Spence Development Company.

1957 6 d.d. holes on prospect No. 1 aggregating 2,412 feet and 6 d.d. holes on prospect No. 2 aggregating 2,269 feet by Nashua Exploration and Mining Ltd.

1967 16 d.d. holes aggregating 3,289 feet on both prospects by Midland Nickel Corp. Ltd.

References: ODM, 1957, M.R.C. 2, p.54.

ODM, Port Arthur files.

49°00' - 86°15'

Baseline Prospect

Main Metals: Cu, Ni, Au.

Location: 49°00' - 86°15'; East shore of Drainage Lake.

Reference: ODM map P.494.

Geology: A dike-like body of anorthosite occurs along the east shore of Drainage Lake between syenite and sediments. The body ranges in width from 100 to 250 feet, strikes N20E from McKergow's base line for 3,200 feet, and dips vertically to steeply E; northward the strike swings to N45E and the dip becomes 50SE. Throughout its exposed length, the anorthosite is mineralized with disseminated pyrite, pyrrhotite and subordinate chalcopyrite.

History: 1954 Geol. and aeromagnetic surveys and 6 d.d. holes aggregating 1,571 feet by Baseline Mines Ltd.

1968 6 d.d. holes totalling 1,517 feet by Maria Mining Corp. Ltd.

References: ODM, 1957, M.R.C. 2, p.46.

ODM, Port Arthur files.

Drainage Lake Prospect

Main Metals: Ni.

Location: 49°00' - 86°15'; 1 mile SW of Drainage Lake.

Reference: ODM map P.494.

Geology: Mineralization consists of disseminated pyrite and pyrrhotite in a dike-like body of anorthosite, lying between hornblende syenite to the NW and granite gneiss to the SE. The anorthosite body is up to about 1/4 mile in width, strikes N45E and dips 50SE.

Economic Features: Values in nickel are reported to be low.

History: 1954 Airborne magnetic and scintillometer surveys, trenching and geological mapping by Prospectors Airways Company Ltd.

References: ODM, 1957, M.R.C. 2, p.61.

Killala Lake Prospect

Main Metals: Cu, Ni.

Location: 49°00' - 86°15'; Approx. 1 mile NE of Killala Lake.
Reference: ODM map P.382.

Geology: The deposit lies within the gabbro of the Killala Lake alkalic complex throughout which are found small amounts of disseminated pyrrhotite. A zone of massive to disseminated pyrrhotite, containing a little chalcopyrite, has been traced by drilling for a distance of 1,100 feet on the west side of, and close to or bordering, a north-south fault. The best mineralization, across a horizontal width of 30 feet, is found at the north end of the zone where the strike changes to N10W.

Economic Features: Values in nickel and copper are reported to be low.

History: 1954 Aeromagnetic and SP surveys and 13 d.d. holes aggregating 7,840 feet by Killala Lake Mines Ltd.

References: ODM, Port Arthur files.
ODM, 1957, M.R.C. 2, p.52.

Sandspit-Popover Prospect

Main Metals: Cu.

Location: 49°00' - 86°15'; North end of Sandspit Lake.
Reference: ODM map P.382.

Geology: The deposit lies within the gabbro of the Killala Lake alkalic complex throughout which are found small amounts of disseminated pyrrhotite. It appears to be closely associated with a steeply-dipping or vertical, graphitic fault zone striking N50E and has been traced by drilling for a length of about 1,200 feet. The deposit consists of streaks and patches of massive pyrrhotite, with minor chalcopyrite, alternating with gabbro containing finely disseminated sulphides. The best widths and values occur where the fault swings locally to assume a strike of N30E.

Economic Features: The best intersection was obtained in hole No. 5, drilled at an angle of 45°. Here a core length of 50 feet was found to average 0.14% Cu. Low values in nickel have also been indicated.

History: 1954 Aeromagnetic and resistivity surveys and 12 d.d. holes aggregating 4,715 feet by Killala Lake Mines Ltd.

References: ODM, Port Arthur files.
ODM, 1957, M.R.C. 2, p.52.

49°00' - 87°15'

Burstrom Prospect

Main Metals: Cu, Au, Ag.

Location: 49°00' - 87°15'; 1/2 mile west of Big Duck Lake.
Reference: ODM map 2023.

Geology: The deposit, 75 feet long and up to 20 feet wide, consists of two, parallel, copper-bearing quartz veins along a contact between hornblende schist and quartz porphyry. The quartz contains disseminated pyrite and chalcopyrite.

Economic Features: A seven-foot width, exposed in an open cut and shaft, assayed approximately 4% Cu (ODM, M.R.C. 2).

History: Open cut 22 feet long; shaft 25 feet deep.
1959 One d.d. hole, 240 feet long, by KRNO Mines Ltd.

References: ODM, 1961, G.R.27, p.23.
ODM, Port Arthur files.

49°00' - 87°30'

Kabamichigama Prospect

Main Metals: Cu, Au.

Location: 49°00' - 87°30'; 3/4 mile N of Kabamichigama Lake, approx. 30 miles NE of Nipigon.

Geology: Massive to gneissic granitic rocks are transected by a fracture zone, about 125 feet wide, which strikes N50-55W and dips steeply E. The fracture zone consists of a mass of quartz veins cementing angular fragments of intermediate to mafic volcanic material. Sulphide mineralization includes abundant pyrite, with a lesser amount of chalcopyrite and a minor amount of bornite. Chalcopyrite occurs as irregular, discrete patches, more closely associated with the volcanic fragments.

Economic Features: Mineralized portions of the breccia zone have been traced on surface for a strike length of 800 feet over widths of 8 to 17 feet.

An EM survey has traced an anomalous zone for a strike length of 4,000 feet.

Diamond drilling encountered the following copper mineralization: Hole No. 1 intersected 87 feet of mineralization of which 19 feet assayed 1% Cu. Hole No. 2 cut 57 feet of mineralization grading 0.54% Cu (Northern Miner, 1968).

History: 1967 Surface work.

1968 EM and MAG surveys and d.d. by Anglo American Nickel Mining Corp. Ltd.

References: ODM, Port Arthur files.

Northern Miner, 1968, June 13, July 18, Aug. 15.

49°00' - 87°45'

Barker Prospect

Main Metals: Cu.

Location: 49°00' - 87°45'; Glacier Creek, 19.5 miles N of Gurney station and 3.5 miles E of Cosgrave Lake.

Reference: ODM map 2137.

Geology: A strongly sheeted quartz vein, with numerous altered wall-rock inclusions, follows the contact between a Keweenawan diabase dike and Archean granite. Mineralization consists of pyrite and chalcopyrite in quartz-carbonate veins.

Two copper deposits have been found. One vein has been traced for a distance of 250 feet with a width of 2 to 5 feet; a second vein is located 3/4 mile to the NE and has been traced for a length of 800 feet.

History: 1965 Surface prospecting and 10 d.d. holes aggregating 1,445 feet by R. Barker.

References: ODM, 1964, P.R. 1964-6, p.54.

ODM, Port Arthur files.

Potter Prospect

Main Metals: Cu.

Location: 49°00' - 87°45'; Glacier Creek, 19 miles N of Gurney station;
3.5 miles SE of Cosgrave Lake.

Reference: ODM map 2137.

Geology: Mineralization consists of disseminated pyrite and chalcopyrite in breccia fragments along a vertical fault zone striking N20E. The fault zone is up to about 100 feet in width, and lies along the contact of a schist-gneiss complex and granite. The breccia fragments are cemented by feldspar veins and quartz.

Economic Features: The copper mineralization has been located in 10 drill holes, 200-400 feet apart, over a strike length of 2,400 feet. One drill hole is reported to have cored material averaging about 0.5% Cu over a width of 104 feet. To the south and north of the drilled section, where the fault zone is bounded to both the east and west by granite, the mineralization dies out.

History: 1955-56 5 d.d. holes by Ray Potter and Associates.

1956 Geol., MAG and EM surveys by Frobisher Ltd.

1956 8 d.d. holes by MacLeod-Cockshutt Gold Mines Ltd.

1967 Limited d.d. by Midland Nickel Corp. Ltd.

References: ODM, Port Arthur files.

ODM, 1957, M.R.C. 2, p.60.

49°00' - 89°30'

Lac Des Iles Prospect

Main Metals: Cu, Ni, Pt, Pd.

Location: 49°00' - 89°30'; S of Lac Des Iles.

Reference: ODM map 2135.

Geology: Gabbroic rocks, chiefly norite, contain eight similar mineralized zones in which sulphides occur as disseminated grains, coarsely crystalline aggregates and as rare fracture fillings. The sulphides in order of abundance, are pyrrhotite, chalcopyrite, pentlandite, pyrite and violarite.

Zone "C", to date the most important deposit, measures 500 feet in length and up to 150 feet in width. The host rock is predominantly norite containing segregations of anorthosite. The sulphides are disseminated irregularly throughout and constitute about 5% by volume of the mineralized zone.

Host rock alteration products in the mineralized zones include sericite, chlorite and epidote.

Economic Features: Bulk samples from each mineralized zone ranged from 65 to 95 pounds. Copper and nickel assays ranged from 0.30 to 0.47% Cu and 0.24 to 0.46% Ni. The highest platinum and palladium assays recorded were 0.032 oz./ton and 0.34 oz./ton, respectively.

History: 1963-64 Surface prospecting, trenching and geochemical surveys; geol., EM, IP, SP, and MAG surveys; and 11 d.d. holes aggregating 4,974 feet by Gunnex Ltd.
1966 13 d.d. holes aggregating 6,030 feet by Anaconda American Brass Ltd.

References: ODM, 1968, G.R.64, p.36-41.
ODM, Port Arthur files.

49°45' - 89°30'

Puddy Lake Prospect

Main Metals: Ni, Fe, Cu, Pt group, Co.

Location: 49°45' - 89°30'; Immediately N and S of Puddy Lake.
Reference: ODM map P.416.

Geology: The area is underlain by a lenticular serpentinite intrusive, approximately 3 1/2 miles long and 3/4 mile wide. The intrusive trends easterly, dips steeply S, and is concordant with a granitic paragneiss footwall and a metasedimentary-augen gneiss hanging wall. The intrusion, with Alpine-type characteristics, is a differentiated stock of completely serpentized pyroxenite, peridotite and dunite. Steatitization and bleaching are locally intense. Scattered within the stock are 10 zones which contain lenses and ramifying veinlets of massive, nickeliferous magnetite. Nickel, copper and cobalt sulphides, hematite, chromite and magnetite occur as minute, discrete grains disseminated irregularly throughout the rock. Near the E end of the property, and S of the Lake, narrow millerite-bearing shear zones have been located.

Economic Features: Low-grade but widespread iron-copper-nickel-cobalt-platinum mineralization occurs within the serpentinite stock. Metallurgical tests have indicated that an iron-nickel concentrate can be produced from the magnetite fraction of the crude rock. Tests further suggest that the sulphide metals are amenable to concentration by flotation and that a potential exists for large tonnage, low-grade nickel-copper-magnetite material. The presence of small amounts of platinum group metals, including iridium, and zinc, cobalt and silver have been confirmed.

History: Prior to 1964 Sporadic exploration for iron, nickel and platinum.
1964-67 Trenching; geol., geochemical, EM, MAG and SP surveys;
metallurgical testing, and 24 d.d. holes aggregating approx. 5,590
feet by Commerce Nickel Mines Ltd.
1967-68 Trenching, EM survey and 10 d.d. holes aggregating 3,106
feet by Newmont Mining Corp. of Canada Ltd.

References: ODM, 1966, P.R. 1966-1, p.20.
ODM, Port Arthur files.

50°00' - 87°30'

Carndesson Prospect

Main Metals: Ag, Pb, Zn, Au.

Location: 50°00' - 87°30'; 4 miles NW of Onaman Lake.
Reference: ODM map 2102.

Geology: Mineralization occurs as sulphide replacements within sheared zones located at, or near, the contacts between greenstone and narrow porphyry dikes, and is found intermittently over a NE strike of 2.4 miles. Several deposits containing galena and sphalerite have been located.

Economic Features: The most promising deposit, the No. 5 vein has been traced by drilling for a strike length of at least 300 feet. The vein has an average grade of 1.14% Pb, 1.58% Zn, 9.0 oz./ton Ag and 0.089 oz./ton Au across a mean width of 5.9 feet.

History: 1949 Surface prospecting and trenching, MAG survey and d.d. aggregating 5,018 feet by Coulee Lead and Zinc Mines Ltd.
1952 Surface work and d.d. by McIntyre Porcupine Mines Ltd.
1953 Property acquired by Carndesson Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.24.
ODM, Port Arthur files.

Headvue Prospect

Main Metals: Zn, Pb, Ag, Au.

Location: 50°00' - 87°30'; 1/4 mile E of Onaman River, between Onaman River and Onaman Lake.
Reference: ODM map 2102.

Geology: Mineralization consists of replacement bodies of quartz, sphalerite and galena along more or less parallel shear zones in tuffaceous sediments. Several lenticular bodies are arranged en echelon fashion along a NE strike length of 1,800 feet. The bodies dip 45-85NE and rake steeply to the SW.

Economic Features: Diamond drilling has indicated 13 ore shoots having an aggregate length of 2,870 feet and an average width of 13.2 feet. The shoots are estimated to contain 2,293 tons of ore per vertical foot to a depth of 260 feet and to have an average grade of 3.15% combined Pb-Zn (A. Hopkins, Aug., 1952).

History: 1951-52 EM survey and 29,951 feet of d.d. by Headvue Mines Ltd.

References: ODM, Port Arthur files.

Tashota-Nipigon Mine (Past Producer)

Main Metals: Au, Ag, Cu.

Location: 50°00' - 87°30'; 1 1/2 miles NW of Onaman Lake.

Reference: ODM map 2102.

Geology: The mine is located on a narrow belt of metavolcanics consisting of a complex series of mafic, intermediate and felsic flows, tuffs and sediments intruded by porphyry dikes. Massive granite is in contact with the metavolcanics 800 feet S of the shaft. The formations strike ENE, dip 60-70N and contain five ore shoots, closely associated with the porphyry dikes, made up of lenses and stringers of quartz within strong E-W shear zones. The ore shoots are mineralized with pyrite, pyrrhotite, chalcopyrite, magnetite and bismuthinite. Galena and sphalerite occur in the lower levels of the mine.

Economic Features: The most important ore shoot, the "A" zone, measured 200 feet in length, 3 to 13 feet in width, and extended from the surface to a depth of 925 feet. The shoot dips 70N and rakes 68W.

History: 1924 Some d.d. by the Nipissing Mining Company.

1934-38 Underground development: vertical shaft to 325 feet with 5 levels, the lowest at 625 feet, from which 4,360 feet of lateral work was completed. Production from 1935 to 1938 included 51,250 tons milled for 12,355.7 ounces Au, 14,527 ounces Ag and 360,306 pounds Cu.
1967 Underground rehabilitation; underground sampling and d.d.; surface magnetometer survey by Tashota-Nipigon Mines Ltd.

References: ODM, Port Arthur files.
ODM, 1938, Vol.47, pt.3, p.21-3.

50°15' - 86°45'

Newman Prospect

Main Metals: Cu, Ag, Au.

Location: 50°15' - 86°45'; One mile NW of the E end of the NE arm of O'Sullivan Lake.

Reference: ODM map 2102.

Geology: The mineral deposit lies within a zone of pillowed lava and metabasalt, from 20 to 70 feet in width, between two north-south dikes of quartz-feldspar porphyry; it appears to be closely associated with a breccia zone striking N10E. The mineralization lies in two parallel bodies, one along the west contact of the east porphyry dike, the other along the east contact of the west porphyry dike. Both bodies are up to 20 feet in width, dip vertically to steeply east, and consist of disseminated pyrrhotite, pyrite, and chalcopyrite in the metavolcanics. The east body has been traced for 120 feet on the surface in a north-south direction; the west body, 150 feet.

Economic Features: Channel samples from the No. 1 or east body averaged 1.64% Cu across a width of 10 feet; on the No. 2, or west body, 0.47% Cu across a similar width. The No. 2 zone was estimated by company geologists to average 1% Cu or better on the surface. Sampling also indicated gold and silver to be present, but in small amounts.

History: 1955 Surface work, dip needle, geol. and EM surveys and 14 d.d. holes by New Athona Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.26.

50°15' - 87°00'

Copper Jim Prospect

Main Metals: Cu, Ag, Au.

Location: 50°15' - 87°00'; N shore of the E arm of O'Sullivan Lake.

Reference: ODM map 2102.

Geology: The mineralization occurs in brecciated and carbonatized rhyolite enclosed by pillow lavas striking NE. Disseminated to massive iron sulphides, with some chalcopyrite, have been traced for a strike length of 600 feet and found to occur across horizontal widths of up to 35 feet.

Economic Features: Grab samples from two surface trenches were found to contain from 2.78 to 7.43% Cu and from 0.03 to 0.07 oz./ton Au. A sample of massive sulphides from a third trench assayed 6.45% Cu, 3.62 oz./ton Ag and 0.06 oz./ton Au.

History: 1954-55 Surface work and 13 d.d. holes aggregating 6,209 feet by Copper Jim Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.24.

50°15' - 87°30'

Kendon Prospect

Main Metals: Zn, Cu, Ag, Au, Pb.

Location: 50°15' - 87°30'; 1 1/2 miles W of Marshall Lake and 1/2 mile E of Gripp Lake.

Reference: ODM map 2102.

Geology: The property is underlain by NW-trending and NE-dipping quartzitic metasediments of the Marshall Lake group. Sphalerite, chalcopyrite and pyrite with minor galena occur as widespread massive streaks and disseminations within the metasediments.

