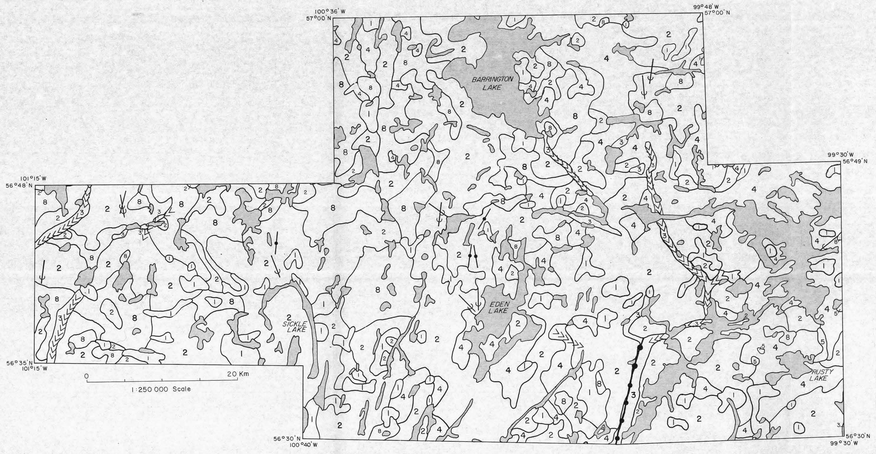
GEOLOGICAL SURVEY OF CANADA COMMISSION GEOLOGIQUE DU CANADA

GOLD IN LAKE SEDIMENTS

GSC OPEN FILE 1959

NORTHWEST MANITOBA, 1989

Part of NTS 64B, 64C



SURFICIAL GEOLOGY LEGEND

8	ORG*	Organic deposits; marsh, fen, bog, and swamp characterized by seasonal flooding, 1 - 5 m thick
7	ALLV	Alluvial sediments; sand, gravel, and silt
6	MARN	Marine sediments; stratified clayey to stony silt
5	GLLN	Glaciolacustrine nearshore sediments; silt, sand and clay, commonly well-sorted, up to 3 m thick
4	GLLO	Glaciolacustrine offshore sediments; silt, clay and sand, well-sorted, 1 to 30 m thick
3	GLF	Glaciofluvial sediments; gravel, sand and silt, waterworted, stratified, includes ice-contact stratified drift, 1 - 100 m thick
2	TILL	Glacial till; primarily bedrock derived, veneer to blanket, silty to sandy, 1 - 5 m thick, may be covered by localized boulder lag
1	ROCK	Bedrock; predominantly exposed bedrock, commonly with a thin cover of till or organic material

Note: Units 6 and 7 may occur in the survey area but are not indicated because of limited areal extent

* A three or four character mnemonic code entered as part of the field data

SYMBOLS

Surficial unit contact .....

Interlobate moraine .....

Esker .....

Striation direction, known or inferred .....

Flute, drumlinoid form .....

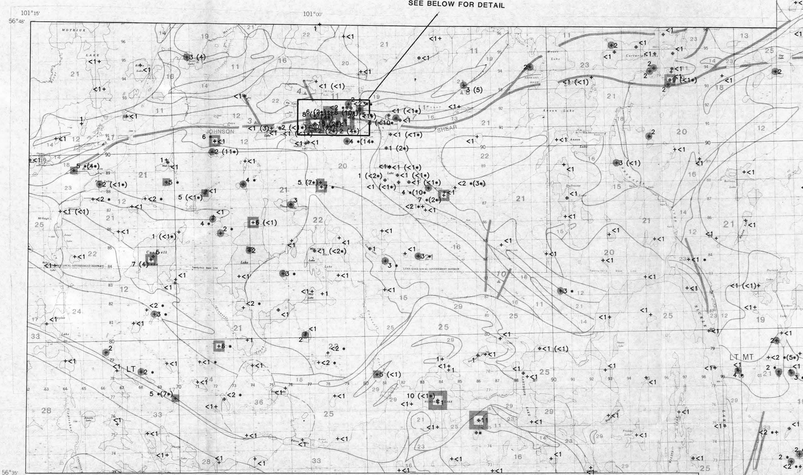
SOURCES OF INFORMATION

Kaszycki, C.A., and Way Nee, V.J., 1986, Surficial Geology of Granville Lake - Manitoba, NTS 64C, Geological Survey of Canada, Open File 1258, 1:100,000

