Ontario

Ministry of Natural Resources

Hon. Alan W. Pope
Minister

John R. Sloan
Deputy Minister

ONTARIO GEOLOGICAL SURVEY

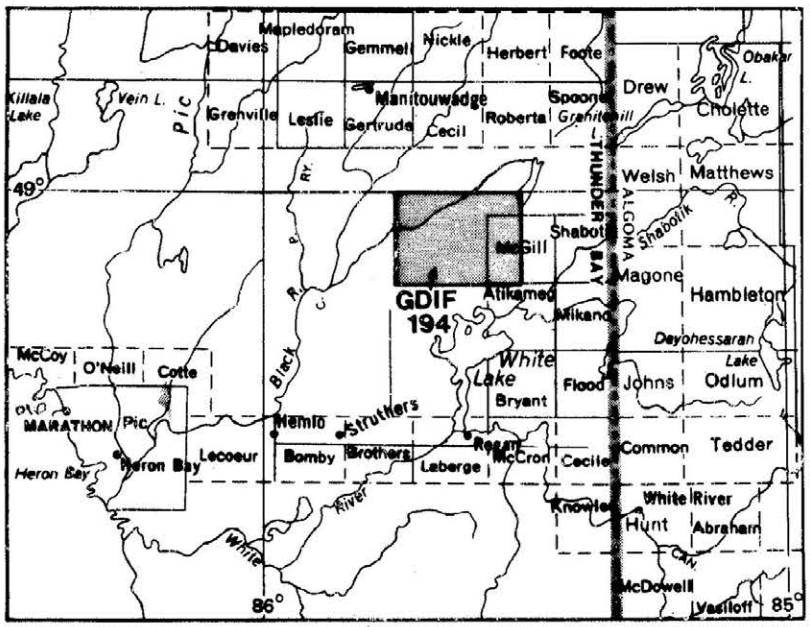
GEOLOGICAL DATA INVENTORY FOLIO

GDIF 194

BLACK RIVER AREA

DISTRICT OF THUNDER BAY

Compiled by the Staff of
the Resident Geologist's Office
Thunder Bay



LOCATION MAP

Scale 1:1 013 760 or 1 inch to 16 miles

NTS Number 42 C/13 NE

Mining Claim Map Number G-580 (M35)

This project was funded equally by the governments of Canada and Ontario under the Northern Ontario Rural Development Agreement (NORDA).

Ontario Geological Survey
1984: Black River Area, District of Thunder Bay; Ontario Geological Survey, Geological Data Inventory Folio 194, compiled by the staff of the Resident Geologist's Office, Thunder Bay, 16 pages and 2 maps.

Original Compilation by: P. Perry

Date	Page Revised	Revised by

Date	Page Revised	Revised by

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ACCOMPANYING MAPS

Property Location Map - 1 map

Exploration Data Map - 1 map

Map Scale 1: 31 680 or 1 inch to ½ mile

CONVERSION FACTORS FOR MEASUREMENTS IN ONTARIO GEOLOGICAL SURVEY PUBLICATIONS

If the reader wishes to convert imperial units to SI (metric) units or SI units to imperial units the following multipliers should be used:

CONVERSION FROM SI TO IMPERIAL			CONVERSION FROM IMPERIAL TO SI		
SI Unit	*Multiplied by*	*Gives*	*Imperial Unit*	*Multiplied by*	*Gives*
			LENGTH		
1 mm	0.039 37	inches	1 inch	**25.4**	mm
1 cm	0.393 70	inches	1 inch	**2.54**	cm
1 m	3.280 84	feet	1 foot	**0.304 8**	m
1 m	0.049 709 7	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
			AREA		
1 cm^2	0.155 0	square inches	1 square inch	**6.451 6**	cm^2
1 m^2	10.763 9	square feet	1 square foot	**0.092 903 04**	m^2
1 km^2	0.386 10	square miles	1 square mile	2.589 988	km^2
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
			VOLUME		
1 cm^3	0.061 02	cubic inches	1 cubic inch	**16.387 064**	cm^3
1 m^3	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m^3
1 m^3	1.308 0	cubic yards	1 cubic yard	0.764 555	m^3
			CAPACITY		
1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	**4.546 090**	L
			MASS		
1 g	0.035 273 96	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 75	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 62	pounds (avdp)	1 pound (avdp)	**0.453 592 37**	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	**907.184 74**	kg
1 t	1.102 311	tons (short)	1 ton (short)	**0.907 184 74**	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	**1016.046 908 8**	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	**1.016 046 908 8**	t
			CONCENTRATION		
1 g/t	0.029 166 6	ounce (troy)/ ton (short)	1 ounce (troy)/ ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ ton (short)	1 pennyweight/ ton (short)	1.714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