Economic Features: Exploration by Jacobus Mining Corp. Ltd. outlined a NE-trending zone having a minimum length of 1,350 feet and an average width of 12 to 13 feet (Northern Miner).

Reserves of 115,000 tons grading 1.37% Cu, 5.91% Zn, 2.85 oz./ton Ag and 0.046 oz./ton Au are indicated (Northern Miner, 1968).

Ownership: Kendon Copper Mines Ltd.

History: 1962-63 Surface work, MAG and EM surveys and considerable d.d. by Jacobus Mining Corp. Ltd.

1966-68 Geophysical surveys and considerable d.d. by Kendon Copper Mines Ltd.

References: ODM, Port Arthur files.

Northern Miner, 1962, Dec. 13, p.14.

Northern Miner, 1968, April 25, p.13.

Northwest Territories Prospect

Main Metals: Zn, Cu, Ag.

Location: 50°15' - 87°30'; 1/2 mile W and 1 mile WSW of Marshall Lake.

Reference: ODM map 2102.

Geology: The area is underlain by NW-trending and NE-dipping quartzitic metasediments of the Marshall Lake sedimentary group. Sulphide mineralization confined to a wide, strong shear zone occurs as massive lenses, up to 10 feet thick, streaks and disseminations. The mineralized zone consists of pyrite, sphalerite and chalcopyrite, strikes at N70E and dips 75N, and plunges 35NE. This zone is believed to be a continuation of the zone outlined on the Kendon Prospect.

Economic Features: A mineralized zone has been outlined on the property but statistics for tonnage, dimensions and grade have not been reported at the time of writing.

Ownership: Northwest Territories Copper Mines Ltd.

History: 1962-63 Surface work, MAG and EM surveys and considerable d.d. by Jacobus Mining Corp. Ltd.

1963 Some d.d. by Marshall Lake Mines Ltd.

1967-68 Considerable d.d. by Northwest Territories Copper Mines Ltd.

References: ODM, Port Arthur files.

Teck Prospect

Main Metals: Cu, Zn.

Location: 50°15' - 87°30'; One mile S of Gripp Lake and 1/4 mile E of the Nipigon Provincial Forest.

Reference: ODM maps 2102, 1958-1.

Geology: The deposits lie in micaceous quartzites of the Marshall Lake group which strike N35W and dip vertically. Four principal sulphide occurrences have been located.

The Main, or A zone, is exposed in trenches for a length of about 30 feet along the regional strike. It consists of micaceous quartzite with disseminated sulphides and thin stringers carrying chalcopyrite with a little pyrite and pyrrhotite. Drilling indicated a width of from 15 to 20 feet.

The narrower B zone lies about 100 feet NNW of the A zone, which it resembles in character. It is less than 10 feet in width and is not exposed on surface.

The C zone, which lies about 200 feet SSE of the A zone, was also indicated by drilling. It is similar to the A zone in character, but is much wider (50 feet) and of lower grade.

The fourth deposit lies 400 feet NE of the A zone. It consists of a narrow band of fractured amphibolite, mineralized with sphalerite, a little chalcopyrite and pyrite, and a trace of pyrrhotite. Numerous other copper deposits are located on the property, but all appear to be of restricted size and erratically distributed in the micaceous quartzites of the Marshall Lake group.

Economic Features: The A zone, where exposed on the surface, and the B zone, where intersected in a drill hole, were found to contain abundant chalcopyrite. But neither zone could be traced for any appreciable length along the regional strike. The C zone was found to be much lower in grade than either the A or the B zones. The zinc deposit is narrow and appears to have little commercial value.

History: 1955 Trenching; ground and airborne EM and MAG surveys, geol. surveys, and 20 d.d. holes aggregating 8,309 feet by Teck Exploration Co. Ltd.

References: ODM, 1957, M.R.C. 2, p.27.
ODM, 1958, Vol.67, pt.3, p.16-18.

50°15' - 88°15'

Despard-Ferland Prospect

Main Metals: Cu.

Location: 50°15' - 88°15'; One-half mile W of Seymour Creek and 6 miles N of Lake Nipigon.
Reference: ODM map 2100.

Geology: The deposit is a zone of sulphide mineralization in a garnetiferous, schistose amphibolite, along or close to the north boundary of a feldspar-hornblende gneiss. The zone strikes N80E and dips 40-60N. It is up to 30 feet wide and is made up of 2 to 3 parallel bodies, one to 8 feet thick, and heavily mineralized with pyrite, pyrrhotite and subordinate chalcopyrite.

Economic Features: The sulphide content of the mineralized zones averages 50% or higher. All diamond drill hole intersections were found to average less than 0.5% Cu, with negligible amounts of nickel and precious metals.

History: 1955 Dip needle survey and 4 d.d. holes aggregating 534 feet by W. Despard.
1961-62 EM and MAG surveys and 4 d.d. holes totalling 914 feet by Mandarin Mines Ltd.

References: ODM, Port Arthur files.
ODM, 1968, G.R.55, p.41-42.

50°45' - 86°30'

Shawmin Prospect

Main Metals: Zn, Ag, Cu, Pb.

Location: 50°45' - 86°30'; Approx. 3 miles NE of Melchett Lake.

Reference: ODM map 2102.

Geology: The property is underlain by siliceous, gneissic sediments, consisting of a succession of thin bands of quartz-mica and biotite schists, trending N60-65E and dipping steeply N. Mineralization consists of a series of small, parallel lenses heavily mineralized with sphalerite associated with some pyrite and lesser galena and chalcopyrite. The lenses range in width from 1/2 inch to over 5 inches, and in length from 3 feet to over 20 feet. The lenses are from an inch to 12 inches apart and occur in groups, forming the mineralized zones. Several parallel zones have been found across a width of 1,000 feet. Most of the zones range in width from 2 to 6 feet. The "Main" and "No. 3" showings attain widths of 45 feet and 30 feet and exposed lengths of 110 feet and 150 feet, respectively.

Economic Features: Two channel samples taken across the main zone returned an average, across 36.1 feet, of 2.78 oz./ton Ag, 3.17% Zn, 0.38% Cu, 0.18% Pb; and across 26.5 feet, of 1.54 oz./ton Ag, 2.26% Zn, 0.22% Cu, and 0.11% Pb. Diamond drilling encountered only minor amounts of sphalerite.

History: 1960 Stripping and trenching, geochemical and SP surveys and 6 d.d. holes aggregating 1,553 feet by Lun-Echo Gold Mines Ltd.
1965 4 d.d. holes totalling 1,150 feet by Shawmin Explorations Ltd.
1968 EM and MAG surveys by Chimo Gold Mines Ltd.

References: ODM, Port Arthur files.

50°45' - 87°00'

Kayedon Lake Prospect

Main Metals: Zn, Pb, Ag, Cu.

Location: 50°45' - 87°00'; Approx. 1 1/2 miles N of Melchett Lake.

Geology: The property is underlain predominantly by metasedimentary rocks consisting of conglomerate, arkose, greywacke and mica and garnet schists, trending E-W and dipping steeply N. The mineralized zone is a quartz-carbonate-sericite schist at least 300 feet wide. Mineralized outcrops have been traced for a strike length of one-half mile. Abundant pyrite, disseminations and streaks of pyrite, chalcopyrite, sphalerite and galena are widespread in the rocks. Silicification and quartz veining accompany some of the better mineralization.

Economic Features: Assays of the mineralized rock from surface trenches returned high zinc values. One character sample gave 14.85% Zn, 0.13% Cu, 0.92 oz./ton Ag and 0.30 oz./ton Au. Drilling intersected widespread but low grade mineralization. Hole N-4 cut 2.0 feet of material grading 8 25% Zn, 1.08% Pb, 0.76 oz./ton Ag and 0.02 oz./ton Au.

History: 1967-68 Surface prospecting and trenching, EM and MAG surveys, 10 d.d. holes aggregating 3,731 feet by Nakina Mines Ltd.

References: ODM, Port Arthur files.

51°00' - 88°45'

Leitch Prospect

Main Metals: Cu, Ni, Co.

Location: 51°00' - 88°45'; E shore of Shabuskwia Lake.
Reference: ODM map 2148.

Geology: The showing is reported to be an outcrop of anorthositic gabbro, measuring 30 feet by 60 feet, carrying abundant chalcopyrite, pyrrhotite, and pyrite. The outcrop lies in swampy ground, and the attitude of the deposit has not been reported.

Economic Features: Three grab samples taken from the outcrop indicated from 0.52 to 2.30% Cu, from 0.38 to 0.62% Ni and from 0.21 to 0.26% Co.

History: 1956-57 Surface work, EM and MAG surveys, and 11 d.d. holes aggregating 1,764 feet by Leitch Gold Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.26.
ODM, Port Arthur files.

51°15' - 88°30'

Weese Lake Prospect

Main Metals: Cu.

Location: 51°15' - 88°30'; NW shore of Weese Lake, approx. 14 miles E of Shabuskwia Lake.

Reference: ODM map 2148; GSC map 8-1961.

Geology: To the E, the area is underlain by a metavolcanic-metasedimentary series of rocks of N-S strike and E dip. Between these and a granodiorite gneiss to the W are two sill-like intrusions of anorthosite. All rocks are cut by a gabbro which occurs as sills in the layered rocks and as irregular dikes in the anorthosite. Sparse but widespread sulphide mineralization is found in both the layered rocks and in the anorthosite. Within the anorthosite, chalcopyrite occurs with quartz in several narrow shear zones, and with nickeliferous pyrrhotite as disseminated grains.

Economic Features: A copper-bearing zone approximately 2,800 feet long but of tenor below economic limits, has been indicated (J.A. McNamee). Drilling of the "Cryderman" zone intersected 18 feet of gabbro in which chalcopyrite and pyrrhotite occur in narrow veins, disseminations and irregular patches. Except for 2.4 feet of core which assayed 1.75% Cu, this intersection gave low values ranging from 0.12 to 0.38% Cu.

History: 1962-63 MAG and EM surveys, trenching, geol. survey and 9 d.d. holes aggregating 2,715 feet by New Jersey Zinc Exploration Company (Canada) Ltd.

References: ODM, Port Arthur files.

51°15' - 88°45'

Boylen Prospect

Main Metals: Cu, Zn, Pb, Ag.

Location: 51°15' - 88°45'; 3 miles S of Petawanga Lake on the Albany River.

Reference: ODM map 2148.

Geology: Intercalated metavolcanic and metasedimentary rocks and granite gneiss of E-W strike and steep S dip, intruded locally by altered gabbro, underlie the area. Mineralization consists of chalcopyrite, pyrrhotite, pyrite, galena, sphalerite and magnetite disseminated in the metavolcanic and metasedimentary rocks, and chalcopyrite disseminated in gabbro.

Diamond drilling has intersected several sulphide-bearing zones containing up to 15% sulphides and attaining widths of up to 24 feet.

Economic Features: Drill hole 343-3 intersected two 10-foot mineralized zones assaying 4.27% Zn, 0.28% Pb, and 0.28 oz./ton Ag; and 2.14% Zn, 0.19% Pb and 0.15 oz./ton Ag. Drill hole 343-8 intersected a 1.2-foot zone assaying 0.20 oz./ton Ag and 4.01% Cu.

History: 1961-62 Airborne EM, MAG and scintillometer surveys; ground EM and MAG surveys; trenching, geol. survey, and 11 d.d. holes aggregating 4,671 feet by M.J. Boylen Engineering.

References: ODM, Port Arthur files.