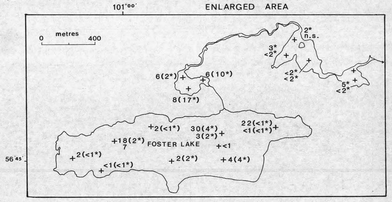
Kaszycki, C.A., and Way Nee, V.J., 1989, Surficial Geology of Uhlman Lake - Manitoba, NTS 64B, Geological Survey of Canada, Open File in preparation, 1:100,000

Kaszycki, C.A., and DiLabio, R.N.W., 1986, Surficial geology and till geochemistry, Lynn Lake - Leaf Rapids region, Manitoba, in Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p 245-256

SEE BELOW FOR DETAIL

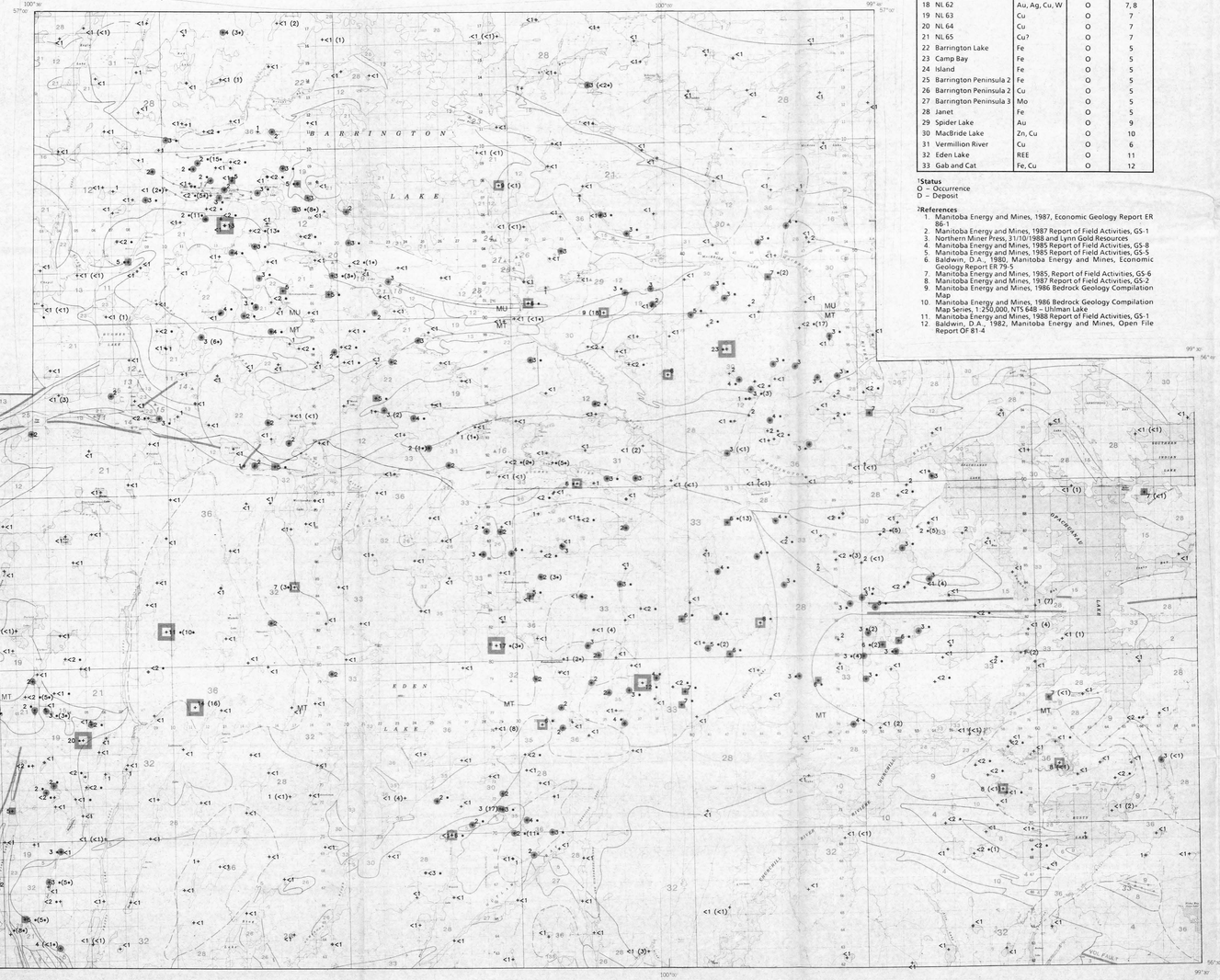


ENLARGED AREA



Au value (ppb) ..... +17
* denotes an analysis performed on a sample weight <10 g.
( ) identifies Au values corresponding to repeat analyses.
<n denotes a result less than detection level n (ppb), consult text for actual sample weight when Au values denoted by * or < detection level

Examples:
+21* Au value of 21 ppb determined on sample weight <10 g.
+30(27*) Au value of 30 ppb on first analysis, Au value of 27 ppb on repeat analysis for sample weighing <10 g.
+<4 Au value less than detection limit of 4 ppb.



