Manitoba
Energy and Mines

MDS MAP No. 6 (1989)

MINERAL DEPOSITS AND OCCURRENCES IN THE LYNN LAKE AREA (64C/14), MANITOBA

To Accompany Report No. 6 of the Mineral Deposit Series

MANITOBA MINERAL DEPOSIT SERIES

The Mineral Deposit Series is designed to provide the explorationist with an up-to-date reference and accurate geographic locations for known mineralization within the Province. A descriptive classification of the mineralization into *deposit types* will assist mineral explorationists in the formulation of exploration strategies.

Mineral occurrences with known tonnage and metal grades are designated as *deposits* and are highlighted with bold deposit type symbols. Where more than one deposit type is known to occur at a locality, the deposit type with the greatest economic potential is indicated. For example, a 30 cm thick solid sulphide layer of the massive sulphide deposit type is indicated instead of a 2 m thick graphitic sulphide layer of the chemical sediment deposit type at the same locality. Mineral occurrence data not displayed on the map are referenced in a companion report to enable the explorationist to modify the classifications in keeping with new developments or concepts.

The basic publication unit for the Mineral Deposit Series will be the 1:50 000 NTS sheet, on which deposits and occurrences are indexed consecutively. Where the density of data warrants the publication of a 1:20 000 map sheet (e.g. 63K/13SE), location numbers may not be consecutive and intervening numbers will be found on the remaining portions of that NTS map sheet (e.g. 63K/13SW).

The accompanying report contains a synthesis of known information for each locality on: Exploration History, Geological Setting, Mineralization, Deposit Type and References. The reports contain detailed maps that include precise locations, drill hole and trench locations and wherever possible detailed geological maps of the property. The data base used to derive the reports will reside in active mineral deposit files in the possession of the mineral deposit geologists at the Geological Services Branch.

This Mineral Deposit Series will be updated periodically as new information becomes available. Consequently, any errors, omissions or suggestions for improvement should be brought to the attention of the Director, Geological Services Branch.

GEOLOGICAL LEGEND

PRECAMBRIAN (APHEBIAN)

INTRUSIVE ROCKS

Post-Sickle and similar rocks of unknown age

- 22 — 22a quartz porphyry, quartz-feldspar porphyry; 22b diabase
- 21 — 21a aplite, aplitic granite; 21b pegmatite, graphic granite
- 20 — Granite, granodiorite
- 19 — 19a hornblende-biotite granodiorite; 19b tonalite
- 18 — 18a gabbro, minor ultramafic rock; 18b diabase; 18c diorite; 18d plutonic breccia

Pre-Sickle and similar rocks of unknown age

- 17 — 17a granite, granodiorite; 17b pegmatite, aplite; 17c syenite, 17d aplitic granite
- 16 — 16a diorite, quartz diorite; 16b hornblende-biotite tonalite, quartz diorite; 16c granodiorite, tonalite
- 15 — Gabbro, norite, diorite, ultramafic rock
- 14 — Hornblende diorite, quartz diorite
- 13 — Gabbro, diabase

SICKLE GROUP (11a, 12a) and SICKLE METAMORPHIC SUITE (11, 12b-12g)

- 12 — Sandstone, derived schist and gneiss: 12a arkosic sandstone, pebbly sandstone; 12b muscovite-bearing arkose, pebbly arkose; 12c greywacke; 12d hornblende-bearing psammitic gneiss, calcareous sandstone; 12e biotite-bearing psammitic gneiss; 12f quartz-feldspar-muscovite schist, arkosic sandstone; 12g sillimanite-bearing arkosic gneiss
- 11 — Conglomerate with quartz-feldspar porphyry, sedimentary, volcanic and granitoid clasts: 11a conglomerate, arkose matrix; 11b conglomerate, greywacke matrix ± hornblende

SICKLE OR WASEKWAN GROUP

- 10 — Conglomerate with sedimentary, volcanic and granitoid clasts, greywacke: 10a conglomerate, hornblende greywacke matrix; 10b conglomerate, biotite greywacke matrix; 10c staurolite schist, greywacke; 10d biotite greywacke, siltstone, minor argillite