THUNDER BAY DISTRICT

OCCURRENCES

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Abrey Tp.; 6½ mi. S of Longlac station.	ODM map 2102. ODM, Port Arthur files.	Zn	Disseminated to massive sphalerite in sericite-talc schist over a width of 23.5 feet and a length of 200 feet. EM and geol. surveys and trenching by Mining Corp. of Canada Ltd., in 1963.
Blake Tp.; 3½ and 4½ mi. SE of Moose Hill (Blake).	ODM map 2065.	Cu	Minor disseminated chalcopyrite near the base of a diabase sill.
Crooks Tp.; 3 mi. SW of Cloud Bay, Post Office (Bahleida-Hacl).	ODM, M.P. 16, p.56-57.	Cu, Ni	Pyrite and copper-nickel sulphides as fracture fillings and lensoid pods along the S edge of a diabase dike.
Crooks Tp.; 2 mi. W of Pine Bay (Bolduc).	ODM map 2065. ODM, Port Arthur files.	Cu, Ni	Copper and nickel sulphides filling fractures and disseminated in diabase dikes. SP survey by T.W. Page, in 1957.
Crooks Tp.; at entrance to Cloud Bay (Cloud Bay).	ODM map 2065. GSC, 1935, Paper 35-1, p.8.	Cu, Ni	Chalcopyrite and pyrrhotite disseminated in a diabase dike.
Crooks Tp.; 2 mi. E of Cloud Lake (Salem).	ODM, Port Arthur files.	Cu	Native copper in amygdaloidal basalt float. Drilling has indicated the basalt extends for 100 feet in length, 40 feet in width and is 10 to 15 feet thick. Geochemical survey and 11 d.d. holes for 437 feet by Salem Explorations Ltd., in 1963.
Davies Tp.; W central part (Labrador).	ODM map P.382. ODM, 1968, G.R.68, p.16.	Cu	Quartz, carbonate, pyrrhotite and minor chalcopyrite occur in sheared, amphibolite migmatite.
Devon Tp.; SE part ½ mile W of the Arrow River (Arrow River).	ODM map P.466. ODM, Port Arthur files.	Cu, Ni	Chalcopyrite and pyrrhotite disseminated in a diabase dike and concentrated in fractures along a shear zone marginal to the dike. Trenching, MAG and geol. surveys by Denison Mines Ltd., in 1962.
Devon Tp.; in the Pigeon River, ½ mi. NW of Pigeon River Post Office (Pigeon River).	ODM map 2065. GSC, 1935, Paper 35-1, p.4.	Cu, Ni	Chalcopyrite and pyrrhotite occur disseminated in diabase.
Devon Tp.; SE¼, claim 61511 (Pylychuck).	ODM map P.466. ODM, Port Arthur files.	Cu, Ni	Chalcopyrite and pyrrhotite in a zone along the S contact of a diabase dike with Rove shale. A 50-foot prospect shaft; in 1966, 2 d.d. holes aggregating 514 feet by Seemar Mines Ltd.
Devon Tp.; S part (South Devon).	ODM map P.466. ODM, Port Arthur files.	Cu, Ni	Chalcopyrite and pyrrhotite disseminated in a diabase dike, 600 to 800 feet wide, and associated with shear zones marginal to the dike. Drilling by Cominco Ltd. in 1964.
Dorion Tp.; N part, lot 12, con. VI (Anderson).	ODM, 1929, Vol.38, pt.6, p.73.	Pb, Zn	A breccia zone in Sibley sandstone, contains quartz, barite, calcite, galena and sphalerite.
Dorion Tp.; central part; lot 10, con. VI and VII (Malotte Lake).	ODM map 2137. ODM, 1929, Vol.38, pt.6, p.73.	Pb	A breccia zone in Sibley sandstone, 5 to 7 feet wide, is filled with quartz and lesser barite and galena.
Dorothea Tp.; SW¼ (Hopkins, A.P.E. Occurrence).	ODM map P.479. ODM, Port Arthur files.	Cu, Mo	Disseminated chalcopyrite and molybdenite in quartz diorite.
Duckworth Tp.; near E boundary (Duckworth).	GSC map 432A.	Cu	Copper mineralization within Archean metavolcanics.
Elmhirst Tp.; SW¼ (Elmwood).	ODM, Port Arthur files.	Zn,Cu,Pb,Au	Sphalerite and minor chalcopyrite and galena disseminated in a narrow shear zone in silicified intermediate volcanic rocks. 1952, some d.d. by Elmwood Mines Ltd.
Elmhirst Tp.; SE¼ (Garvey).	ODM, Port Arthur files.	Zn, Cu	Pyrite, minor chalcopyrite and sphalerite are disseminated in silicified andesite. 1967, 3 d.d. holes aggregating 668 feet by Paramaque Mines Ltd.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Elmhirst Tp.; N and S side of the Sturgeon River, near township boundary (Morrison).	ODM, Port Arthur files. Northern Miner, Oct. 12, 1967, p.7.	Cu,Zn,Au,Ag	Scattered chalcopyrite and sphalerite as disseminated grains and streaks in rhyolite. 1960-61 EM survey and d.d. by Martin-Sturgeon Mines Ltd.; 1966, d.d. by Norlex Mines Ltd.; 1967, EM survey by Kerr Addison Mines Ltd.
Gillies Tp.; S part, lot 1, con. III (Haywood).	ODM map 2065. Harris, F.R. and Fenwick, K.G., 1964, ODM, unpubl. rept.	Cu	Chalcopyrite and pyrite are disseminated irregularly in anorthositic gabbro near the base of a diabase sill.
Glen Tp.; lots 5L and 6L (Bishop).	ODM map 2137. ODM, 1929, Vol.38, pt.6, p.71.	Pb, Zn	Galena and sphalerite, with calcite, quartz and barite in a fault zone, in Sibley shaly dolomite; a 100-foot shaft and test pits on property.
Gorham Tp.; parts of lots 10, 11, con. II (Thunderhead Gold Mine).	M.R.B., Ottawa, mineral files. Canadian Mines Handbook, 1968-9, p.330.	Cu, Ni	Copper and nickel sulphides are associated with a mafic intrusive. Surface samples assayed 0.44% Cu and 0.02% Ni over 4 feet. Some d.d. by Thunderhead Gold Mines Ltd. in 1968.
Hagey Tp.; W end of Boyes Island in SE bay of Upper Shebandowan Lake (Kumpala).	ODM maps 2065, 2128. ODM, Port Arthur files.	Cu	Pyrite, chalcopyrite and magnetite in mafic metavolcanic rocks. 1966, trenching by Shawmin Explorations Ltd.
Hagey Tp.; SE ¼ (Lower Shebandowan).	ODM map 2065. ODM, Port Arthur files.	Cu, Ni	Sparse sulphide mineralization disseminated in peridotite and along slip surfaces in it. 1956, Geol. survey and trenching; 9 d.d.h. aggregating 3509 feet by Trans-Canada Explorations Ltd.
Hagey Tp.; ½ mi. N of Middle Shebandowan Lake (Middle Shebandowan).	ODM map 2128. ODM, 1968, G.R.53, p.23.	Cu	Copper mineralization in mafic metavolcanics intruded by narrow porphyry dikes. Four d.d. holes by F.E. Anderson.
Haines Tp.; S shore Loch McLean (Loch McLean).	ODM map 2127.	Cu	Cu mineralization in mafic metavolcanics.
Homer Tp.; shore of Lake Superior, 2½ mi. E of mouth of Pukaakwa River.	ODM map P.506.	Cu, Ag, Au	Scattered blebs of sulphides form 3 or 4 mineralized areas about 1 ft. in diameter in mafic metavolcanics. Sulphide areas form an irregular zone about 20 ft. long. Two grab samples assayed 3.20 and 2.35% Cu; 0.40 and 0.88 oz./ton Ag; and 0.02 and 0.12 oz./ton Au, respectively.
Homer Tp.; on shore of Lake Superior near SE corner of Tp.; location uncertain.	GSC, 1863, Geol. of Canada, p.704-705.	Cu,Pb,Zn,Mo	Quartz-carbonate veins contain pyrite, chalcopyrite, galena, sphalerite, and one vein is reported to contain molybdenite.
Irwin Tp.; NE ¼ (Brenbar).	ODM map P.481. ODM, 1936, Vol.45, pt.2, p.92-7.	Cu, Pb, Zn	Minor chalcopyrite, galena and sphalerite associated with quartz veins in chlorite schist. (Former Casey Contact Mines Ltd. gold property).
Irwin Tp.; NE ¼ (Quebec-Sturgeon River).	ODM map P.481. ODM, 1936, Vol.45, pt.2, p.36-45.	Cu,Zn,Au,Ag	Chalcopyrite and sphalerite associated with quartz veins in mafic metavolcanics. (Former Sturgeon River Gold Mines Ltd. gold and silver property).
Irwin Tp.; N of W end of Windigokan Lake (Windigokan Lake).	ODM map P.481.	Cu	2 pits, ½ mile apart, contain pyrite and chalcopyrite in mafic metavolcanics.
Jarvis Location; (1) central part, (2) Jarvis Peninsula, and (3) Jarvis Point (Jarvis).	ODM map 2065. GSC, 1935, Paper 35-1, p.7-9. ODM, Port Arthur files.	Cu, Ni	At (2) and (3), pyrite, pyrrhotite and chalcopyrite occur as irregular veinlets, up to 4 inches wide, in a 3-foot width of norite occurring in diabase. In (1) nickel and copper sulphides occur as segregations in a diabase dike. In 1958, (1) and (3) were tested by d.d. totalling 1443 feet by Claybar Uranium Mines Ltd.
Kirby Tp.; N shore Kirby Lake (Kirby Lake Occurrence).	ODM, Port Arthur files.	Zn	Pyrite, sphalerite and minor chalcopyrite in shear zone in hornblende schist. 1961, Surface prospecting and EM survey by Kateri Mining Company Ltd.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
McTavish Tp.; SE¼ of lot 3, con. I (Barker).	ODM, Port Arthur files.	Cu	Chalcopyrite, quartz and calcite in a breccia zone between Archean granite and Sibley shale. 1967, 13 d.d. holes totalling 1825 ft. by R. Barker.
McTavish Tp.; lots 5 and 7 (Caribou).	ODM, 1929, Vol.38, pt.6, p.78. GSC, 1931, Mem. 167, p.172.	Pb, Zn	Galena, sphalerite and traces of pyrite and chalcopyrite in a quartz-calcite-barite vein at the contact of a diabase dike and Sibley dolomitic sediments. Prior to 1900, limited underground development. Property known as the Caribou Mine.
McTavish Tp.; on S shore of Sheen Lake (Sheen Lake).	ODM map 2137. ODM, Port Arthur files.	Pb, Zn, Ag	Two occurrences of galena and sphalerite as disseminated patches within a breccia zone in Sibley sediments. In 1947, 7 d.d. holes aggregating 4000 ft. by Little Long Lac Gold Mines Ltd.
McTavish Tp.; 1.5 mi. NW of Pearl station (Wright Mine).	ODM map P.358. GSC, 1937, Mem. 167, p.164-165.	Pb,Cu,Au,Pt	Galena, sphalerite and chalcopyrite as seams and stringers irregularly distributed within a quartz-calcite vein at the contact between Archean granite and Sibley sediments. 1906-10, surface work and shaft 52 ft. deep by the Detroit-Algoma Company.
Meador Tp.; SE¼ (Bobjo).	ODM, Port Arthur files. ODM map 2102.	Cu	Chalcopyrite grains and blebs associated with quartz stringers in diabase. 1954, limited d.d. by Bobjo Mines Ltd.
Meador Tp.; S central part, W of Musca Lake (Holm or Brennan-Kenty Occurrence).	ODM, 1936, Vol.45, pt.2, p.91. ODM, Port Arthur files.	Cu, Au	Chalcopyrite associated with quartz veins in sheared felsic metavolcanics and tuff. 1967, limited d.d. by H.W. Holm.
Meador Tp.; SE¼ (Spooner).	ODM, 1936, Vol.45, pt.2, p.16. ODM map 2102.	Cu, Au	A shear zone, striking N10E and dipping 60E, in granite porphyry contains quartz stringers mineralized with chalcopyrite and pyrite.
Moss Tp.; NE¼ (Arcadia).	ODM map 2036. ODM, 1964, C.R.19, p.26. ODM, Port Arthur files.	Cu	Chalcopyrite in sheared, silicified rhyolite. 1957, EM and MAG surveys; 4 d.d.h. aggregating 1,329 ft. by Arcadia Nickel Corp. Ltd.
Oliver Tp.; 2 mi. NW of Murillo station (Murillo).	ODM map 2065.	Cu	Scattered chalcopyrite mineralization in the argillite-tuff unit of the Gunflint Formation.
Pardee Tp.; sec. 12, 13, con. VI (Isotalo).	ODM map P.467. ODM, 1968, C.R. Kustra, unpubl. rept.	Cu, Ni	Pyrite, chalcopyrite and pyrrhotite disseminated irregularly and fill fractures in a coarse-grained diabase dike. The mineralization occurs marginally along the S side of the dike.
Pardee Tp.; 3 mi. N of Pigeon River P.O. (McCuaig).	ODM map 2065. ODM, Port Arthur files.	Cu,Ni,Pt,Pd	Pyrite, pyrrhotite, chalcopyrite and pentlandite disseminated in coarse gabbro. The occurrence, referred to as the "McCuaig float", has been tested by trenching, diamond drilling and geophysical surveys.
Pardee Tp.; W end of Crystal Lake, on the S shore (Norway Lake).	ODM map P.467. ODM, Port Arthur files.	Ni	Massive segregations of pyrrhotite and pentlandite, about 12 ft. wide, on the N contact of a gabbro dike. 1966, trenching, 2 d.d. holes by Norway Lake Iron Mines Ltd.; 1967, 2 d.d. holes by Anaconda American Brass Ltd., for Norway Lake Iron Mines Ltd.
Pardee Tp.; lot 17A (Renshaw).	ODM map 2065. ODM, Port Arthur files.	Cu, Ni, Pt	Copper-nickel sulphide mineralization in gabbro. Mineral rights held by Thunder Bay Nickel Corporation Ltd.
Pearson Tp.; con. II, lots 18 and 19 (Ponka).	ODM map 2065. Pye, E.G., ODM, unpubl. rept.	Cu	Chalcopyrite and pyrite disseminated in anorthosite and concentrated in irregular segregations near the base of a diabase sill.
Pifher Tp.; 2 mi. E of Pifher Lake (Greenspar).	ODM, Port Arthur files.	Cu, Au	Pyrite, pyrrhotite, chalcopyrite and minor bornite occur as fracture fillings and disseminated grains in intermediate volcanics. 1965, surface work and limited d.d. by Greenspar Mines Ltd.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Pifher Tp.; 3.5 mi. SE of Pifher Lake (Kirkland-Hudson Bay).	ODM, 1936, Vol.45, pt.2, p.115.	Pb, Cu	A N-S fault in a feldspar porphyry dike contains quartz stringers mineralized with pyrite, chalcopyrite and galena.
Prince Location; ½ mi. S of Mink Point (Prince Mine).	ODM map 2065. Pye, E.C., ODM, unpubl. rept.	Cu, Ag	Minor chalcocite mineralization associated with a calcite-quartz-barite vein in a fault zone separating Rove shale and diabase. Some underground development for silver in 1846-48.
Sandra Tp.; N central part (Knight).	ODM, 1936, Vol.45, pt.2, p.98.	Cu, Au	Volcanic tuff and agglomerate containing quartz lenses mineralized with chalcopyrite and pyrite intruded by granite dikes.
Shabotik Tp.	Kustra, C.R., ODM, pers. com.	Cu, Ni, Pt	Copper and nickel sulphides disseminated in amphibolite portions of migmatite.
Tp. 80; 1 mi. N of Ripple station (Wincore).	ODM, Port Arthur files.	Zn, Ag	Massive sphalerite, up to 4 inches in width, in carbonate veins filling fracture zones in rhyolite. 1950, limited d.d. by Wincore Exploration Ltd.
Tp. 91; approx. 4 mi. NE of Ozone siding (Kama Hill).	ODM map 2137. ODM, 1929, Vol.38, pt.6, p.83.	Pb, Zn	Sphalerite and galena, with calcite and quartz gangue, filling a fault zone in Sibley dolomite.
Tp. 91; ½ mi. NE of Ozone siding (Lawrence).	ODM map 2137. ODM, 1929, Vol.38, pt.6, p.84.	Pb, Zn	Sphalerite and galena with quartz, amethyst and barite filling a fault zone in Archean granite.
Tp. 92; approx. 2 mi. NW of Ozone siding (Gordon).	ODM map 2137. ODM, 1929, Vol.38, pt.6, p.85.	Pb, Zn	Galena and sphalerite occur in calcite veins in granite.
Walters Tp.; N of the W end of Paint Lake (McCall Occurrence).	ODM, Port Arthur files.	Cu, Au	Massive chalcopyrite with quartz in metavolcanics. 1945, surface prospecting by Dajaty Mines Ltd.
47°45' - 86°00'; 2½ mi. N of Lake Superior, 4½ mi. E of E border of Homer Tp.; 4000 ft. N of E end of Pipe Lake.	ODM map P.506.	Cu	Mineralized area 1 to 2 ft. across in amphibolite, with disseminated pyrite and chalcopyrite. Grab sample assayed 0.17% Cu.
48°00' - 85°15'; about 1 mi. N of Mishibishu Lake.	ODM, 1940, Vol.49, pt.9, p.12.	Au, Pb, Cu	Primarily a gold prospect. Auriferous quartz veins in metavolcanics, contain pyrite, chalcopyrite and galena.
48°00' - 85°30'; N of East Pukaakwa River at lat. 48°02', long. 85°39'.	ODM map P.506.	Cu	Contact zone between mafic metavolcanics and granite, intruded by felsite, contains malachite-filled vugs. Zone is narrow, extends for a few ft. in direction N50E. Grab sample assayed 0.72% Cu.
48°00' - 85°45'; ¾ mi. S of McDougall Lake; Lorne Occurrence.	ODM, 1905, Vol.14, pt.1, p.337-8. ODM map P.506. ODM, Sault Ste. Marie, file SSM-605.	Fe, Cu	Chalcopyrite, pyrite, pyrrhotite and magnetite in iron formation; a 15-foot adit prior to 1954. Samples taken in 1954 gave nil Au, nil Ag, nil Zn, trace Cu.
48°00' - 89°00'; Pie Island in Thunder Bay, on Keefer Point (Keefer Point).	ODM map 2065. GSC, 1931, Mem. 167, p.187-8.	Pb, Zn	A vein breccia in Rove sediments containing calcite gangue, galena and sphalerite.
48°00' - 89°00'; S end of Thompson Island, in Thunder Bay (Thompson Island).	ODM map 2065. GSC, 1935, Paper 35-1, p.10-11.	Cu, Ni	Pyrrhotite and chalcopyrite disseminated in diabase dikes and marginal to dike walls.
48°00' - 89°15'; W end of Spar Island, in Thunder Bay (Spar Island).	GSC, 1935, Paper 35-1, p.10.	Cu	Chalcopyrite sparsely disseminated in diabase.
48°00' - 89°15'; N end of Victoria Island, in Thunder Bay.	ODM map 2065. GSC, Paper 35-1, p.7.	Cu, Ni	Pyrrhotite and chalcopyrite occur as vein-like masses, one ft. wide and up to 20 ft. long, in diabase dikes.
48°00' - 89°30'; Naomi Island, at entrance to Fine Bay (Naomi Island).	ODM map 2065. GSC, 1935, Paper 35-1, p.5.	Ni	Nickel sulphides in diabase dikes.
48°15' - 90°45'; S shore of Redfox Lake (East Redfox Lake).	ODM map P.393. ODM, Open File Rept. 5020, p.93.	Cu	Pyrite and chalcopyrite disseminated in rhyolite inclusions within dacite porphyry.
48°15' - 90°45'; NW shore of Home Lake (Home Lake).	ODM map 2149. ODM, 1968, G.R.66, p.25-7. ODM, Port Arthur files.	Cu, Zn	Pyrite, pyrrhotite, sphalerite, chalcopyrite and cuprite disseminated within a 5-ft. width in rhyolite. 1966, IP and MAG surveys by Can-Fer Mines Ltd.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
48°15' - 90°45'; ½ mi. W of the N end of Mowe Lake (Mowe Lake).	ODM map 2149. ODM, 1968, G.R.66, p.25.	Cu	Minor chalcopyrite associated with a small quartz vein in chlorite schist.