MINERAL DEPOSITS AND OCCURRENCES

	Location Name	Commodity	Status[1]	Reference[2]
1	Gemmell 1	Au	O	1
2	Gemmell 2	Au	O	2
3	Ace Vein	Au	O	1
4	Austin Vein	Au	O	1
5	Johnson Shear	Au	O	1
6	T1A	Au	D	1
7	CL Group	Au	O	1
8	Burnt Timber	Au, Ag	D	3
9	Cartwright Lake	Au, Ag	D	1, 4
10	Lasthope	Au	D	1
11	Gold Lake	Au, Pb	O	5
12	Hughes Lake 1	Fe	O	6
13	Hughes Lake 2	Fe	O	5
14	Hughes River 1	Cu, Fe	O	5
15	Hughes River 2	Cu	O	5
16	Adam Lake	Fe	O	5
17	Farley Lake	Au, Ag	D	1
18	NL 62	Au, Ag, Cu, W	O	7, 8
19	NL 63	Cu	O	7
20	NL 64	Cu	O	7
21	NL 65	Cu?	O	7
22	Barrington Lake	Fe	O	5
23	Camp Bay	Fe	O	5
24	Island	Fe	O	5
25	Barrington Peninsula 2	Fe	O	5
26	Barrington Peninsula 2	Cu	O	5
27	Barrington Peninsula 3	Mo	O	5
28	Janet	Fe	O	5
29	Spider Lake	Au	O	9
30	MacBride Lake	Zn, Cu	O	10
31	Vermillion River	Cu	O	6
32	Eden Lake	REE	O	11
33	Gab and Cat	Fe, Cu	O	12

[1]Status
O – Occurrence
D – Deposit

[2]References
1. Manitoba Energy and Mines, 1987, Economic Geology Report ER 86-1
2. Manitoba Energy and Mines, 1987 Report of Field Activities, GS-1
3. Northern Miner Press, 31/10/1988 and Lynn Gold Resources
4. Manitoba Energy and Mines, 1985 Report of Field Activities, GS-8
5. Manitoba Energy and Mines, 1985 Report of Field Activities, GS-5
6. Baldwin, D.A., 1980, Manitoba Energy and Mines, Economic Geology Report ER 79-5
7. Manitoba Energy and Mines, 1985, Report of Field Activities, GS-6
8. Manitoba Energy and Mines, 1987 Report of Field Activities, GS-2
9. Manitoba Energy and Mines, 1986 Bedrock Geology Compilation Map
10. Manitoba Energy and Mines, 1986 Bedrock Geology Compilation Map Series, 1:250,000, NTS 64B – Uhlman Lake
11. Manitoba Energy and Mines, 1988 Report of Field Activities, GS-1
12. Baldwin, D.A., 1982, Manitoba Energy and Mines, Open File Report OF 81-4

LEGEND

QUATERNARY

36 Q – Unconsolidated glacial sediments

PRECAMBRIAN

35 X – Pegmatite
34 EZ – Aegerine-augite monzonite
33 G – Granite, megacrystic to seriate porphyritic
32 GA – Granodiorite, seriate-porphyritic to hornblendic
31 GB – Granite, undivided
30 GC – Granodiorite, granite
29 BTD – Diorite, quartz diorite – Black Trout diorite
28 T – Tonalite, granodiorite, gneissic tonalite
27 ZM – Monzodiorite
26 D – Diorite, quartzdiorite, amphibolite

LYNN LAKE DOMAIN

SICKLE GROUP

25 SS – Sandstone, quartzofeldspathic gneiss
24 SSh – Calcareous sandstone, hornblende-quartzofeldspathic gneiss
23 SC – Polymictic conglomerate

PLUTONIC ROCKS

22 PG – Granite, granodiorite
21 PT – Tonalite, granodiorite – Pool Lake intrusive suite
20 PD – Diorite, quartz diorite
19 B – Gabbro, diorite