1 ounce (troy)/ton (short)	20.0	pennyweights/ton (short)
1 pennyweight/ton (short)	0.05	ounce (troy)/ton (short)

One gram(g) per tonne is equivalent to one part per million (1 ppm).

NOTE–Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries published by The Mining Association of Canada in co-operation with the Coal Association of Canada.

DATA SOURCES CHECK LIST

NOTE: The following sources have been searched to compile the data for this area. If no reference data was found the appropriate box is marked 'no'; if reference data was found, the box is marked 'yes'.

All reference data found are included in the following pages. If the box is blank, the data source has not yet been searched. If the box is marked N.A., the source item is Not Applicable to this area and therefore not searched.

	SOURCES OF DATA	Data	Initial
1	Resident Geologist's Office Files	YES	P. JUNE/84
2	Assessment Files Research Office, Toronto	YES	P. JUNE/84
3	ODM General Index; 7 volumes	YES	P. JUNE/84
4	Catalogue of Airborne Geophysical Surveys (ODM)	YES	P. JUNE/84
5	ODM Mineral Resources Circulars and OGS Mineral Deposits Circulars	YES	P. JUNE/84
6	ODM Industrial Mineral Reports	NO	P. JUNE/84
7	Bibliography of Post Precambrian Theses - Karrow (ODM MP 1)	NO	P. JUNE/84
8	Bibliography of Precambrian Theses - Ginn (ODM MP 2)	NO	P. JUNE/84
9	Newspaper Clippings File	YES	P. JUNE/84
10	GSC Index to Publications	YES	P. JUNE/84
11	OGS Index to Published Maps and Reports - MP 77 and Supplements to MP 77	YES	P. JUNE/84
12	OGS Index Maps	YES	P. JUNE/84
13	Source Mineral Deposit Records (O.G.S.)		
14	Author - Subject Articles File	YES	P. JUNE/84
15	Miscellaneous Papers: ODM & OGS	NO	P. JUNE/84
16	ODM Geological Circulars: OGS Study Series	NO	P. JUNE/84
17	ODM Preliminary Reports: ODM Bulletins	NO	P. JUNE/84
18	ODM – OGS Open File Reports	YES	P. JUNE/84
19	OGS Northern Ontario Engineering Geology Terrain Studies	YES	P. JUNE/84
20	OGS Aggregate Resources Inventory Papers	NO	P. JUNE/84
21	OGS Mineral Potential Maps	YES	P. JUNE/84