48°30' - 89°00'; ½ mi. W of the central part of Onion Lake (Onion Lake).	ODM map 2065. ODM, Port Arthur files.	Cu	Pyrite, pyrrhotite and chalcopyrite disseminated in silicified breccia enclosed by metagreywacke. 1956, Geol. mapping and 5 d.d. holes aggregating 893 ft. by N.R. Maki.
48°30' - 90°15'; ½ mi. N of Upper Shebandowan Lake, approx. one mile SW of Kashabowie station (Anderson).	ODM map 2128. ODM, 1968, G.R.53, p.22-3. ODM, Port Arthur files.	Cu	Pyrite and chalcopyrite in silicified metavolcanics. 1950, 2 d.d. holes aggregating 1,302 ft. by C.E. Anderson; 1962, 2 d.d. holes totalling 410 ft. by F.E. Anderson.
48°30' - 90°15'; 2 mi. SW of Kashabowie station and S of the Burchell Lake highway (Montco Occurrence).	ODM map 2128. ODM, 1968, G.R.53, p.27. ODM, Port Arthur files.	Cu	Minor chalcopyrite disseminated in pyrite-graphite schist.
48°30' - 90°30'; 4 mi. W of Upper Shebandowan Lake (Parry).	ODM map 2036. ODM, 1964, G.R.19, p.34. ODM, Port Arthur files.	Cu	Chalcopyrite mineralization in felsic metavolcanics. 1956, EM, SP and MAG surveys and 4 d.d. holes aggregating 1,343 ft. by Rio Tinto Canadian Exploration Ltd.
48°30' - 90°30'; 1½ mi. SE of the SE bay of Burchell Lake (Squeers Creek).	ODM, Port Arthur files.	Cu	Chalcopyrite and pyrite in felsic and mafic metavolcanics. Low assays were reported in drilling. 1963, EM survey and 5 d.d. holes totalling 1,872 ft. by North Coldstream Mines Ltd.
48°30' - 90°30'; NW shore of Burchell Lake (West Burchell Lake).	ODM map 2036. ODM, 1964, G.R.19, p.34.	Cu	Minor chalcopyrite in felsic metavolcanics. Limited d.d. by North Coldstream Mines Ltd.
48°30' - 90°45'; approx. 2 mi. WNW of the junction of Tilley Creek and the Obadinaw River (Obadinaw).	ODM map P.451. ODM, Open File Rept. 5020, p.89.	Cu	Minor pyrite, chalcopyrite and malachite in sheared quartz diorite.
48°45' - 85°45'; N of Dotted Lake (Fairservice).	ODM map 2146. ODM, 1968, G.R.72, p.61. ODM, Port Arthur files.	Zn	Short, narrow stringers of massive sphalerite in amphibolite. 1965, airborne EM and MAG survey by Irish Copper Mines Ltd.
48°45' - 85°45'; 7 mi. N of Hemlo station and ½ mi. W of Black River (Kusins).	ODM map P.494. ODM, 1968, G.R.72, p.61-3. ODM, Port Arthur files.	Zn, Pb, Ag	Sphalerite and galena disseminated in a pyritic, schistose silicified mafic metavolcanic; a grab sample contained 1.9% Zn, 0.94% Pb and 0.64 oz./ton Ag. 1965, 4 d.d. holes totalling 629 ft. by Cominco Ltd.
48°45' - 86°00'; Fallen Creek, approx. ½ mi. N of Fallen Lake (Fallen Lake).	ODM map 2099. ODM, 1967, G.R.43, p.44.	Cu	Minor malachite and rusty gossan along a fault in hornblende hornfels and amphibolite.
48°45' - 86°15'; 4 mi. SW of Skipper Lake (Ameranium).	ODM map P.494. ODM, Port Arthur files.	Cu, Ti	Chalcopyrite disseminated in fine-grained gabbro, and chalcocite and ilmenite disseminated in coarse-grained gabbro of the Port Coldwell alkalic complex.
48°45' - 86°15'; ½ mi. W of Huck Lake (Huck Lake).	ODM map P.382. ODM, Port Arthur files.	Cu	Minor chalcopyrite with pyrite and pyrrhotite disseminated in metasediments. 1957, trenching and 3 d.d. holes totalling 917 ft. by Kennco Explorations (Canada) Ltd.
48°45' - 86°15'; W of the S end of Wullie Lake, approx. 11 mi. NW of Marathon station; includes claims 2393, 3514, 2990 (Wullie Lake).	ODM, Port Arthur files.	Cu, Ni	Nickeliferous pyrrhotite and chalcopyrite disseminated in the basal, olivine gabbro phase of the Port Coldwell alkalic complex. 1965, one d.d. hole for 501 ft. by Seemar Mines Ltd.
48°45' - 86°30'; ½ mi. SE of Glory Lake (Glory Lake).	ODM map 2137. ODM, Port Arthur files.	Cu	Minor chalcopyrite, associated with quartz in a fault zone in granite. 1964, surface work and 1 d.d. hole for 272 ft. by M. Connell.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
48°45' - 87°15'; S end of Winston Lake, 13 mi. NW of Schreiber (Anderson).	ODM, 1967, G.R.27, p.21.	Cu	Pyrrhotite, pyrite and minor chalcopyrite disseminated in a narrow band of garnet-biotite gneiss. 1952, surface work and 5 d.d. holes aggregating 424 ft. by L.C. Anderson.
48°45' - 87°45'; NE coast of St. Ignace Island, Lake Superior (Addicks).	ODM map 2137. ODM, Port Arthur files.	Cu, Ag	Small amounts of native copper, bornite, chalcocite and native silver as amygdule fillings in Keweenaw basalt. 1964, 6 d.d. holes aggregating 1,540 ft. by Mentor Addicks.
48°45' - 88°00'; W side of St. Ignace Island, Lake Superior (Dampier).	ODM map 2137. ODM, Port Arthur files.	Cu	Small amounts of native copper as amygdule fillings in Keweenaw basalt. 1961, 3 d.d. holes aggregating 2,753 ft. by E. Dampier; 1968, 8 d.d. holes totalling 857 ft. by J.L. Carroll.
48°45' - 88°30'; one mi. N of Innes Lake (Innes Lake).	ODM map P.358. ODM, Port Arthur files.	Pb, Zn, Ag	Galena and sphalerite with calcite and barite as fracture fillings in Sibley dolomite. 1965, surface work by Central and Eastern Canada Mines Ltd.
48°45' - 88°45'; 2 mi. WNW of Innes Lake (Lebel).	ODM map 2137. ODM, 1929, Vol.38, pt.6, p.72-3.	Pb, Zn, Ag	A calcite-barite vein, with galena and sphalerite, in interbanded mica schist and gneiss cut by granite.
48°45' - 90°15'; N shore of Bolton Bay, Lac Des Mille Lacs (Edwards).	ODM, 1967, G.R.48, p.26. ODM, Port Arthur files.	Cu, Ag, Au	A breccia zone mineralized with quartz veins and chalcopyrite in rhyolite. 1965, EM survey by Kerr Addison Mines Ltd.
48°45' - 90°30'; SW end of island, one mi. S of Tunnel Island in Lac Des Mille Lacs (Lac Des Mille Lacs).	ODM map 2104. ODM, 1967, G.R.48, p.27.	Cu	Small amounts of malachite, chalcopyrite and bornite at contact between felsic flow breccia and metabasalt, near an intrusion of gabbro.
49°00' - 86°00'; 4 mi. E of Vein Lake (Barker-Dawd).	ODM, 1957, M.R.C. 2, p.46.	Cu	A strong fractured zone in hornblende syenite, 20 to 30 ft. wide and up to 1½ mi. long, is sparsely mineralized with pyrite and chalcopyrite and associated quartz stringers. Some surface work in 1955.
49°00' - 86°00'; 3½ mi. SE of Vein Lake (Baarts-Donaldson).	ODM map P.382. ODM, Port Arthur files.	Cu	Minor chalcopyrite in granite gneiss. 1965, EM survey by Kerr Addison Mines Ltd. and 4 d.d. holes aggregating 744 ft. by A. Knapp.
49°00' - 87°15'; ¼ mi. E of the S end of Heron Lake and 1½ mi. N of Big Duck Lake (Canabel).	ODM map 2023. ODM, 1964, G.R.27, p.24. ODM, Port Arthur files.	Pb, Zn, Ag	Minor galena and sphalerite in mica-garnet schist. 1958, 5 d.d. holes for 1,001 ft. by Valmont Mining Exploration Ltd.
49°00' - 87°15'; approx. ¼ mi. E of the N end of Winston Lake (Ciglen).	ODM map 2023. ODM, 1957, M.R.C. 2, p.47.	Zn	Pyrrhotite, sphalerite, pyrite and traces of chalcopyrite as disseminations, bands and streaks localized along the gneissosity of a silicified garnet-biotite gneiss. The zone is up to 17 ft. wide and has been traced 180 ft. 1952, trenching by S. Ciglen.
49°00' - 87°15'; ½ mi. N of Big Duck Lake (Dalsland).	ODM map 2023. ODM, 1964, G.R.27, p.31.	Zn	Pyrrhotite and sphalerite disseminated in hornblende schist over a width of 20 ft. 1958, one d.d. hole by Canabel Syndicate Ltd.
49°00' - 88°45'; ¾ mi. NW of Disraeli Lake (Commerce).	ODM map P.462. ODM, Port Arthur files.	Cu	Disseminated chalcocite, minor galena and very little native copper is confined to a 10-foot thick reef-like bed of fossiliferous, porous, vuggy dolomitic limestone. 1966, trenching and d.d. by Commerce Nickel Mines Ltd.
49°00' - 88°45'; SW tip of Disraeli Lake (Gilbert-McAteer).	ODM map P.462.	Cu	Chalcopyrite disseminated in a late phase of a Keweenaw diabase sill.
49°00' - 89°45'; S shore of Demars Lake (Demars Lake).	ODM map P.383. ODM, Open File Rept. 5009, p.42.	Cu, Ni	Copper and nickel sulphides disseminated in pyroxenite.
49°00' - 89°45'; E and W of the N end of Laurion Lake (Laurion Lake).	ODM map P.380.	Cu, Ni	Minor splashes and disseminations of pentlandite and chalcopyrite in noritic and amphibolitic rocks. Grab samples taken from trenches yielded 0.15 to 0.30% Cu and trace to 0.33% Ni.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
49°15' - 85°45'; NW end of Beavercross Lake and 18 mi. N of Manitowadge station (Beavercross Lake).	ODM map 2141. ODM, 1968, G.R.68, p.19.	Cu	Chalcopyrite associated with quartz-carbonate veins marginal to a diabase dike.
49°15' - 89°15'; 1.5 mi. SW of Wabikon Lake (Armstrong).	ODM, Port Arthur files.	Cu, Ag	Chalcopyrite and pyrite are disseminated in sheared andesite and quartz porphyry. 1964, IP survey by McIntyre Porcupine Mines Ltd.; 1965, MAG and geol. surveys and sampling by Steep Rock Iron Mines Ltd.
49°15' - 89°45'; W and N of Jack Lake (Jack Lake).	ODM map P.380. ODM, Port Arthur files.	Cu	Minor pyrite, pyrrhotite and chalcopyrite in intermediate to mafic metavolcanics. 1965, geophysical surveys and considerable d.d. by Phelps-Dodge Corp. of Canada Ltd.
49°15' - 89°45'; ½ mi. E of Little Nama Lake and 12 mi. N of Manitowadge station (Little Nama Lake).	ODM, 1968, G.R.68, p.19. ODM map 2141.	Cu	Chalcopyrite in quartz-carbonate veins in an E-trending diabase dike.
49°30' - 85°30'; 3.5 mi. NE of Stevens station (Taradale).	ODM, G.R.68, p.18. ODM, Port Arthur files.	Cu	Chalcopyrite and pyrrhotite in quartz-carbonate veins filling shears in a diabase dike. 1954, surface work by Mr. Dunkley.
49°30' - 86°30'; 9 mi. S of Longiac station (Albert).	ODM, 1967, M.P. 16, p.57-8.	Cu, Au	Pyrite and chalcopyrite in veinlets and disseminations associated with quartz veins in sheared, intermediate metavolcanics, which form large lenses enclosed by granitic rocks.
49°30' - 89°45'; S shore of Garden Lake, near E end (Garden Lake Occurrences).	ODM map 2058. ODM, Port Arthur files.	Ni	Two occurrences containing narrow seams of nickel sulphide in sheared and silicified intermediate metavolcanics. 1946, surface prospecting, trenching and d.d. by Little Long Lac Gold Mines Ltd.
49°45' - 87°30'; 4 mi. W of the S part of Onaman Lake (Bidlamaque).	ODM map 2102. ODM, Port Arthur files.	Cu, Zn	Pyrite, pyrrhotite, lesser amounts of chalcopyrite and sphalerite filling fractures and disseminated in chlorite schist and andesite.
49°45' - 89°30'; 1½ mi. NW of Paddon Lake (Adams).	ODM map P.416.	Cu, Ni	Nickeliferous pyrrhotite, pyrite and chalcopyrite as disseminations and massive fracture fillings in narrow shear zones in anorthositic gabbro and anorthosite. 1965, geophysical surveys, surface prospecting and trenching by Anaconda American Brass Ltd.
49°45' - 89°30'; W end of Paddon Lake (Paddon Lake).	ODM map P.416. ODM, Port Arthur files.	Cu, Ni	Chalcopyrite and nickeliferous pyrrhotite as disseminated grains and splashes and blebs in a gabbro. 1963, surface trenching and 7 d.d. holes for 2,012 ft. by Harrison Minerals Ltd.; 1966, one d.d. hole for 182 ft. by Cantri Mines Ltd.
50°15' - 86°45'; ½ mi. S of Muriel Lake (Muriel Lake).	ODM, 1931, Vol.40, pt.5, p.100-2.	Cu, Ag, Au	Chalcopyrite and pyrrhotite within shear zones in intermediate metavolcanics.
50°15' - 86°45'; approx. 3 mi. S of the E end of Superb Lake (Warren).	ODM map 2102. ODM, Port Arthur files.	Cu, Ni	Copper and nickel sulphides in shear zones in mafic metavolcanics near a contact with felsic porphyry. 1968, trenching and 7 d.d. holes aggregating 1,134 ft. by Tombill Mines Ltd.
50°15' - 87°00'; NE shore of N part of O'Sullivan Lake (Chimo).	ODM, 1955, Vol.64, pt.4, p.20.	Cu,Au,Zn,Pb	A sheared tuffaceous zone about 13 ft. wide, mineralized with sulphides of arsenic, iron, copper, zinc, and lead. 1945, trenching and limited d.d. by Chimo Gold Mines Ltd.
50°15' - 87°00'; ½ mi. E of the N part of O'Sullivan Lake (Jonsmith).	ODM, Port Arthur files.	Cu, Ag, Au	Minor chalcopyrite, pyrite and pyrrhotite as disseminations and narrow veins in intercalated intermediate to felsic metavolcanics. 1959, EM and MAG surveys and 14 d.d. holes aggregating 3,706 ft. by Jonsmith Mines Ltd.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
50°15' - 87°30'; approx. 2 mi. W of Marshall Lake and N of Gripp Lake (Gripp Lake).	ODM map 2102. ODM, Port Arthur files.	Cu	Minor chalcopyrite disseminated in quartzitic metasediments. 1962, 4 d.d. holes aggregating 1,688 ft. by United New Fortune Mines Ltd.
50°15' - 87°30'; 3 mi. WSW of Marshall Lake and S of Gripp Lake (Min-Ore).	ODM map 2102. ODM, Port Arthur files.	Cu	Chalcopyrite and pyrite disseminated in quartzitic metasediments. 1962, 6 d.d. holes aggregating 884 ft. by Min-Ore Mines Ltd.; 1965, 2 d.d. holes totalling 677 ft. by Marshall Lake Mines Ltd.
50°15' - 87°45'; N shore of Turtle Island near W end of Toronto Lake (Shepherd).	ODM map 2100. ODM, 1968, G.R.55, p.42-3. ODM, Port Arthur files.	Zn, Pb, Cu	Arsenopyrite, pyrite, pyrrhotite, chalcopyrite, sphalerite and galena occur in minor amounts as fracture fillings in silicified rock. 1955, MAG survey and 5 d.d. holes aggregating 2,958 ft. by N.A. Timmins Explorations (Ontario) Ltd.
50°15' - 87°45'; S shore of Toronto Lake, at its W end and near an island W of a peninsula at the E end of the lake (Toronto Lake).	ODM map 2100. ODM, 1968, G.R.55, p.60.	Ni	Minor, nickeliferous pyrrhotite, disseminated in peridotite, has been detected in drill core. 1958, limited d.d. by Panther International Mining Company Ltd.
50°15' - 88°30'; ½ mi. N of Pikitigushi Lake and 11 mi. N of Windigo Bay, Lake Nipigon (Pikitigushi Lake).	ODM map 2102. ODM, 1957, M.R.C. 2, p.25.	Cu	Stringers of pyrite and subordinate chalcopyrite, up to 3 inches thick occur in intermediate metavolcanics. 1955, surface work, and MAG and EM surveys by Kennco Explorations (Canada) Ltd.
50°15' - 88°45'; one mi. S of Blackett Lake (Blackett Lake).	ODM map 2102. ODM, Port Arthur files.	Cu, Ni	Minor amounts of chalcopyrite and pyrrhotite as disseminated grains and streaks in silicified pyroclastic rocks. 1959, 4 d.d. holes aggregating 1,037 ft. by Panther International Mining Company Ltd.
50°30' - 88°45'; NW shore of Caribou Lake, approx. 18 mi. N of Armstrong station (Bovin-Gilbert).	ODM map 2102. ODM, Port Arthur files.	Pb, Ag, Au	Narrow cross fractures in a shear zone in metasediments contain argentiferous galena and pyrite. Best surface sample was 6.19% Pb across 18.6 ft. 1959, 6 d.d. holes totalling 1,171 ft. by Central Patricia Gold Mines Ltd.
50°30' - 88°45'; S of Rhodes Lake and ½ mi. S of Linklater Lake (Coplo).	ODM, Port Arthur files.	Cu, Ag, Au	Two parallel quartz veins, 2 to 4 ft. wide in mafic metavolcanics. Chalcopyrite, bornite and covellite are associated with the veins. 1963, EM and MAG surveys and d.d. by Centurion Mines Ltd.
50°30' - 88°45'; SW shore of Keller Island in Caribou Lake (Keller Island).	ODM map 2102. ODM, Port Arthur files. ODM, 1940, Vol.49, pt.6, p.10.	Cu, Au	A chalcopyrite-bearing quartz vein in intermediate metavolcanics. 1956, MAG and EM surveys by Central Manitoba Mines Ltd.
50°30' - 88°45'; N end of Cumaway Lake and 1 mi. SE of Keller Bay, Caribou Lake (Lett).	ODM map 2102. ODM, Port Arthur files.	Cu, Zn, Pb	Chalcopyrite, sphalerite and galena occur in intermediate metavolcanics. 1956, EM survey by Noranda Mines Ltd.
51°00' - 88°45'; ½ mi. E of the E arm of Shabuskwia Lake (Femony).	ODM, Port Arthur files.	Cu, Ni	Minor chalcopyrite and pyrrhotite disseminated in patches of coarse-grained plagioclase within a pyroxene-bearing gneiss. 1957, MAG survey, surface work and limited d.d. by Cominco Ltd.
51°00' - 88°45'; one mi. E of the S bay of Shabuskwia Lake (Grayden-Farley).	ODM, Port Arthur files.	Cu, Ni	Zones of minor chalcopyrite and pyrite in Keewatin gneisses intruded by granite and pegmatite. 1956-57, Geol. and MAG surveys and 15 d.d. holes aggregating 976 ft. by McIntyre Porcupine Mines Ltd.
51°00' - 88°45'; ½ mi. S of the W end of Gould Lake and one mi. SE of the E bay of Shabuskwia Lake (Governor).	ODM map 2148. ODM, Port Arthur files.	Cu, Ni	Chalcopyrite, pyrrhotite and minor pyrite in fracture zones in anorthosite and hornblende mica schist. 1961, trenching by Governor Gold Mines Ltd.
51°00' - 88°45'; 2½ mi. E of S bay of Shabuskwia Lake and one mi. S of McWami Lake (McWami).	ODM, Port Arthur files.	Cu, Ni	Minor chalcopyrite and pyrrhotite disseminated in patches of coarse-grained plagioclase within a pyroxene-bearing gneiss. 1957, MAG survey, surface work and limited d.d. by Cominco Ltd.