WASEKWAN GROUP

18 C – Conglomerate
17 W – Feldspathic greywacke, conglomerate
16 WW – Volcanic sandstone, siltstone and mafic mudstone, iron formation (dotted line)
15 WA – Wasekwan Group undivided
14 WV – Rhyolite, dacite, pyroclastics
13 WVa – Andesite, porphyritic and aphyric basalt, tuff
12 WVr – Basalt, porphyritic and aphyric, iron formation (dotted line), mafic tuff
11 WVpb – Basalt, pillow basalt, porphyritic and aphyric basalt, mafic tuff

LEAF RAPIDS DOMAIN

PLUTONIC ROCKS

10 LBD – Gabbro

UNNAMED METASEDIMENTARY AND METAVOLCANIC ROCKS

9 LRW – Greywacke, calc-silicate rock, iron formation (dotted line)
8 LRC – Polymictic conglomerate and interbedded sandstone
7 K – Chemical sedimentary rock
6 V – Aphyric pillowed basalt
5 LRA – Amphibolite, includes gabbro, sedimentary and volcanic rocks

RUTTAN GROUP

4 RVf – Mafic volcaniclastic rock, minor quartz diorite
3 RVr – Basalt, aphyric and porphyritic

SOUTHERN INDIAN DOMAIN

2 N – Quartzofeldspathic gneiss ± hornblende, may include meta-sandstone
1 SIW – Quartz-biotite gneiss, amphibolite, migmatite

SYMBOLS

Geological boundary .....

Area of little or no outcrop .....

Fault, shear zone .....

Mineral deposit or occurrence .....

Lake sediment and water sample location .....

Field duplicate sample site .....

Geology base derived from:

Cameron, H.D.M., 1988; Geology of the Eden Lake Area, Manitoba Energy and Mines, Geological Report GR 84 – 2, 1:50,000.

Manitoba Energy and Mines, 1986; Bedrock Geology Compilation Map Series, 1:250,000, NTS 64B Uhlman Lake

_____, Bedrock Geology Compilation Map Series, 1:250,000, NTS 64C Granville Lake.

GEOLOGICAL SURVEY OF CANADA
EXPLORATION GEOCHEMISTRY SUBDIVISION

PROJECT COORDINATORS

H.R. Schmitt, P.W.B. Friske

CONTRACTORS

Collection: 64B – Marshall Macklin Monoghan, Toronto (1984)
– H.R. Schmitt, GSC (1987)
64C – Wollex Exploration, Calgary (1983)
– H.R. Schmitt, GSC (1985, 1986, 1987)

Preparation: Golder Associates, Ottawa (1984 – 1988)

Sediment Analysis: 64B – Barringer Magenta Ltd., Rexdale (1984 – 1985)
– Bondar-Clegg and Company Ltd., Ottawa (1987)
– Chemex Labs Ltd., Vancouver (Au only) (1985, 1987, 1988)
64C – Acme Analytical Laboratories Ltd., Toronto (1983)
– Barringer Magenta Ltd., Rexdale (Sb only) (1985)
– Chemex Labs Ltd., Vancouver (Au only) (1985, 1987, 1988)

Water Analysis: 64B – Barringer Magenta (Alberta) Ltd., Calgary (pH, U, F) (1984)
– Ward TSL, Winnipeg (1985)
– Chemex Labs Ltd., Vancouver (1987)
64C – Chemex Labs Ltd., Vancouver (1983, 1987)
– Ward TSL, Winnipeg (Cond, HCO_3, Ca, Mg, Fe – 1984)

Cartography: GSC, Terra Surveys Ltd., Ottawa

Reproduction: Ashley Reproductions, Ottawa

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Manitoba Energy and Mines

Energy, Mines and Resources Canada / Énergie, Mines et Ressources Canada

Canada

GOLD IN LAKE SEDIMENTS

GSC OPEN FILE 1959

CANADA – MANITOBA
MINERAL DEVELOPMENT AGREEMENT (1985 – 1989)

LAKE SEDIMENT AND WATER GEOCHEMICAL SURVEY

NORTHWESTERN MANITOBA, 1987 - 1988

CONCENTRATION	FREQUENCY
10 to 30	N=12(1.51%)
6 to 9	N= 21(2.64%)
5	N= 31(3.89%)
2 to 4	N= 161(20.23%)
0 to 1	N=571(71.73%)

Scale 1:50 000 - Échelle 1/50 000

Kilometres 0 1 2 3 4 Kilomètres

Universal Transverse Mercator Projection

Projection transverse universelle de Mercator

Elevation in feet above mean sea level

Mean magnetic declination 1989, 11°23' East, decreasing 22.7' annually