METALS AND MINERALS REFERENCES LIST

- △ anh. . . . . .Anhydrite
- △ ank. . . . . .Ankerite
- △ anna . . . . . Annabergite
- △ ap. . . . . .Apatite
- △ arg . . . . . Argentite
- △ As . . . . . .Arsenic
- △ asp . . . . . .Arsenopyrite
- △ asb . . . . . .Asbestos
- △ ba. . . . . .Barite
- △ be. . . . . .Beryl
- △ Bi. . . . . .Bismuth
- △ bn . . . . . .Bornite
- △ bran . . . . . .Brannerite
- △ bruc . . . . . .Brucite
- △ Cd . . . . . Cadmium
- △ calc. . . . . Calcite
- △ carb . . . . . .Carbonate
- △ cel . . . . . .Celestite
- △ cc. . . . . .Chalcocite
- △ cp. . . . . .Chalcopyrite
- △ ch. . . . . .Chert
- △ clay . . . . . .Clay
- △ Co . . . . . Cobalt
- △ cob. . . . . Cobaltite
- △ cb. . . . . .Columbite
- △ Cu . . . . . .Copper
- △ cor . . . . . Corundum
- △ dol . . . . . Dolomite
- △ ep. . . . . Epidote
- △ ery . . . . . Erythrite
- △ fel . . . . . .Feldspar
- △ fl . . . . . .Fluorite (flurospar)
- △ fu. . . . . .Fuchsite
- △ gn. . . . . Galena
- △ gt. . . . . Garnet
- △ goe . . . . . .Goethite
- △ Au . . . . . Gold
- △ gf. . . . . .Graphite
- △ gl . . . . . Gravel
- △ gyp. . . . . Gypsum
- △ hem . . . . . Hematite
- △ il . . . . . .Ilmenite
- △ Fe . . . . . .Iron
- △ IF. . . . . Iron Formation
- △ jas . . . . . Jasper
- △ kaol . . . . . .Kaolinite (kaolin)
- △ ky . . . . . Kyanite
- △ Pb . . . . . Lead
- △ lim . . . . . Limonite
- △ Li. . . . . Lithium
- △ mgst . . . . . .Magnesite
- △ mag . . . . . .Magnetite
- △ mc . . . . . Malachite
- △ Mn . . . . . Manganese
- △ mb. . . . . .Marble
- △ mar. . . . . Marcasite
- △ ma . . . . . .Marl
- △ mi . . . . . Mica
- △ ml . . . . . .Millerite
- △ mo . . . . . Molybdenite
- △ Mo . . . . . .Molybdenum
- △ mon . . . . . Monazite
- △ ne. . . . . Nephelite (nepheline)
- △ nc. . . . . .Niccolite
- △ Ni. . . . . Nickel
- △ Nb . . . . . .Niobium
- △ Pd . . . . . .Palladium
- △ peat . . . . . .Peat
- △ pent . . . . . .Pentlandite
- △ Pt. . . . . .Platinum
- △ py . . . . . .Pyrite
- △ pyl . . . . . Pyrochlore
- △ pyrl . . . . . .Pyrolusite
- △ po . . . . . .Pyrrhotite
- △ q . . . . . Quartz
- △ qcv . . . . .Quartz carbonate vein
- △ ra. . . . . .Radioactive minerals
- △ RE . . . . . .Rare Earths
- △ sd. . . . . Sand
- △ sgl . . . . . Sand and gravel
- △ ss. . . . . .Sandstone
- △ scap . . . . . Scapolite
- △ shee . . . . . .Scheelite
- △ serp . . . . . Serpentine
- △ sh. . . . . Shale
- △ sid . . . . . Siderite
- △ si . . . . . Silica
- △ Ag . . . . . .Silver
- △ sl . . . . . Slate
- △ sm . . . . . .Smaltite
- △ sod. . . . . Sodalite
- △ spec . . . . . Specularite
- △ sp. . . . . .Sphalerite
- △ spd. . . . . .Spodumene
- △ staur. . . . . .Staurolite
- △ stib. . . . . Stibnite
- △ st . . . . . .Stone
- △ talc. . . . . .Talc
- △ Te . . . . . .Tellurium
- △ td. . . . . Tetrahedrite
- △ th. . . . . .Thorite
- △ Th . . . . . .Thorium
- △ thuc . . . . . Thucholite
- △ ti . . . . . Titanite
- △ Ti. . . . . Titanium
- △ tour . . . . . .Tourmaline
- △ trap . . . . . .Trap rock
- △ W. . . . . Tungsten
- △ uran . . . . . Uraninite
- △ U . . . . . .Uranium
- △ verm. . . . . .Vermiculite
- △ Y . . . . . Yttrium
- ▲ Zn . . . . . .Zinc
- △ zr. . . . . Zircon

Solid triangles indicate metal and mineral occurrences shown on the accompanying maps.