TIMISKAMING DISTRICT

ARGYLE TOWNSHIP

Kells Prospect

Main Metals: Cu, Ni, Pt, Zn, Pb.

Location: Argyle Tp.; NE pt., 3 mi. S of Whitefish Lake.

Reference: ODM map 2046.

Geology: Small massive sulphide lens containing chalcopyrite, pyrrhotite, pentlandite, and gersdorffite occurs in a talcose mafic dike which cuts diorite breccia. Other small lenses of disseminated sulphides in weak shear zones contain pyrite, chalcopyrite, sphalerite, and galena.

Economic Features: Selected samples contained high concentrations of Ni and Pt.

History: Trenching, MAG, and EM surveys, and 12 d.d. holes by Hoyle Mining Co. Ltd.

Reference: ODM, Kirkland Lake files.

BARTLETT TOWNSHIP

Fatima Prospect

Main Metals: Ni.

Location: Bartlett Tp.; NE part, near Geikie Tp. boundary; includes claims P.36097-36102, P.36692, P.36693, P.36745, and P.36883.

Reference: ODM map 2148.

Geology: The known mineralization is towards the top of a serpentinized peridotite lens which strikes N. The mineralized zone is 3700 feet in length and extends from surface to a depth of 2000 feet. Millerite, pentlandite and pyrrhotite have been identified.

Economic Features: In 1965 reserves, to a depth of 1500 feet, were 4,770,000 tons averaging 1% Ni after dilution (Survey of Mines 1966, p.152). In 1967, a feasibility study was completed.

Ownership: Texmont Mines Limited.

History: 1958 MAG and EM surveys and 11,676 feet of drilling by Fatima Mining Co. Ltd.

1959-60 Shaft to 790 with levels at 150, 300, 450, 600 and 742 feet. Development included 1550 feet of cross cutting on the 450 foot-level, 1450 feet of cross cutting on the 742-foot level, and 250 feet of raising by Fatima Mining Co. Ltd.

References: ODM, 1960, Vol.70, p.88-9.

CIMM, 1966, Trans., Vol.LXIX, p.149.

Survey of Mines, 1966, p.152.

BEN NEVIS TOWNSHIP

Interprovincial Prospect

Main Metals: Zn, Pb, Cu, Ag, Au.

Location: Ben Nevis Tp.; claim L39767, 3 1/2 miles NE of Verna Lake.

Reference: ODM map 37g.

Geology: Three parallel quartz-carbonate veins (max. width 1.5 feet) along shear zones in Keewatin rhyolite and andesite contain sphalerite, galena, chalcopyrite, pyrite and marmatite; main vein traced 300 feet on surface, with both ends open.

Economic Features: Grab samples from the 225-foot level contained 11.48% Zn, 7.84% Pb, 0.52% Cu, 4.7 oz./ton Ag and 0.17 oz./ton Au (A. Walz, 1928).

Ownership: Canagau Mines Ltd.

History: 1928 3-compartment shaft, 346 feet deep, with levels at 125, 225 and 325 feet, and 934 feet of crosscutting by Interprovincial Exploration Co. Ltd.

1946 Surface work, geophysical survey, and d.d.

1957 Some d.d. by Canagau Mines Ltd.

1964 Some d.d. by Frobex Ltd.

References: ODM, 1928, Vol.37, pt.3, p.25.

ODM, Kirkland Lake files.

ODM, 1937, Vol.46, pt.1, p.110.

BOSTON TOWNSHIP

Jalore Prospect

Main Metals: Zn, Pb.

Location: Boston Tp.; claims L55726 and L55819, S and SW of the pellet plant of the Adams Mine.

Reference: ODM map 1957-4.

Geology: Two showings of pyrite, pyrrhotite, sphalerite, and galena about 1/2 mile apart, with intervening low ground. Sulphides occur in brecciated Keewatin agglomerate and conglomerate, as fine stringers and platings distributed over a wide fractured zone.

Economic Features: Grab sample assays from L55726 are: 2.8% Zn and 0.93% Pb; 2.2% Zn and 0.9% Pb. Best d.d. intersection gave 1.7% Zn and 1.1% Pb in 2.5 feet of core.

Ownership: Jalore Mining Co. Ltd.

History: 1951 12 short X-ray drill holes by McIntyre Porcupine Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.30.

ODM, 1957, Vol.66, pt.5, p.37, 38.

ODM, Kirkland Lake files.

CLIFFORD TOWNSHIP

Brett-Trethewey Prospect

Main Metals: Cu, Mo.

Location: Clifford Tp.; SE part.

Reference: ODM map 2046.

Geology: Chalcopyrite, and fine-grained molybdenite occur in sheared dacite breccia and basalt, which are cut by granodiorite, quartz diorite, and gabbro.

Economic Features: Main showing is 15 feet long and 3 to 4 feet wide.

History: 1928-29 A small prospect shaft was sunk.

References: ODM, 1928, Vol.37, pt.3, p.23.

ODM, 1957, M.R.C. 2, p.31.

COLEMAN TOWNSHIP

Penn-Cobalt (Foster) Mine (Past Producer)

Main Metals: Ag, Co, Ni, Cu, Zn, Pb.

Location: Coleman Tp.; SE 1/4, N 1/2 lot 4, con. IV.

Reference: ODM map 2052.

Geology: Sphalerite, galena and chalcopyrite occur with pyrite and pyrrhotite as lenses in Keewatin chert, tuff and graphitic sediments. Deposits occur below the Foster No. 5 vein, one of eleven productive silver-smaltite-calcite veins.

Economic Features: In 1951, reserves were estimated at more than 300,000 tons containing 3% Zn, 1.5% Pb, 0.5% Cu, and 0.75 oz./ton Ag (Penn-Cobalt Silver Mines Ltd.).

Ownership: Agnico Mines Ltd.

History: 1905-46 Intermittent production of Ag and Co by Foster Cobalt Mining Co. Ltd. and others.

1951-56 Base metals explored by 16,984 feet of d.d. and by the 140- and 210-foot levels of No. 5 shaft; and about 21,766 lbs. Ni and 24,121 lbs. Cu were recovered as a by-product of Ag-Co mining by Penn-Cobalt Silver Mines Ltd. and Cobalt Consolidated Mining Corp. Ltd. Mill was erected in 1951 but abandoned.

References: ODM, 1961, P.R. 1961-6, p.64-73.

ODM, 1968, M.R.C. 10, p.132-3.

Price Prospect

Main Metal: Cu.

Location: Coleman Tp.; lot 19, con. IV; claim 268.

Geology: Chalcopyrite and some pyrite occur in a carbonate-quartz vein which cuts Nipissing diabase at a dip of 30-40 degrees.

Economic Features: 20 tons cobbled ore shipped in 1916 contained 7.95% Cu.

History: Old shaft 24 feet deep, with adjacent stope.
1968 1 d.d. hole for 146 ft. by James H. Price.

Reference: ODM, Kirkland Lake files.

Silver Miller (La Rose) Mine (Past Producer)

Main Metals: Ag, Co, Cu, Ni.

Location: Coleman Tp.; lot 4, con. VI; mining location J.S. 14.

Reference: ODM map 2050.

Geology: Chalcopyrite accompanied by galena and sphalerite occurs in Keewatin chert.

Economic Features: By-products of mining silver-cobalt ore during the 1950-55 period were as follows: 816,755 lb. Ni and 307,983 lb. Cu. The copper production came from copper ore, and is not a by-product of mixed ores. Reserves are 30,000 tons of 1.75% Cu (L.J. Cunningham, Dec. 1956).

History: Exploration for silver and cobalt below the ore in the La Rose No. 1 vein, which was in the overlying Cobalt sedimentary rocks, discovered copper-lead-zinc ore in the underlying Keewatin chert.

References: ODM, Kirkland Lake files.

ODM, 1961, P.R. 1961-3, p.79-95.

ELDORADO TOWNSHIP

Hart Prospect

Main Metals: Ni.

Location: Eldorado Tp.; SE part; claims TRP 24100, TRP 24107 - 24109, TRP 24218 - 24223.

Reference: ODM map 47d.

Geology: The stratigraphic section across the property from S to N is mafic volcanics, peridotite, iron formation and felsic volcanics. The strike ranges from N55E to N75E and the dip is steep to the S. A lean iron formation is mineralized with pyrrhotite and pyrite and nickel bearing sulphides are present within the iron formation and at the lower contact of the peridotite.

Economic Features: The nickel bearing zone is 700 feet in length and to date no deposit of economic interest has been located. Over core lengths of 10 to 15 feet assays from 0.5 to 0.8% Ni are fairly numerous.

Ownership: L.N. Hart.

History: Prospecting and trenching.

1964-65 MAG and EM surveys and 13 d.d. holes for 6084 feet by Norlex Mines Limited.

1968 6 holes with a length of 6247 feet drilled by Paramaque Mines Ltd.

References: ODM, Timmins, file T-1430.
Northern Miner, 1968, May 16, April 25.

GAUTHIER TOWNSHIP

Lake Beaverhouse (Upper Beaver) Mine (Producer)

Main Metals: Cu, Au, Ag, W.

Location: Gauthier Tp.; NE pt., claims L2587, L2586, L2601, L2602.
Reference: ODM map 50c.

Geology: Chalcopyrite and gold in quartz-carbonate veins and syenite dikes cutting basalt above a mass of syenite. Parts of the quartz-carbonate veins that contain appreciable magnetite contain little ore, but parts that contain much pyrite also contain the copper-gold ore. Some of the gold ore is in quartz veins containing few sulphides.

Workings are on W side of N-striking Misema River fault.

Economic Features: Production is at the rate of 170 tons per day, and proven ore reserves at the beginning of 1968 were 62,000 tons (about the same as the year before) of 1.26% Cu and \$8.75 Au per ton (Northern Miner, May 16, 1968). Ore has been discovered 700 feet west of existing workings on the 200-foot level, and below the 1200-foot level. To develop the latter would require a shaft-deepening program. Total value of Cu, Au, and Ag production until the end of 1967 is \$3,349,330.

Ownership: Owned by Lake Beaverhouse Mines Ltd., and operated by Upper Beaver Mines Ltd.

History: 1912 Gold discovered; some development work by La Mine d'Or Huronia.
1919-35 Property acquired by Argonaut Gold Ltd. (later Argonaut Consolidated Gold Mines Ltd.), with intermittent production. Workings consisted of a 500-foot shaft, a winze from the 500-foot to the 1250-foot level, and crosscutting and drifting on 10 levels.
1935 Beaverhouse Lake Gold Mines Ltd., later (1950) Lake Beaverhouse Mines Ltd., acquired the property and discovered a new vein on surface south of the No. 3 shaft.
1937-39 Toburn Gold Mines Ltd. explored the 200- and 350-foot levels beneath the new discovery. Before the mine closed in 1939, 800 feet of crosscutting and drifting and considerable lateral d.d., as well as four surface drill holes, were done by Ventures Ltd.
1950 Name changed to Lake Beaverhouse Mines Ltd.; geol. and geophysical surveys and 5401 feet of d.d. (16 holes) completed.
1961-63 Surface and underground exploration by Augustus Exploration Ltd. and Faraday Uranium Mines Ltd.
1964 Underground development resumed under the management of Upper Canada Mines Ltd., and shipments of ore began in February 1965.

- References: ODM, 1964, M.R.C. 3, p.47.
ODM, 1940, Vol.49, pt.1, p.14.
ODM, 1941, Vol.50, pt.8, p.16-18.
ODM, Kirkland Lake files.
GSC, 1923, Summ. Rept., pt.C, p.42-60.
CIMM, 1967, Centennial Field Excursion, Guide Book, October, p.93-6.

GILLIES LIMIT TOWNSHIP

Bruneau Prospect

Main Metals: Pb, Cu.

Location: Gillies Limit Tp.; block 60.
Reference: ODM, Kirkland Lake files.

Geology: Galena with smaller amounts of chalcopyrite, pyrite, and pyrrhotite occur in a quartz vein with some calcite and red feldspar. Quartz vein is lenticular, cuts Keewatin rocks, and dips 20 degrees.

History: 1950, 1954 Trenching; minor d.d.

References: ODM, Kirkland Lake files.
ODM, 1957, M.R.C. 2, p.105.

Coballoy Prospect

Main Metals: Ag, Co, Pb, Cu.

Location: Gillies Limit Tp.; claim A-1.
Reference: ODM map 2050.

Geology: Galena occurs largely as replacement of a cherty Keewatin sedimentary band between lava flows. In addition silver-cobalt mineralization is present in carbonate veins cutting Cobalt sedimentary rocks.

Ownership: Coballoy Mines & Refiners Ltd.

History: 1915-16 Sinking of the "York-O'Brien" shaft, with some lateral work by O'Brien Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.106.
ODM, Kirkland Lake files.

Mitchell-Callahan Prospect

Main Metals: Pb, Cu, Zn, Ag.

Location: Gillies Limit Tp.; block 2; claim T 19492.
Reference: ODM map 2051.

Geology: Galena, chalcopryrite, and some sphalerite and pyrite occur in a gently dipping carbonate vein cutting Nipissing diabase. The galena contains 25-35 oz./ton Ag.

History: Old pits and trenches.

References: ODM, 1957, M.R.C. 2, p.111.

Montgomery Prospect

Main Metals: Ni, Cu.

Location: Gillies Limit Tp.; block 91; unpatented claims T 52453, T 52454, T 52506, T 52505.

Geology: Two showings of nickel associated with pyrrhotite and chalcopryrite in sheared gabbroic rock and adjacent Keewatin volcanic rocks.

Economic Features: A selected sample of massive pyrrhotite with minor chalcopryrite contained 0.5% Ni and 0.67% Cu (O.A. Seeber, 1956).

History: 1955-56 A magnetic survey and d.d. (5 holes totalling 1511 feet), by The Coniagas Mines Ltd.
1957-58 Geol., MAG, and EM surveys by P.E. Hopkins.

References: ODM, Kirkland Lake files.

Nickel Rim Prospect

Main Metals: Cu, Ni.

Location: Gillies Limit Tp.; block 90 near E end of Dieter Lake, as well as N of Whitney Lake.
Reference: ODM map P.321.

Geology: Disseminated and massive pyrite and pyrrhotite, with minor chalcopryrite occur in sheared gabbro containing blue quartz "eyes".

Economic Features: One of the highest nickel assays was obtained from 1.6 feet of drill core containing 1.18% Ni, 0.32% Cu, and 2.8 oz./ton Ag.

Ownership: Nickel Rim Mines Ltd.

History: 1955-56 The Coniagas Mines Ltd. did a magnetometer survey and drilled 5 holes.
1957 P.E. Hopkins did MAG, EM and geol. surveys.
1963 C.H. Niemetz drilled 4 holes.
1963-65 Nickel Rim Mines Ltd. did photogeological, geol., MAG, SP, ratio-resistivity, and EM surveys, and drilled 10 holes.
1967 Nickel Rim drilled one deep hole (1275 feet).

References: ODM, 1968, Open File Rept. 5016, p.56-65, fig. 2.

Rib Lake Copper Prospect

Main Metals: Ni.

Location: Gillies Limit Tp.; block 90; unpatented claim 53537 and patented claim T 32553.

Geology: Disseminated nickeliferous pyrrhotite in sheared gabbroic rock.

History: 1952 5 d.d. holes for about 1023 feet by Rib Lake Copper Mines Ltd.

References: ODM, Kirkland Lake files.

Sutherland Prospect

Main Metals: Cu, Zn, Pb, Fe.

Location: Gillies Limit Tp.; block 95; claim T 26934.
Reference: ODM map P.321.

Geology: Chalcopyrite, sphalerite, and galena in silicified zones and in quartz veins cutting bedded Keewatin felsic tuffs near pyrite-pyrrhotite iron formation.

History: 1960 3 d.d. holes (total 359 feet) by J.T. Sutherland.

References: ODM, Kirkland Lake files.

HEARST TOWNSHIP

Hearst-Larder South Prospect

Main Metals: Cu, Pb, Zn.

Location: Hearst and McElroy Tps.; at common boundary near the 3 mile post; covered by claims L103931, L103932, L102311, and L102312.

Reference: ODM map 2046.

Geology: The main showing on L102312 consists of stringers and small lenses of chalcopyrite, sphalerite, galena, pyrite and pyrrhotite in Keewatin and Timiskaming siliceous sedimentary rocks.

Economic Features: Assays of chip samples ranged from 0.85-2.11% Cu, 0.57-5.84% Pb, and 0.30-1.92% Zn (William Gerrie). Drilling in 1952 failed to intersect economic mineralization.

Ownership: Amax Exploration Inc.

History: 1952 MAG survey and 2726 feet d.d. by Hearst Larder Mines Ltd.
1968 MAG and EM surveys by Amax Exploration Inc.

References: ODM, 1957, M.R.C. 2, p.30.
ODM, 1964, M.R.C. 3, p.83-4.
ODM, Kirkland Lake files.

JAMES TOWNSHIP

Ethel Copper Mine (Past Producer)

Main Metals: Cu.

Location: James Tp.; lot 1, con. VI, and Tudhope Tp., lot 12, con. VI.
Reference: ODM map 2151.

Geology: Chalcopyrite, bornite, and specular hematite occur in carbonate veins cutting Nipissing diabase, and in some of the wallrock.

Economic Features: Most of the known ore has been removed. Total production was 202,132 lb. Cu, 2484 oz. Ag, and 69 oz. Au, from 8500 tons milled, for a value of \$96,834.

Ownership: Ethel Copper Mines Ltd.

History: 1961 IP and EM surveys.
1961-62 27 d.d. holes by St. Lucie Exploration Co. Ltd.
1962-67 Shipments made intermittently by Ethel Copper Mines Ltd. Development included 140-foot adit, 350-foot inclined shaft, and 100-ton per day mill. Mine idle since Jan. 1967.

References: ODM, Kirkland Lake files.
ODM, Annual Reviews.
ODM, 1968, G.R.62, p.25-6.
Can. Mines Handbook, 1968-9.

Giles Prospect

Main Metals: Pb, Cu, Ag.

Location: James Tp.; NW 1/4, S 1/2 of lot 7, con. V, and lot 8.

Reference: ODM map 2151.

Geology: Galena in quartz-carbonate vein with a maximum width of 15 inches in a shear zone 4 feet wide in Cobalt conglomerate near diabase. Also, pyrite and chalcopyrite disseminated in the sandstone matrix of the conglomerate.

Economic Features: A selected sample contained 9% Pb, and assays of 1/2 oz./ton Ag have been obtained.

References: ODM, Kirkland Lake files.

ODM, 1968, G.R.62, p.27.

McLaughlin Prospect

Main Metals: Cu.

Location: James Tp.; N 1/2 of lot 3, con. VI.

Geology: Chalcopyrite and bornite occur in carbonate veins in Cobalt conglomerate, near the bottom contact of Nipissing diabase.

References: ODM, Kirkland Lake files.

ODM, 1957, M.R.C. 2, p.35.

KATRINE TOWNSHIP

Anderson Prospect

Main Metals: Cu.

Location: Katrine Tp.; claims L58862, L56878, L59313, L61900, near Misema Lake.

Reference: ODM map 2061.

Geology: Chalcopyrite erratically disseminated throughout quartz-carbonate stockworks 2 to 20 feet wide and at least 275 feet long. The stockworks are in Keewatin intermediate volcanic rocks.

Economic Features: Chip samples across 4 - 8.5 feet contained 0.65 - 1.80% Cu; a bulk sample contained 1.77% Cu.

Ownership: Misema Lake Mining Corporation Ltd.

History: 1943 Trenches, shaft 30 feet deep.
1954 2002 feet d.d. on claim L58862 by Mogul Mining Corp. Ltd.
1960 2017 feet d.d. by Misema Lake Mining Corp. Ltd.

References: ODM, Kirkland Lake files.
ODM, 1957, M.R.C. 2, p.28.
ODM, 1964, G.R.29, p.12.

LANGMUIR TOWNSHIP

McWatters Prospect

Main Metals: Ni.

Location: Langmuir Tp.; SW 1/4; claims P.50838-74 and P.50875-91.
Reference: ODM map P.444.

Geology: Keewatin mafic volcanics have been intruded by lenses of serpentized peridotite-diorite. The ultramafic intrusive strikes NE and is 3400 feet in length and from 200 to 400 feet in width. The mineralized zone is in the central part of the ultramafic body and dips steeply SE. The better mineralized zone is 300 feet in length, 50 feet in width and extends from surface to a depth of 300 feet. Sulphides may be massive or occur either as veinlets or disseminations, and are pyrite, pyrrhotite, pentlandite, millerite with minor amounts of chalcopyrite.

Economic Features: Reserves in 1964 consisted of:
Lower Zone 165,790 tons averaging 1.92% Ni
Upper Zone 477,770 tons averaging 0.77% Ni.
(Canadian Mines Handbook 1968-69, p.218).

Ownership: McWatters Gold Mines Limited, 82 1/2%; Quebec Manitou Mines Limited, 17 1/2%.

History: All exploration to date by McWatters Gold Mines Ltd.
1961 MAG, EM and geol. surveys.
1962 25 d.d. holes for a total length of 8694 feet.
1964 25 d.d. holes for a total length of 15,574 feet.
1965 Metallurgical tests.
1967 3 d.d. holes for a total length of 1298 feet.
Of the 53 d.d. holes, 35 were drilled on the main peridotite body.

References: Canadian Mines Handbook, 1968-69, p.218.
CIMM, 1966, Trans., Vol. LXIX, p.149.

LEBEL TOWNSHIP

Dane Copper Mine (Past Producer)

Main Metals: Cu, Ag, Fe.

Location: Lebel Tp.; SW pt. claims L52929, L24218.

Reference: ODM map 53a.

Geology: Keewatin strata-bound sulphide zone near the nose of a fold lying between the syenite stocks in SE Teck Tp. and Lebel Tp.

Economic Features: East shaft was sunk in thinly-bedded chert containing chalcopryite, pyrite, pyrrhotite. A chip sample across three feet contained 9.72% Cu.

A second deposit consists of chalcopryite blebs in a vertical east-striking quartz vein. East of the shaft, a five-foot chip sample across the vein contained 2.13% Cu (William Gerrie, 1953).

Ownership: Nucleonic Mines Limited.

History: 1911-50 W (100-foot) and E (113-foot) shafts sunk by Dane Mining Co. Ltd. Later, E shaft deepened to 200 feet, and 200 feet of lateral work completed. Some ore apparently shipped in 1911; 770 tons of 15 to 20% Cu ore was shipped in 1913; further shipments, in 1921; and, one ton of 11% Cu ore was shipped during Second World War. 1951 E (No. 1) shaft dewatered and X-ray d.d. by Consular Harker Mines Ltd.
1952 SP survey by W.R. Bergey.
1956 Some d.d. by Iso Uranium Mines Ltd.

References: ODM, Kirkland Lake files.

ODM, 1957, M.R.C. 2, p.29.

ODM, 1964, M.R.C. 3, p.83.

McELROY TOWNSHIP

Hearst-Larder South Prospect

(See Hearst Township)

Lowe Prospect

Main Metals: Ni, Cu, Zn, Pb.

Location: McElroy Tp.; NE pt., and adjacent Hearst Tp.

Geology: Ni and Cu mineralization occurs in stringers and blebs near contacts of peridotite and gabbro with Keewatin and Timiskaming volcanic and sedimentary rocks. Zn, Pb and Cu mineralization occurs in graphitic zones in Keewatin and Timiskaming greywacke, tuff, and breccia zones, and in quartz-carbonate veins.

Economic Features: From several nickel-copper showings, selected samples contain 0.5 - 1.0% Ni and 1% Cu. Best d.d. intersection, by Wright-Hargreaves in 1954, was 17 feet of 2% Zn, 1% Pb, and 0.5% Cu.

Ownership: Parts held by Amax Exploration Inc., Emil Chorzepa, and Amax Exploration Inc. on lease from Detlef Lowe.

History: 1935 500 feet d.d. on McRae-Hopkins option by Sylvanite Gold Mines Ltd.
1954 160 feet d.d. on Low-Little option.
1944 MAG survey and 860 feet d.d. by Siscoe Gold Mines Ltd.
1954 Geol. MAG, EM surveys, and 2332 feet d.d. by Wright-Hargreaves Mines Ltd.
1960 Soil geochemistry and 1328 feet d.d. by Sogemines Development Co. Ltd. and Vitro Minerals Ltd.
1968 Geol., MAG, and EM surveys by Amax Exploration Inc.

References: ODM, Kirkland Lake files.

Philibert Prospect

Main Metals: Ni, Cu, Pb.

Location: McElroy Tp.; E of big bend in the Misema River, central part McElroy Tp., includes claim L57685.

Geology: Base metals occur near the contacts of peridotite, gabbro, diorite, and syenite cutting Keewatin and Timiskaming volcanic and sedimentary rocks.

Economic Features: Samples containing as much as 3 to 9% Ni and 0.3 to 1% Cu can be selected from pits near the contacts of serpentinite with conglomerate. Galena and chalcopyrite occur in quartz veins, syenite, and sedimentary rocks.

Ownership: Ralph Allerston (claim L57685); Roy Newman (claim L102460), and Mrs. Ann Mageau (claim L102808).

History: 1954 Some d.d. by Wright-Hargreaves Mines Ltd.

References: ODM, Kirkland Lake files.

MORRISETTE TOWNSHIP

Mallard Lake Prospect

Main Metals: Pb, Zn, Ag, Cu, Au.

Location: Morrisette Tp.; S boundary near milepost 3.

Reference: ODM map P.447.

Geology: Galena, sphalerite, chalcopyrite, and pyrite occur in quartz-carbonate-barite veins in schistose Keewatin volcanic and carbonate rocks cut by quartz porphyry dike. Also chalcopyrite in pyrrhotite zones in felsic volcanic breccia.

Economic Features: Five channel samples taken at 10-foot intervals down the shaft, sunk on the main vein, contained an average of 5.71% Pb, 0.43% Cu, 10.9 oz./ton Ag, and 0.16 oz./ton Au across two feet. Three subsequent holes drilled through the main vein at depths of about 115 feet contained an average of less than 2.57 oz./ton Ag and 0.01 oz./ton Au, and similarly lower amounts of Pb.

A surface trench in rock containing about 30% pyrrhotite yielded 0.45% Cu across 6 or 8 feet, but one drill hole, intersecting the sulphide zone at a vertical depth of 115 feet, encountered less than 0.04% Cu across 12 feet of true width.

Ownership: Roy and Jack Newman.

History: Before 1920 A 62-foot shaft was sunk.

1935 Sampling and geological mapping by Erie Canadian Mines Ltd.

1956 4 d.d. holes for 850 feet by Macassa Mines Ltd.

1967 12 d.d. holes for 786 feet by Black River Mining Ltd. and Coastal Mining Ltd.

References: ODM, 1921, Vol.30, pt.6, p.62.

ODM, Kirkland Lake, files.

ODM, 1957, M.R.C. 2, p.32.

PACAUD TOWNSHIP

Amity Mine (Past Producer)

Main Metals: Cu, Zn, Pb.

Location: Pacaud Tp.; S 1/2 lot 5, con. VI (adjoins the Patterson Mine).

Reference: ODM map 2046.

Geology: Parts of a banded sulphide zone (iron formation) in rhyolitic (cherty) tuff contain concentrations of chalcopyrite, bornite, sphalerite and galena across an average width of 4 feet. The sulphide zone is 200 feet from the contact of the Round Lake granitic batholith.

The same geological formations are present in the Patterson and Trethewey-Ossian Mines to the southeast.

Economic Features: The best ore in the mine was 7 to 8% Cu across 11 feet, on the 350-foot level.

Ownership: Unpatented claims owned by Jack Kentish of Val d'Or.

History: 1926-30 2-compartment shaft 1020 feet deep, with lateral work on the 50-, 125-, 475-, 600-, and 1000-foot levels, by Amity Copper and Gold Mines Ltd. 13 cars of development ore shipped containing 4 to 13% Cu (S.A. Pain).

1933 Mine re-opened, and 177 tons of ore shipped by Amity Gold Mines Ltd. Property held to 1944.

1951 The property, acquired by Marge Copper Gold Mines Ltd., was optioned to Golden Arrow Mines Ltd. (later Consolidated Golden Arrow Mines Ltd.). The mine was dewatered, re-sampled and then allowed to flood.

1955 Mirla Exploration Ltd. mined 863 tons of ore.

References: ODM, 1957, M.R.C. 3, p.82.

ODM, Vol.XXXIX, pt.1, p.78.

ODM, 1957, Vol.66, pt.5, p.43.

ODM, Kirkland Lake files.

Patterson Mine (Past Producer)

Main Metals: Cu.

Location: Pacaud Tp.; S 1/2 of lot 4, con. VI.

Reference: ODM map 1957-4.

Geology: Chalcopyrite is present in a banded pyrite-pyrrhotite zone (iron formation) in rhyolitic (cherty) tuff. The nearby Amity and Trethewey-Ossian Mines are on the same formations, along strike from the Patterson Mine.

Economic Features: Ore shoots are 32 feet or less in length and up to 4 feet in width; ore shipped in 1928-9, averaged 8% Cu and 0.5 oz./ton Ag (S.A. Pain).

Ownership: S.A. Pain of Kirkland Lake, and Mr. Bernier and Pierre Severio, both of Timmins.

History: 1927-29 Patterson Copper Mines Ltd. sunk a 3-compartment shaft to a depth of 520 feet, with about 2550 feet of lateral development on the 125-, 250-, 375-, and 500-foot levels. Mine closed in October 1929, with 9 cars of sorted ore shipped.
1951 Mine optioned to Golden Arrow Mines Ltd. (later Consolidated Golden Arrow Mines Ltd.).
1955 Property optioned to Mirla Exploration, and before operations were suspended in November 1956, 3279 tons of Cu ore were shipped..
1962 435 feet of d.d. by Reno Rinaldi.

References: ODM, 1964, M.R.C. 3, p.84.
ODM, Kirkland Lake files.
ODM, 1957, Vol.66, pt.5, p.49-50.
ODM, 1957, M.R.C. 2, p.115.

Sheroomac Prospect

Main Metals: Cu, Zn.

Location: Pacaud Tp.; S 1/2 of lot 12, con. VI, and nearby claims.
Reference: ODM map 1957-4.

Geology: Chalcopyrite, pyrite, pyrrhotite and sphalerite occur as lenses and in quartz stringers and disseminated in Keewatin silicic bedded tuffs, fragmental rocks, and iron formation. The Round Lake granitic batholith occurs a short distance to the S.

Economic Features: A selected sample from the eastern outcrop of No. 3 vein contained 1.46% Cu, 1.50% Zn, 0.18 oz./ton Au and 0.84 oz./ton Ag. A selected sample from 1200 feet farther west contained 3.07% Cu, 0.02 oz./ton Au and 1.23 oz./ton Ag (Northern Miner, June 19, 1952).

Ownership: J.B. Tarzwell.

History: 1929 Trenching and pitting by Round Lake Copper Mines Ltd.
1952 Geol. mapping, and 13 d.d. holes for 1200 feet by Taroomac Prospecting Syndicate.
1961 2 d.d. holes for 185 feet, by Sheroomac Mining Corp. Ltd.

References: ODM, Kirkland Lake files.
ODM, 1957, Vol.66, pt.5, p.41-42.

Trethewey - Ossian Mine (Past Producer)

Main Metals: Cu, Zn, Pb.

Location: Pacaud Tp.; N 1/2 of lot 3, con. V; adjoins the Patterson Mine.
Reference: ODM map 1957-4.

Geology: Parts of a banded sulphide zone (iron formation) in rhyolitic (cherty) tuff contain concentrations of chalcopyrite, bornite, and chalcocite, with lesser amounts of sphalerite and galena. The main sulphide band extends from the Patterson Mine across 2000 feet of Trethewey-Ossian property, following close to the contact of the Round Lake granitic batholith. The main sulphide band contains two parallel copper zones about 100 feet apart.

Economic Features: Shipments of 346 tons in 1955 yielded 43,411 lb. Cu valued at \$16,008.

Ownership: Mrs. C.H. Cameron.

History: 1929-31 2-compartment, 140-foot shaft, 77 feet of crosscutting and 90 feet of drifting by Trethewey-Ossian Mines Ltd.
1947-53 Property restaked by C.H. Cameron.
1951 Property was optioned to Golden Arrow Mines Ltd. (later Consolidated Golden Arrow Mines Ltd.), which drilled 11 d.d. holes, deepened the shaft to 220 feet, a 140-foot crosscut was driven, some drifting was done, and some underground d.d. was carried out.
1955 Cam Copper Mines Ltd. hoisted 500 tons and shipped 346 tons.
1967 Remaining known reserves (1000 tons) shipped by Fidelity Mining Investments Ltd.

References: ODM, 1957, M.R.C. 2, p.105-6.

ODM, Kirkland Lake files.
ODM, 1929, Vol.38, pt.6, p.102.
ODM, 1930, Vol.39, pt.1, p.128.
ODM, 1957, Vol.66, pt.5, p.51-2.

POWELL TOWNSHIP

Ethel Copper Prospect

Main Metals: Cu, Au, Ag.

Location: Powell Tp.; SE 1/4 central pt.
Reference: ODM map 2110.

Geology: Chalcopyrite in quartz stockworks and silicified zone in "Timiskaming" arkose near the contact of a syenite stock. Silicified zone is more than 100 feet in diameter.

Economic Features: Best drill intersection (1955-7) was 1.06% Cu over a length of 16.5 feet, followed by 5 feet of 0.75% Cu. Bulk sampling (Stancop Mines Ltd., 1964) included the production of 18,958 lb. Cu, 13 oz. Au and 174 oz. Ag from 2000 tons milled.

History: 1955-57 Stripping, test pitting, and 20 d.d. holes by Ethel Copper Mines Ltd.
1964 A few tons mined from pit by Stancop Mines Ltd.

References: ODM, 1967, G.R.51, p.46-7.
ODM, Kirkland Lake files.

Ryan Lake Mine (Past Producer)

Main Metals: Cu, Mo, Au, Ag.

Location: Powell Tp.; E central part.
Reference: ODM map 2110.

Geology: Main ore zone consists of chalcopyrite, pyrite, and pyrrhotite as lenses, stringers, and disseminations in parallel shear zones several feet wide. The shear zones are in peridotite and syenite. Molybdenite occurs along slip surfaces. A similar parallel shear zone in Keewatin volcanic rocks 200 feet N of the main ore zone contains widespread low Cu concentrations. Also, chalcopyrite and molybdenite occur in quartz veins associated with syenite porphyry.

Economic Features: Some ore remains underground, and a few thousand tons of tailings contain appreciable amounts of molybdenum and copper. Total production from the mine was 4,995,745 lb. Cu, 1352 oz. Au, 36,141 oz. Ag and 11,393 lb. Mo valued at \$1,744,011.

Ownership: Pax International Mines Ltd.

History: 1950-57 480-foot shaft with lateral work on 4 levels. 163,490 tons mined by Ryan Lake Mines Ltd., Min-Ore Mines Ltd. and G.S. Welsh. 1964-65 150-ton mill installed and limited production by Pax International Mines Ltd. 13,167 feet of d.d. and geochem. survey carried out.
1966 Geochem., geol., and geophysical surveys and several thousand feet of d.d. by Cominco Ltd.

References: ODM, Kirkland Lake files.
ODM, 1967, G.R.51, p.37-8.
Can. Mines Handbook, 1968-69.

Welsh-Sauvé Prospect

Main Metals: Cu, Au, Pb, Zn, Mo.

Location: Powell Tp., 3 1/2 mi. NW of Matachewan.