MINERAL OCCURRENCES

Map Ref. Letter	Name(s)	Mineralization	Source Mineral Deposit Record	References in OGS Mineral Deposits Circulars & OGS Industrial Mineral Reports	Additional References and/or Remarks
A	Fairservice Occurrence	Zn			Milne, V. G., 1968; GR 72, p. 61

GDIF FORM NO. 1

TYPE OF WORK		Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE THUNDER BAY		GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
COMPANY/AUTHOR (file number)																				
1	Boos, Bernard (Hibert, Nick, Rodeo Resources Limited) F.N.: 2.5912	83	83			83														
2	Canadian Superior Exploration Limited (Selco Exploration Limited) F.N.: 63.1796									65										
3	Caravelle Mines Limited (Pulfa Prospect) F.N.: 63.1698							65[1]	65[1]	65[1]										
4	East Lun Gold Mines Limited							54[1]												
5	Irish Copper Mines Limited (Fair Service Option) F.N.: 63.1716								65[1]	65[1]										

Notes:
1. Filed 42 C 13/SW.

GDIF FORM NO. 2

DRILLHOLE SUMMARY

Map Drilling Location Number	Company Name	Company Drillhole Number	Date Drilled	Bearing Azimuth	Initial Dip of Hole	Thickness of Overburden	Total Length of Hole	Mineralization Noted in Log	Assay Data Included for

GDIF FORM NO. 3

AIRBORNE GEOPHYSICAL SURVEY DATA

No.	By / For	Type of Survey	Flight Altitude	Flight Line Direction	Flight Line Spacing
2	Selco Exploration Company Limited Canadian Superior Exploration Limited	Airborne Electromagnetic Airborne Magnetometer[1]	380 feet	N/S	1320 feet
3	Selco Exploration Company Limited Caravelle Mines Limited	Airborne Electromagnetic Airborne Magnetometer	400 to 600 feet	N/S	660 feet
5	Canadian Aero Mineral Survey Limited Irish Copper Mines Limited	Airborne Electromagnetic Airborne Magnetometer	140 feet	N/S	660 feet

Notes:
1. Magnetic data not recorded on map.

GEOCHEMICAL SURVEY DATA

Map Sample Site Reference Number	Type of Survey	Analysis For	By	Reference
1	Soil Geochemistry (A or B horizon)	Cu, Pb, Zn, Mo, Au	Manwa Exploration Limited	Resident Geologist's Assessment Files, Thunder Bay F.N.: 2.5912

GDIF FORM NO. 5

MISCELLANEOUS DATA

AGE DATING

Site	Method	Material	Reference	Result

NEWSPAPER CLIPPINGS FILE

NOTE: A file of newspaper clippings about the companies listed below, who have worked in this area, is maintained in the Regional/Resident Geologist's Office. Thunder Bay

Rodeo Resources Limited

Canadian Superior Exploration Limited

Selco Exploration Limited

Caravelle Mines Limited

Irish Copper Mines Limited

ODM GENERAL INDEX SEARCH

Words searched: Black River, Caravelle Mines Limited, Dead Otter Lake, Dotted Lake, Irish Copper Mines Limited

Index Volume	Listing:	Report Volume	Part	Page
3	Black River, Pic River			
	Character and drainage	40	2	23-25
		41	6	38
	Glacial Lake deposits	41	6	37, 42
	Rocks	40	2	30
		41	6	40
	Surveyed	41	6	35
	Timber	41	6	39
	Dead Otter Lake, N.W. of White Lake			
	Rocks near	41	6	40
	Drag-fold schists, photo	41	6	41
	Topography near	41	6	37
6	Black River, Pic River			
	Mining claims	66	8	88
	Irish Copper Mines Limited			
	Incorporated	65	1	33
8	Dead Otter Lake			
	Black River Area, Thunder Bay District	GR 72		2, 4, 8, 10, 37-50
	Dotted Lake			
	Black River Area, Thunder Bay District	GR 72		2, 4, 10, 23-61
	Black River, Thunder Bay District			
	Copper/Nickel/Zinc/Lead	GR 72		56-63
	Geology of the area			
	Report and maps 2143 and 2147 on, 1968 by V. G. Milne	GR 72		
	Irish Copper Mines Limited			
	Black River Area, Thunder Bay District			
	Report on Fairservice Occurrence	GR 72		2, 55, 61

GDIF FORM NO. 8

ODM GENERAL INDEX SEARCH

Words searched:

Index Volume	Listing:	Report Volume	Part	Page

GDIF FORM NO. 8

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
		REGIONAL GEOLOGICAL COMPILATION MAPS		
Milne, V. G., et al	1972	Manitouwadge-Wawa Sheet, Algoma, Cochrane, Sudbury and Thunder Bay Districts, Ontario. Associated map P-494.	ODM, Map 2220	1 inch to 4 miles
		GEOLOGICAL REPORTS AND MAPS		
Bell, R.	1872	Report on the country north of Lake Superior between the Nipigon and Michipicoten Rivers, Ontario.	GSC Report of Progress 1870-1871, Pt. VIII	
Card, K. D.	1981	Compilation of Bedrock Geology of Central Superior and Southern Provinces, Ontario.	GSC, OFR 729	1:250,000
Logan, W. E.	1847	Remarks on the Mining Region of Lake Superior: addressed to the Committee of the Honorable Executive Council and the Report on Mining Locations Claimed on the Canadian Shores of the Lake, addressed to the Commissioner of Crown Lands.	GSC Separate Report 391	
Milne, V. G.	1968	Geology of the Black River Area, District of Thunder Bay, Ontario. Accompanied by maps: 2143, 2144, 2145, 2146, 2147. Associated maps: P-294, P-332 to P-335.	ODM, GR 72	2 inches to 1 mile
Thompson, J. E.	1931	Geology of the Heron Bay Area, District of Thunder Bay, Ontario. Accompanied by map 40 D.	ODM Annual Report, Vol. 40, Pt. 2	pp. 21-39
Thompson, J. E.	1932	Geology of the Heron Bay-White Lake Area. Accompanied by map 41 J.	ODM Annual Report, Vol. 41, Pt. 6	pp. 34-47

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
Wilson, W. J.	1909	Geological Reconnaissance of a portion of Algoma and Thunder Bay Districts, Ontario. Accompanied by 964.	GSC Separate Paper 980	
		GEOPHYSICAL REPORTS AND MAPS		
GSC	1963	Aeromagnetic Map, White River Area, 42 C.	GSC, Map 7087G	1 inch to 4 miles
GSC	1981	Magnetic Anomaly Map, Western Ontario.	GSC, Map 1564A	1:100,000
GSC - ODM	1963	Aeromagnetic Map, White Lake, Ontario. (42 C/13)	GSC-ODM Map 2168G	1 inch to 1 mile
		GEOCHEMICAL REPORTS AND MAPS		
GSC	1981	National Geochemical Reconnaissance coloured Compilation Map Series; Lake Superior, Ontario.	GSC, OFR 746	1:200,000
GSC - OGS	1979	Regional Lake Sediment and Water Geochemistry Reconnaissance Data, Eastern Shore Lake Superior, NTS 42 C and 42 F/S, Algoma and Thunder Bay Districts, Ontario. Accompanied by maps 80000 to 80015.	OGS, OFR 5267	
		MINERAL POTENTIAL		
Springer, J. S.	1977	Ontario Mineral Potential, White River Sheet, NTS 42 C, Thunder Bay and Algoma Districts, Ontario.	OGS, Map P-1519	1:250,000

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
		SURFICIAL, PLEISTOCENE, TERRAIN ENGINEERING		
Boissoneau, A. N.	1965	Algoma-Cochrane Surficial Geology, NTS 32 D, E; 42 A, B, C, F, G, H, Ontario.	ODLF, Map S3-65	1 inch to 8 miles
Gartner, J. F., McQuay, D. F.	1980	Northern Ontario Engineering Geology Terrain Study, White River Area, NTS 42 C/NW, Thunder Bay and Algoma Districts, Ontario. Accompanied by maps 5094 and 5098.	OGS, NOEGTS 61	1:100,000