Reference: ODM map 2110.

Geology: Small amounts of chalcopyrite, molybdenite, galena, sphalerite, nickeliferous pyrrhotite, with gold and silver values have been found in sheared Archean carbonate rock, serpentinite, syenite, greywacke, conglomerate, and rhyolitic tuffs.

History: From the 1930's until the 1950's, the property was prospected, test-pitted, geologically and geophysically surveyed, and d.d. (at least 3500 feet). More recently, some bulldozing and d.d. has been done by Stan Welsh of Matachewan.

References: ODM, Kirkland Lake files.

ODM, 1967, G.R.51, p.43-4.

RATTRAY TOWNSHIP

Mathias Prospect

Main Metals: Cu.

Location: Rattray Tp.; 3/4 mi. W of the Quebec border at mileage 28.5 from Lake Timiskaming.

Geology: Showing is in old pit under water close to west shore of small lake. Drill holes went from Cobalt conglomerate into Pontiac schists intruded by porphyritic granite. Minor chalcopyrite is present in quartz stringers, which are numerous in the conglomerate.

History: 1956 Some d.d. by Kerr-Addison Gold Mines Ltd.

References: ODM, 1957, M.R.C. 2, p.109, 110.

SKEAD TOWNSHIP

New Telluride Mine (Past Producer)

Main Metals: Cu, Au.

Location: Skead Tp.; N of Skidoo Lake; claim L8846.

Reference: ODM 1949-3.

Geology: Chalcopyrite, pyrite and specular hematite stringers and veins occur in weak NE-striking shears across a 500-foot width of Keewatin andesite, dacite and dacite breccia cut by lamprophyre dikes.

Economic Features: Eighty tons of ore were shipped to Noranda in 1931, and 24 tons of concentrates in 1932; 3904 lb. of copper were recovered. Gold worth \$1303 was produced in 1931 and 1932.

History: 1927-32 A 2-compartment shaft was sunk to a depth of 375 feet; lateral work consisted of 45 feet on the 90-foot level, 425 feet on the 150-foot level, and 1525 feet on the 250-foot level. In 1929 a mill was built. The mine closed down in 1932. 1946 7000 feet of d.d. was done from surface. 1948 The workings were dewatered to the 250-foot level.

References: ODM, 1949, Vol.58, pt.6, p.35.
ODM, Kirkland Lake files.

SOUTH LORRAIN TOWNSHIP

Elite Cobalt Prospect

Main Metals: Pb, Cu.

Location: South Lorrain Tp.; 1/2 mi. SE of Oxbow Lake; unpatented claim T54162.
Reference: ODM map P.289 (revised).

Geology: Disseminated galena, chalcopyrite, pyrite, and pyrrhotite in slightly sheared Keewatin tuffs.

Ownership: Silver Tower Mines Ltd.

History: Old pits.
1956 4 d.d. holes by Elite Cobalt Mines Ltd.
1965 4 d.d. holes.

References: ODM, 1957, M.R.C. 2, p.108.
ODM, 1968, M.R.C. 10, p.439.

TECK TOWNSHIP

Winnie Lake Mine (Past Producer)

Main Metals: Cu, Zn, Pb, Au, Sn.

Location: Teck Tp.; NW pt.
Reference: ODM map 1945-1.

Geology: Chalcopyrite, sphalerite, galena, pyrite, and pyrrhotite occupy the interstices of mafic and silicic agglomerate and pillow selvages. The contact of a granite-syenite stock occupies a former anticline a short distance W of the deposit; granitic dikes cut the volcanic rocks.

Economic Features: The main showing, at the shaft, is 70 feet long and a few feet wide. Selected samples from the dump contain considerable copper and zinc, and as much as 0.06 oz./ton Au. The best drill intersection, in Erie Canadian hole No. 2, contained 4.2% Cu in 2.7 feet of core. Drilling by Winnie Lake Mining Co. about 450 feet E of the shaft cut a 5-foot width containing 1.03% Cu, 0.24% Zn, and 0.01 oz./ton Au. Macassa Mines Ltd., drilling below the main sulphide showing, intersected 1.16% Cu in 9 feet of core.

Ownership: George Potter.

History: Before 1927 a shaft sunk to a depth of 27 feet, and a small shipment of Cu-Zn ore was made.
1927 EM survey by Ottawa-Teck Syndicate.
1938 4 d.d. holes by Erie Canadian Mines Ltd. Two additional holes were drilled by Winnie Lake Mining Co. Ltd. to test the ground E of the shaft.
1950 5 d.d. holes by Macassa Mines Ltd.

References: ODM, 1928, Vol.37, pt.3, p.43.
ODM, 1948, Vol.57, pt.5, p.53.
ODM, Kirkland Lake files.

TUDHOPE TOWNSHIP

McGale Prospect

Main Metals: Cu, Ag.

Location: Tudhope Tp.; lot 12, con. III.
Reference: ODM map 2046.

Geology: Chalcopyrite and bornite occur in carbonate veins associated with aplite (granophyre) in Nipissing diabase.

Ownership: M.J. McGale.

History: Surface prospecting, including trenching, and a few feet of X-ray d.d.

References: ODM, 1957, M.R.C. 2, p.35.
ODM, Kirkland Lake files.
ODM, 1968, G.R.62, p.15.

Paramount Prospect

Main Metals: Cu, Ag, Co, Pb.

Location: Tudhope Tp.; lot 12, con. IV, approximately one mile NW of Hope Lake.

Reference: ODM map 50j.

Geology: Chalcopyrite and bornite in carbonate (with quartz) veins associated with aplite in Nipissing diabase.

Also, about 22 chains N of the copper prospect a shaft was sunk on two NW-striking quartz-carbonate veins containing chalcopyrite, galena, and a cobalt mineral.

History: 43 tons of Cu-Ag-Au ore is said to have been shipped.

References: ODM, 1941, Vol.50, pt.4, p.41-42.

ODM, Kirkland Lake files.

Sauvé Prospect

Main Metals: Cu, U, Au.

Location: Tudhope Tp.; lot 10, con. VI, unpatented claim MR49372.

Reference: ODM map 2046.

Geology: Chalcopyrite and specularite occur in carbonate veins in and at contacts of a diabase dike cutting cobalt conglomerate and greywacke. A radioactive mineral, probably pitchblende, is associated with the veins.

Economic Features: A selected sample of radioactive material contained 1.56 percent U_3O_8 equivalent.

History: One hole each was drilled by Mr. Sauvé of Latchford, Wm. Inch of Haileybury, and Chavigny Gold Mines Ltd.

References: ODM, Kirkland Lake files.

YARROW TOWNSHIP

Matarrow Mine (Past Producer)

Main Metals: Pb, Zn, Ag.

Location: Yarrow Tp.; between E shore of Mistinikon Lake and Mudpack Lake, including the former patented claims MR17440, 17441, 17443, 17418, and 17419.

Reference: ODM map 2046.

Geology: Galena and sphalerite occur as stringers and lenses, as well as in carbonate veins, in Keewatin iron formation having a maximum width of 200 feet, and at least 1650 feet long. The iron formation consists of rhyodacitic tuff, chert, carbonate rocks, pyrite, pyrrhotite, and graphite.

Economic Features: 39,804 tons of ore averaging 6.13% combined Pb and Zn were treated for a total recovery of 2,460,210 lbs. Pb, 916,707 lbs. Zn and 4853 oz. Ag.

Ownership: Jarrow Mines Ltd.

History: 1928 Trenching and 1130 feet of d.d.

1948-50 Some d.d. by Matarrow Lead Mines Ltd.

1951-53 Matachewan Consolidated Mines Ltd. brought property into production in July 1952. A three-compartment vertical shaft sunk to a depth of 347 feet, and levels established at 150 feet and 300 feet. Total lateral development consisted of 1600 feet on the 150-foot level and 1250 feet on the 300-foot level. Raising amounted to 520 feet. In 1952, 43 holes totalling 4879 feet of underground d.d. were completed. The mine produced for 7 1/2 months ending in February 1953. It was closed as ore grade on the 300-foot level was not up to expectations. By the time operations ceased, 51 surface diamond drill holes (total 13,891 feet) had been completed.

1964 New Jason Mines Ltd. tested mineralization beneath the old workings by 7750 feet of d.d.

1968 Three drill holes contained little base metal mineralization.

References: ODM, 1957, M.R.C. 2, p.34.

ODM, Kirkland Lake files.

TIMISKAMING DISTRICT

OCCURRENCES

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Alma Tp.; SE $\frac{1}{2}$, E central pt.; Triana.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in syenite porphyry.
Armstrong Tp.; N $\frac{1}{2}$, lot 12, con. II; Tinney.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz-carbonate vein in Nipissing diabase.
Baden Tp.; NW $\frac{1}{4}$, central pt.; Baden Syndicate.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in quartz vein in andesite tuff.
Baden Tp.; NW $\frac{1}{4}$, E pt.; Rich-Ore.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in brecciated granite.
Baden Tp.; NW $\frac{1}{4}$, N central pt.; Thesaurus.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and molybdenite in quartz stringers in syenite.
Barr Tp.; SW $\frac{1}{4}$.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Pyrite, galena, sphalerite and chalcopyrite in carbonate vein.
Barr Tp.; NW $\frac{1}{4}$; Barbana.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Bornite, sphalerite and galena in norite and diabase.
Belfast Tp.; NE pt.; Normalloy.	ODM, Kirkland Lake files.	Cu	
Ben Nevis Tp.; NE $\frac{1}{4}$, S central pt.; Beaudry.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in andesite.
Ben Nevis Tp.; SE pt.; Ehrhart.	ODM, 1928, Vol.37, pt.3, p.25.	Cu, Pb, Zn	Galena, sphalerite, chalcopyrite and arsenopyrite in sheared Keewatin volcanics.
Ben Nevis Tp.; NE $\frac{1}{4}$, S central pt.; Sakinaw Lake.	ODM, Kirkland Lake files.	Pb, Zn	Galena and sphalerite in rusty altered rhyolite.
Ben Nevis Tp.; SW $\frac{1}{4}$, W central pt.; Tremblay.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Pyrite and chalcopyrite in rhyolite; sphalerite and galena in quartz-carbonate vein.
Benoit Tp.; S $\frac{1}{2}$ of N $\frac{1}{2}$, lot 10, con. V; Chamandy.	ODM, Kirkland Lake files. ODM, 1957, M.R.C. 2, p.33.	Cu	Chalcopyrite in quartz stringers in andesite.
Benoit Tp.; N $\frac{1}{2}$ of lot 5, con. II; Erickson.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz-carbonate vein.
Bernhardt Tp.; SE $\frac{1}{4}$, NW pt.; Dixon-Clifford-Buscis.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Chalcopyrite, sphalerite and galena in pyrite zone in andesite.
Black Tp.; NE $\frac{1}{4}$, NW corner; Henderson.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in felsic volcanics.
Black Tp.; NE $\frac{1}{4}$, N central pt.; INCO.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Pyrite, chalcopyrite, sphalerite and galena in graphitic volcanics.
Black Tp.; NW $\frac{1}{4}$, SW central pt.; Keller.	ODM, Kirkland Lake files.	Cu, Pb	Galena and chalcopyrite in quartz vein in diorite.
Black Tp.; central pt.; Legend Gold.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in quartz vein.
Black Tp.; NW $\frac{1}{4}$, W central pt.; North Denison.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Sphalerite, galena and chalcopyrite in quartz vein.
Black Tp.; NW $\frac{1}{4}$, W pt.; North Expo.	ODM, Kirkland Lake files.	Cu, Pb	Chalcopyrite and galena in quartz vein.
Black Tp.; NE $\frac{1}{4}$, central pt.; Solmes & O'Connor.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Sphalerite, galena and chalcopyrite in rhyolite.
Bompas Tp.; SW $\frac{1}{4}$, E central pt.; Tomlinson.	ODM, Kirkland Lake files.	Cu, Pb	Chalcopyrite and galena in quartz-carbonate vein.
Boston Tp.; SE $\frac{1}{4}$ on Donald Lake; Bargnesi.	ODM, Kirkland Lake files.	Cu, Ni, Pb	Pyrite, chalcopyrite, bornite and galena in quartz vein in gabbro.
Boston Tp.; NW $\frac{1}{4}$, NW pt.; Campbell-Jeanjacquet.	ODM, Kirkland Lake files. ODM, 1957, Vol.66, pt.5, p.32,33.	Cu, Pb, Zn	Chalcopyrite and sphalerite in graphitic tuff; galena in andesite.
Boston Tp.; E $\frac{1}{2}$, W central pt.; Marshall-Evoy.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Sphalerite, galena and chalcopyrite in Archean conglomerate.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Boston Tp.; NW $\frac{1}{4}$, SE pt.; Rio Tinto.	ODM, Kirkland Lake files.	Cu, Zn	Copper and zinc in soil.
Boston Tp.; N $\frac{1}{2}$, central pt.; Schwegg Prosper.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Sphalerite, galena and chalcopyrite in stringers and lenses in silicic tuff; andesite and graphitic zones.
Boston Tp.; SW $\frac{1}{4}$, SW pt.; Tagliamonti.	ODM, 1950, Vol.59, pt.6, p.62.	Cu	Pyrite and chalcopyrite in quartz stringers in hornblende granite.
Brethour Tp.; lot 10, con. I.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in felsic volcanics.
Bryce Tp.; N $\frac{1}{2}$ of lot 10, con. V; Harris-Harlow.	ODM, 1941, Vol.50, pt.4, p.39.	Pb, Zn	Pyrite, galena and sphalerite in quartz vein.
Bucke Tp.; SW $\frac{1}{4}$ of lot 11, con. II, Armstrong.	ODM, Kirkland Lake files.	Cu	Chalcopyrite, pyrite and cobaltite in quartz-carbonate vein.
Bucke Tp.; NW $\frac{1}{4}$ of lot 15, con. I; Cobalt Consolidated.	ODM, Kirkland Lake files.	Pb, Zn	Sphalerite and galena in sulphides in Keewatin rocks.
Bucke Tp.; SE $\frac{1}{4}$, N $\frac{1}{2}$ of lot 14, con. I; Cobalt Contact.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Pyrite, chalcopyrite, galena and sphalerite disseminated in greenstone and in carbonate veins.
Bucke Tp.; lot 6, con. IV; Farien.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in quartz-carbonate vein in Cobalt conglomerate.
Bucke Tp.; S $\frac{1}{4}$, lot 7, con. IV; Haileybury West Road.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in quartz-carbonate vein.
Bucke Tp.; SE $\frac{1}{4}$ of N $\frac{1}{2}$, lot 13, con. I; Harrison Hibbert (Big Ben).	ODM, Kirkland Lake files.	Cu, Pb, Zn	Chalcopyrite, sphalerite and galena in quartz-carbonate vein; recorded production 69,458 lb. copper.
Bucke Tp.; lot 1, con. IV; Sharp Lake Dyke.	ODM, Kirkland Lake files.	Cu, Pb	Chalcopyrite, pyrite and galena in white carbonate vein.
Bucke Tp.; lot 2, con. VI; South Wabi Creek.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and hematite in quartz-carbonate vein in red aplite dike.
Bucke Tp.; lot 7, con. III; Wonderland Shaft.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz-carbonate vein.
Bucke Tp.; NE $\frac{1}{4}$, lot 1, con. III.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in quartz vein.
Bucke Tp.; lot 2, con. II.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in Nipissing diabase.
Bucke Tp.; NE $\frac{1}{4}$ lot 2, con. IV.	ODM, Kirkland Lake files.	Cu	Chalcopyrite, bornite and chalcocite in quartz vein.
Bucke Tp.; lot 2, con. V.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in aplite.
Bucke Tp.; lot 4, con. IV.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in quartz-carbonate vein in diabase.
Bucke Tp.; lot 4, con. V.	ODM, Kirkland Lake files.	Cu	Pyrite, chalcopyrite and pyrrhotite in quartz-carbonate vein.
Bucke Tp.; lot 9, con. II.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in carbonate veins.
Bucke Tp.; SW $\frac{1}{4}$ lot 9, con. III.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz-carbonate vein.
Bucke Tp.; lot 7, con. IV.	ODM, Kirkland Lake files.	Pb	Pyrite and galena in Cobalt sediments.
Bucke Tp.; lot 2, con. IV.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in altered mafic and intermediate volcanics.
Cairo Tp.; NW $\frac{1}{4}$, N central pt.; Craig; Cameron.	ODM, Kirkland Lake files.	Cu, Pb	Chalcopyrite and galena in quartz vein in syenite.
Cairo Tp.; NW $\frac{1}{4}$, W central pt.; claim MR9506; Crang (Fort Matachewan).	ODM, Kirkland Lake files.	Pb	Pyrite and galena in quartz vein.
Cairo Tp.; central pt.; De Marco.	ODM, Kirkland Lake files.	Cu, Pb	Galena and chalcopyrite in quartz-carbonate vein.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Cairo Tp.; E½ central pt.; Dominion Gulf.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz-carbonate vein.
Cairo Tp.; NW¼ central pt.; Jacaranda.	ODM, Kirkland Lake files.	Cu	Pyrite, pyrrhotite and chalcopyrite in Archean conglomerate.
Cairo Tp.; W½, W central pt.; King.	ODM, Kirkland Lake files. ODM, 1957, M.R.C. 2, p.37.	Cu	Chalcopyrite and hematite stringers in greenstone.
Cairo Tp.; 1½ mi. NE of Matachewan; Midrim.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein in syenite.
Cairo Tp.; ½ mi. N of Matachewan; Midrim.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Chalcopyrite, galena and sphalerite in greywacke cut by syenites.
Cairo Tp.; central pt. 3 mi. NE of Matachewan; Midrim.	ODM, Kirkland Lake files.	Cu, Pb	Pyrite, chalcopyrite and galena in quartz vein in syenite porphyry.
Cairo Tp.; SW¼, S central pt.; North Expo (Sunisloe; Rosmar).	ODM, Kirkland Lake files.	Cu	Chalcopyrite in Keewatin volcanics.
Cairo Tp.; NE¼, SE pt.; Siscoe Metals.	ODM, Kirkland Lake files.	Cu, Pb	Chalcopyrite and galena in quartz vein.
Catharine Tp.; N½ of SW¼ lot 9, con. V; Gold Hill, (Hill Top).	ODM, Kirkland Lake files. ODM, 1929, Vol.38, pt.6, p.103.	Cu, Pb	Chalcopyrite, pyrite and galena in quartz vein.
Catharine Tp.; S½ lot 11, con. VI; Kennedy-Boston.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and pyrite in quartz vein.
Catharine Tp.; S½ lot 11, con. IV; Mindoka.	ODM, 1963, G.R.18, p.9, 15.	Cu, Pb	Pyrite, chalcopyrite and galena in mafic volcanics.
Catharine Tp.; S½ lot 6, con. I; Shortt-Netherton.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in quartz vein.
Chamberlain Tp.; NE¼ of S½ lot 6, con. I; Leslie-McPherson.	ODM, Kirkland Lake files.	Cu, Pb	Pyrite, chalcopyrite and galena in quartz vein.
Cleaver Tp.; W½ central pt.; Lamothe.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Sphalerite, galena and chalcopyrite in carbonate vein.
Clifford Tp.; SE¼, west of Verna Lake; Bain Copper.	ODM, 1928, Vol.37, pt.3, p.24.	Cu	Chalcopyrite in quartz diorite dike.
Clifford Tp.; SE¼, E central pt.; Brillund (Herrick).	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Clifford Tp.; SE¼ central pt.; Mining Corporation.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in quartz vein in andesite.
Coleman Tp.; lot 5, con. IV; Alexandra (Silverfields).	ODM, Kirkland Lake files.	Cu, Ni	Chalcopyrite and nickel arsenides.
Coleman Tp.; lot 4, con. IV; Glen Lake (Bailey).	ODM, Kirkland Lake files.	Cu	Chalcopyrite in Nipissing diabase.
Douglas Tp.; SE¼.	Northern Miner, Feb. 18, 1965.	Cu	Disseminated chalcopyrite in andesite.
Eby Tp.; NE¼ central pt.; Fishkin.	ODM, Kirkland Lake files.	Cu, Zn	Pyrite, chalcopyrite and sphalerite in andesite.
Eby Tp.; lot 1, con. V; Todora Kirkland.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in brecciated rhyolite.
Eldorado Tp.; claim P.48852.	ODM, Timmins file T-693.	Cu, Zn, Pb	Massive to disseminated chalcopyrite, sphalerite, galena and iron sulphide in 15 x 4 foot trench.
Flavelle Tp.; SE¼ lot 11, con. VI; Bailey.	ODM, Kirkland Lake files.	Cu, Pb	Chalcopyrite, pyrite and galena in quartz vein.
Flavelle Tp.; NW¼ lot 9, con. V; Chavigny Gold.	ODM, Kirkland Lake files.	Cu, Pb	Pyrite, galena and chalcopyrite in quartz vein.
Flavelle Tp.; lot 2, con. VI; S of Flavelle Creek.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in diorite.
Fripp Tp.; NE corner.	ODM, Timmins file T-646.	Cu	Minor chalcopyrite in mafic volcanic rocks.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Frripp Tp.; Quartz Lake.	ODM, Timmins file T-702.	Cu, Pb	Disseminated chalcopyrite and galena in quartz veins and sheared andesite.
Frripp Tp.; NE shore, Bruce Lake.	ODM, Timmins file T-702.	Cu, Ni	Minor chalcopyrite and pentlandite in peridotite.
Gauthier Tp.; E½, E central pt.; Rosen.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Gauthier Tp.; NE½, E central pt.; Taylor, Thos. C.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in quartz vein.
Gauthier Tp.; W½, E central pt.; Upper Canada.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Sphalerite, galena and chalcopyrite in quartz vein.
Gillies Limit Tp.; block 33, NW pt.; block 23, S pt.; Nickel Rim.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in carbonate stringers.
Gillies Limit Tp.; block 35, NE pt.; Watts & Armstrong.	ODM, Kirkland Lake files.	Ni	Millerite disseminated in fine-grained chlorite.
Gillies Limit Tp.; block 25, NW pt.; Williamson.	ODM, Kirkland Lake files.	Ni	Niccolite in carbonate veins.
Grenfell Tp.; NE½, NE pt.; Kerr Addison.	ODM, Kirkland Lake files.	Cu, Zn	Chalcopyrite and sphalerite traces in rhyolite tuff.
Grenfell Tp.; NE½, NE pt.; New Kelore (Republic-Tungsten).	ODM, Kirkland Lake files.	Cu, Pb, Zn	Pyrite, galena, sphalerite and chalcopyrite in rhyolite.
Hearst Tp.; NW½, W central pt.; claim 85157 (4097).	ODM, 1947, Vol.56, pt.8, p.31.	Pb	Galena in carbonate in mafic volcanics.
Hearst Tp.; NE½, central pt.; Lowe, D. (Vitro Minerals Option).	ODM, Kirkland Lake files.	Cu, Pb, Zn	Sphalerite, galena and chalcopyrite in quartz-carbonate vein.
Hillary Tp.; NE corner.	ODM, Timmins file T-406.	Cu	Minor chalcopyrite in andesite.
Holmes Tp.; W shore of Geraldine Lake.	ODM, Kirkland Lake files.	Cu	Chalcopyrite deposit.
Holmes Tp.; N pt. Galer Lake on boundary of lots 9 and 10; Loki.	ODM, 1966, G.R.44, p.14.	Cu	Pyrite and chalcopyrite in quartz vein at contact of feldspar porphyry and greenstone.
Holmes Tp.; N½ lot 7, con. II; Loki	ODM, 1966, G.R.44, p.14.	Pb	Galena and pyrite in quartz vein in feldspar porphyry.
Holmes Tp.; lot 11, con. III.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Hudson Tp.; lot 12, con. VI.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in Nipissing diabase at its contact with Firstbrook bedded argillite.
Ingram Tp.; S pt. lot 11, con. VI; Marshall.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Galena, chalcopyrite and sphalerite in quartz-carbonate vein in Nipissing diabase.
Ingram Tp.; S½ lot 10, con. VI; Tinex Development Exploration.	ODM, Kirkland Lake files.	Cu, Pb	Pyrite, chalcopyrite and galena in veins in Cobalt argillite.
James Tp.; SW¼ of S½ lot 10, con. V; Bermead (Tee-Arr, Lenwood).	ODM, Kirkland Lake files. ODM, 1968, G.R.62, p.22-3.	Cu, Ni, Pb, Ag, Co	Niccolite, smaltite, chalcopyrite and bornite in a carbonate vein.
Katrine Tp.; W½, central pt.; Norwood Kirkland.	ODM, Kirkland Lake files.	Pb, Zn	Galena and sphalerite in quartz vein.
Katrine Tp.; SE½, E central pt.; Walsh-Katrine.	ODM, Kirkland Lake files.	Cu, Pb	Pyrite, chalcopyrite and galena in quartz vein.
Knight Tp.; W½, W central pt.; Sutherland (Arthur Lake).	ODM, Kirkland Lake files.	Ni, Cu	Nickel silicate and minor chalcopyrite in mafic rocks.
Langmuir Tp.; INCO.	ODM map P.444.	Ni, Cu	Nickel-copper mineralization along peridotite-rhyolite contact.
Langmuir Tp.; SE corner.	ODM map P.444.	Zn, Pb	Disseminated sphalerite and galena in barite.
Lee Tp.; SE½, central pt.; Campbell-Jeanjacquet.	ODM, Kirkland Lake files.	Cu	Sparse chalcopyrite in carbonate vein.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Leonard Tp.; NW $\frac{1}{2}$, central pt.; Newnorth.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in carbonate vein.
McElroy Tp.; NE $\frac{1}{2}$, NE pt.; Big Jackpot (Scarth).	ODM, Kirkland Lake files.	Pb	Pyrrhotite, pyrite, sphalerite and galena in seams in Timiskaming greywacke.
McElroy Tp.; S $\frac{1}{2}$, central pt., claim WR 97; Jean Petit.	ODM, 1916, Vol.25, pt.1, p.252.	Cu	Chalcopyrite in carbonate veins.
McElroy Tp.; SW $\frac{1}{4}$, S central pt.; Judge.	ODM, 1950, Vol.59, pt.6, p.47.	Cu	Pyrite and chalcopyrite in quartz-carbonate vein.
McElroy Tp.; NE $\frac{1}{2}$, central pt., claim MR 25; Kirkland-Hudson Bay.	ODM, 1950, Vol.59, pt.6, p.52.	Pb, Zn	Galena, sphalerite and pyrite in quartz vein.
McElroy Tp.; SW $\frac{1}{2}$, NE pt.; Knox.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in granite injection in altered greywacke.
McElroy Tp.; SW $\frac{1}{2}$; Mondoux.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Pyrite, galena, sphalerite and pyrrhotite in quartz vein.
McElroy Tp.; NE corner; St. Jean.	ODM, Kirkland Lake files.	Pb	Galena vein in andesite.
McGarry Tp.; NW corner; Rose (Union).	ODM, 1941, Vol.50, pt.7, p.89.	Cu, Zn	Pyrite, pyrrhotite, sphalerite and chalcopyrite in amygdaloidal rock.
McGarry Tp.; NE $\frac{1}{2}$, NW corner; Tresdor Larder.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz and carbonate stringers.
McNeil Tp.; SE corner; Denison.	ODM, Kirkland Lake files.	Cu	In mafic volcanics.
McVittie Tp.; W $\frac{1}{2}$, W central pt.; Mary Ann.	ODM, Kirkland Lake files.	Cu	Chalcopyrite blebs in rhyolite.
McVittie Tp.; NE $\frac{1}{2}$, E central pt.; Smith-Lyman.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein in andesite.
Maisonville Tp.; lot 6, con. IV; Bradford.	ODM, Kirkland Lake files.	Cu, Pb, Zn	Galena, sphalerite and chalcopyrite in quartz-carbonate vein.
Maisonville Tp.; NW $\frac{1}{2}$ of N $\frac{1}{2}$ lot 7, con. III; Cole.	ODM, Kirkland Lake files.	Cu, Ni	Pyrite and chalcopyrite in gossans in andesite.
Maisonville Tp.; W $\frac{1}{2}$, central pt.; Peterson.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in silicified syenite porphyry.
Maisonville Tp.; N $\frac{1}{2}$ lot 8, con. II; Pudden.	ODM, Kirkland Lake files.	Cu	Chalcopyrite disseminated in greenstone and in quartz vein.
Marter Tp.; N $\frac{1}{2}$ lot 12, con. V.	ODM, 1963, G.R.18, p.18.	Cu	Pyrite and chalcopyrite in quartz vein in granitic gneiss.
Marter Tp.; lot 2, con. II; Aubin, Alphonse.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Marter Tp.; lot 1, con. III; Carlson.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein.
Marter Tp.; S $\frac{1}{2}$ lot 11, con. V; Sawka-Allard.	ODM, Kirkland Lake files.	Cu	Chalcopyrite at contact of iron formation with felsic tuffs.
Marter Tp.; SE $\frac{1}{4}$ of N $\frac{1}{2}$ lot 2, con. IV; Shortt.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in quartz vein.
Melba Tp.; NE $\frac{1}{2}$; Boland-Bell (Midrim).	ODM, Kirkland Lake files.	Cu	Chalcopyrite in stringers and disseminated in dacite breccia.
Mickle Tp.; NE $\frac{1}{2}$, NE pt.; Northmount.	ODM, Kirkland Lake files.	Cu	Chalcopyrite, pyrite and bornite in carbonate with specular hematite margins.
Midlothian Tp.; NW $\frac{1}{2}$, E central pt.; Anderson-Clark.	ODM, Kirkland Lake files.	Cu, Pb	Pyrite, chalcopyrite and galena in quartz veins.
Midlothian Tp.; SW $\frac{1}{2}$, S central pt.; Consolidated Mining & Smelting.	ODM, Kirkland Lake files.	Cu	Chalcopyrite blebs associated with carbonate veins.

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Midlothian Tp.; N½, N central pt.; Laroma Midlothian.	ODM, Kirkland Lake files.	Cu	Chalcopyrite specks in carbonate.
Midlothian Tp.; central pt.; Morgan, C.	ODM, Kirkland Lake files.	Zn	Sphalerite and pyrite in rhyolite.
Musgrove Tp.; NE corner.	ODM, Timmins file T-492, T-702.	Cu	Minor disseminated chalcopyrite along peridotite-granite contact.
Natal Tp.; NW¼, central pt.; Teegana.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein in greywacke, arkose and quartzite.
Pacaud Tp.; NW¼ of S½ lot 9, con. VI.	ODM, 1957, Vol.66, pt.5, p.49.	Cu	Pyrrhotite and chalcopyrite at contact of felsic tuff and andesitic tuff.
Pacaud Tp.; N½ lot 1, con. VI; Bennett-Pacaud.	ODM, 1957, Vol.66, pt.5, p.46.	Cu	Pyrite and chalcopyrite in quartz-carbonate vein in basalt.
Pense Tp.; N½, N central pt.; Osborne.	ODM, 1922, Vol.31, pt.3, p.16.	Cu, Zn	In Nipissing diabase.
Pense Tp.; SE¼, NE pt.; Talisman.	ODM, Kirkland Lake files.	Cu	Pyrrhotite, pyrite and chalcopyrite in siliceous iron formation.
Pontiac Tp.; SE shore of Clarice Lake.	ODM, 1928, Vol.37, pt.3, p.25.	Cu	Chalcopyrite in rhyolite.
Powell Tp.; W½, central pt.; Brookbank.	ODM, Kirkland Lake files.	Ni	Pyrrhotite and pyrite in andesite.
Powell Tp.; SE¼, NE pt.; Culver.	ODM, 1967, G.R.51, p.36.	Cu	Chalcopyrite and pyrite in quartz vein in greywacke and conglomerate.
Powell Tp.; E¼, E central pt.; Geo-Scientific "Mistinikon Lake".	ODM, Kirkland Lake files.	Cu	Pyrite, pyrrhotite and chalcopyrite disseminated and stringers in andesite.
Price Tp.; S central pt.	ODM, Timmins file T-781.	Cu	Disseminated chalcopyrite in iron formation.
Robertson Tp.; W½, central pt.; Denison.	ODM, Kirkland Lake files.	Cu	Chalcopyrite disseminated in sheared and silicified gabbro.
Shillington Tp.; W½, central pt.; Steedman.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein in greywacke.
Skead Tp.; N pt. lot 2, con. II; Orbit (Denique).	ODM, 1949, Vol.58, pt.6, p.30.	Cu	Pyrite and chalcopyrite in stringers and lenses in sheared dacite.
South Lorrain Tp.; NE¼, SW pt.; Ox-Bow Silver.	ODM, Kirkland Lake files.	Pb	Galena in Keewatin schist.
Tudhope Tp.; N½ lot 12, con. III; Doyle, Holden, Regan.	ODM, Kirkland Lake files.	Cu	Bornite and chalcopyrite in carbonate vein in Nipissing diabase.
Tudhope Tp.; SE¼, lot 10, con. VI; Hurd (Edelston).	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in carbonate vein in Nipissing diabase.
Tudhope Tp.; S pt. lot 12, con. VI; Merico.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and bornite in carbonate vein in Nipissing diabase.
Tudhope Tp.; N½ lot 7, con. I; Payne, J.R.	ODM, Kirkland Lake files.	Cu	Pyrite and chalcopyrite in quartz vein in greenstone, diorite and feldspar porphyry.
Tudhope Tp.; NE pt. lot 12, con. V; Quesnel.	ODM, Kirkland Lake files.	Cu	Pyrite, chalcopyrite and bornite in carbonate vein in Nipissing diabase.
Tudhope Tp.; NE¼ of S½ lot 2, con. IV; Red Lake.	ODM, Kirkland Lake files.	Cu	Chalcopyrite disseminated in andesite.
Tudhope Tp.; SW¼ of S½ lot 1, con. IV; Trihope.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz-carbonate vein in dacite.
Tyrrell Tp.; E¼, central pt.; Benvan.	ODM, Kirkland Lake files.	Cu, Pb	Pyrite, chalcopyrite and galena in quartz-carbonate vein in Nipissing diabase.
Van Hise Tp.; SW¼, central pt.; Charbonneau.	ODM, Kirkland Lake files.	Cu	Chalcopyrite in quartz vein in fine-grained greenstone.
Yarrow Tp.; NE¼, central pt.; Legacy.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and bornite in quartz vein in Cobalt argillite and greywacke.
Yarrow Tp.; SE¼, S central pt.; Maralgo.	ODM, Kirkland Lake files.	Cu	Chalcopyrite and bornite in quartz vein in altered Cobalt greywacke.

VICTORIA COUNTY

Occurrences

<u>Location</u>	<u>References</u>	<u>Metals</u>	<u>Remarks</u>
Somerville Tp.; lot 2, con. V, (Victoria).	ODM, 1943, Vol. 52, pt. 2, p.50-51.	Pb	Galena vein developed by 100-ft. shaft and 2 levels.
Somerville Tp.; lot 1, con. VII, (Crown King).	ODM, 1943, Vol. 52, pt. 2, p.51.	Pb	3 barite veins with galena in marble.

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