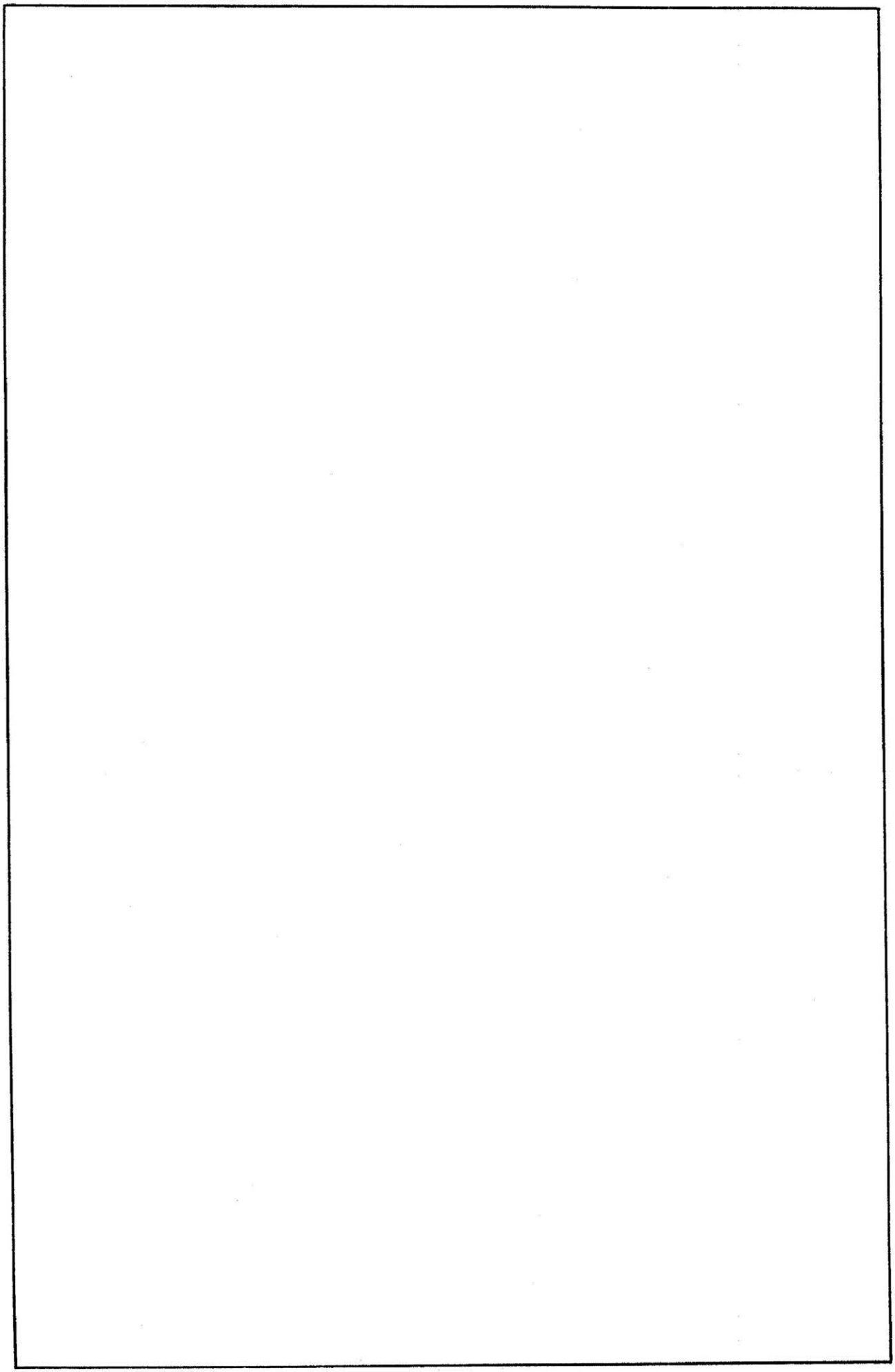
SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages

GDIF FORM NO. 9

NOTES AND ADDENDA

GDIF FORM NO.10



BLACK RIVER AREA

86° 00'

85° 45'

49° 00'

48° 52' 30"

Ministry of Natural Resources
Ontario

Hon. Alan W. Pope
Minister

John R. Sloan
Deputy Minister

ONTARIO GEOLOGICAL SURVEY

PROPERTY LOCATION MAP

GEOLOGICAL DATA INVENTORY FOLIO 194

(Map 1 of 2)

BLACK RIVER AREA

DISTRICT OF THUNDER BAY

Scale 1:31 680

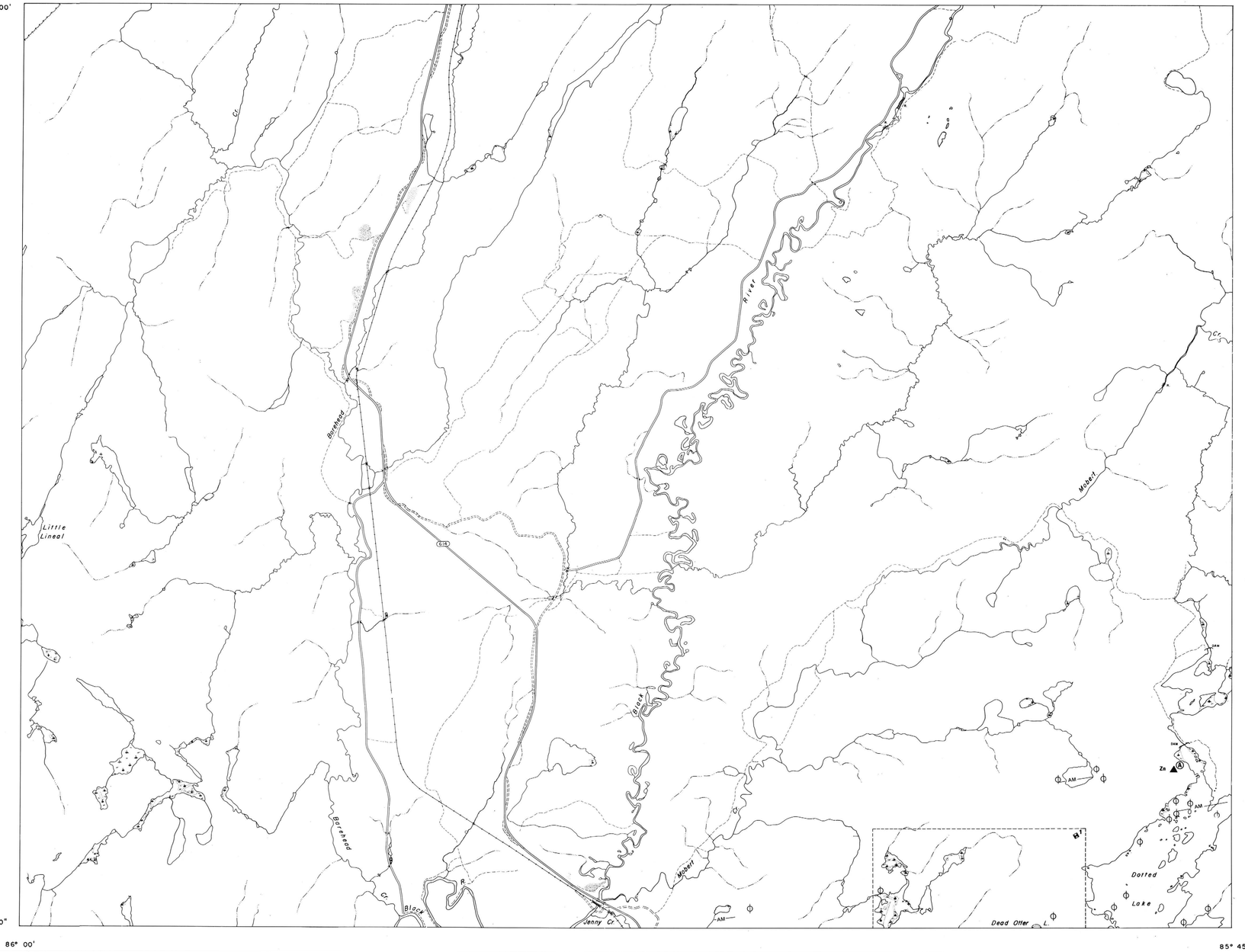
Mile 0.5 0 0.5 1 Mile

Kilometre 0.5 0 0.5 1 Kilometre

EXPLORATION DATA FILE AREAS

Reference number is always inside work area area outlined. See listing in text pages.

Small area of exploration.



TYPES OF DATA SHOWN ON THIS MAP

GEOCHEMICAL AND GEOCHRONOLOGICAL DATA

- ☐ Geochemical sample site, with reference number
- ☒ Area of geochemical sampling, with reference number
- ☐ Age dating material sampling site, with reference number
- ☐

GEOPHYSICAL ANOMALIES

- ☒ AM — Airborne Magnetometer Anomaly
- ☐ Airborne Electromagnetometer Anomaly Length of anomaly along flight line
- ☒ Airborne Electromagnetometer Anomaly. Location of anomaly along flight line
- ☒ Airborne Electromagnetometer Anomaly Conductor Axis: definite, probable, possible
- ☐ ARA — Airborne Radiometric Anomaly
- ☐ M — Ground Magnetometer Anomaly
- ☐ VL — Ground Electromagnetometer Anomaly (VL - Vertical Loop; HL - Horizontal Loop; VLF - Very low freq; Turam; JEM - Crone EM - 16)
- ☐ RA — Ground Radiometric Anomaly
- ☐ IP — Induced Polarization Anomaly
- ☐ SP — Self Potential Anomaly
- ☐ AMAG — Audio-frequency magnetometer anomaly (total intensity)
- ☐ R — Resistivity Anomaly
- ☐ GR — Gravity Anomaly
- ☐

MISCELLANEOUS DATA

- ☐ Trenching, pit
- ☐ Adit
- ☐ Open pit
- ☐ Rock quarry
- ☐ Sand and/or gravel pit
- ☐

NOTE: Consult the text that accompanies this map for pertinent lists of data, references, and abbreviations.

Ministry of Natural Resources — Ontario

Hon. Alan W. Pope, Minister
John R. Sloan, Deputy Minister

ONTARIO GEOLOGICAL SURVEY

EXPLORATION DATA MAP

GEOLOGICAL DATA INVENTORY FOLIO 194

(Map 2 of 2)

BLACK RIVER AREA

DISTRICT OF THUNDER BAY

Scale 1:31 680

Mile 0.5 0 0.5 1 Mile

Kilometre 0.5 0 0.5 1 Kilometre

GEOLOGICAL AND MINING SYMBOLS

TYPES OF DATA SHOWN ON THIS MAP

MINERAL OCCURRENCES

- ☒ Cp A. — Mineral occurrence at surface, with reference letter
- ☐ Au A. 84' — Mineral occurrence with shaft, depth given with reference letter
- ☐ Ag A. — Mineral occurrence reported but exact location uncertain, with reference letter
- ☐ Cp A. — Mineralized Float with reference letter
- ☐

DRILL HOLES

- ☐ Location of single drill hole, with reference number
- ☐ Location of closely spaced group of drill holes, with reference number
- ☐ Drill hole, exact location uncertain, with reference number.
- ☐ Property with underground drill holes in this general area, with reference number
- ☐ Property with drill holes which have not been plotted on map, with reference number
- ☐ Reverse Circulation Drill Hole; Churn drilling, with reference number
- ☐