WASEKWAN GROUP

- 9 — Sedimentary rocks, coarse- to fine-grained, paragneiss: 9a pebbly greywacke, paraconglomerate; 9b hornblende greywacke, siltstone; 9c biotite greywacke, siltstone, mudstone; 9d quartz-rich greywacke; 9e siltstone and mafic mudstone; 9f mafic mudstone, tuff, greywacke; 9g argillite; 9h chert; 9i porphyroblastic schist; 9j iron formation
- 8 — Conglomerate: 8a quartz-pebble conglomerate; 8b conglomerate with volcanic and sedimentary clasts; 8c pebbly mudstone; 8d polymictic volcanic breccia, conglomerate
- 7 — Rhyolite, felsic gneiss: 7a massive aphyric rhyolite; 7b massive porphyritic rhyolite; 7c porphyritic breccia; 7d hyaloclastite; 7e tuff
- 6 — Dacite: 6a massive aphyric dacite; 6b massive porphyritic dacite; 6c breccia; 6d tuff; 6e altered dacite, schist
- 5a,c,d / 5b — Intermediate and felsic volcanic rocks: 5a andesite; 5b porphyritic dacite; 5c intermediate tuff, lapilli tuff; 5d pyroclastic breccia
- 4 — Mafic and intermediate volcanic rocks, amphibolite: 4a massive porphyritic and aphyric basalt and andesite; 4b pillowed basalt and andesite; 4c autoclastic breccia; 4d polymictic breccia; 4e mafic tuff, 4f intermediate tuff; 4g garnetiferous amphibolite; 4h andesite
- 3 — Porphyritic basalt: 3a massive basalt; 3b pillowed basalt; 3c autoclastic breccia; 3d porphyritic and aphyric basalt; 3e tuff; 3f banded amphibolite, breccia; 3g mafic porphyry
- 2 — Aphyric basalt: 2a massive basalt; 2b pillowed basalt; 2c pillow breccia, hyaloclastite; 2d tuff; 2e plagioclase-phyric basalt; 2f high-magnesia basalt, tuff, ultramafic rock, amphibolite
- 1 — Greywacke, siltstone, mudstone, minor volcanic rocks
- W — Wasekwan Group undivided

ROCKS OF PROBABLE WASEKWAN AGE: Burntwood River Metamorphic Suite, Zed Lake Greywacke

- IA-E — 1A biotite ± garnet-bearing metagreywacke, migmatite; 1B biotite- sillimanite-garnet-bearing metagreywacke-metamudstone, migmatite; 1C layered and massive amphibolite; 1D quartzite; 1E marble

SYMBOLS

GEOLOGICAL SYMBOLS

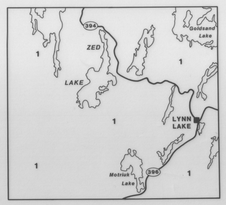
- Geological contact (approximate, assumed, gradational, underwater)
- Geological contact inferred from aeromagnetic trends, signature, and nearest measured structural attitude
- Fault (defined, approximate, inferred; dip)
- Shear zone
- Geophysical conductor

TOPOGRAPHIC SYMBOLS

- Swamp
- Winter road
- (391) Provincial road

The base for this map is taken from map sheet N.T.S. Map 64 C/14 1985. Her Majesty the Queen in Right of Canada with permission of Energy, Mines and Resources Canada.

GEOLOGICAL MAP SOURCE



Geological base map derived or modified from:

1. Gilbert, H.P., Syme, E.C. and Zwanzig, H.V. 1980: Geology of the metavolcanic and volcaniclastic metasedimentary rocks in the Lynn Lake area, Manitoba Energy and Mines, Mineral Resources Division,Geological Paper GP80-1, 118 p.

Scale 1:50 000

KILOMETRES 1 0 1 2 3 4 5 KILOMETRES

Mineral Deposit interpretation and compilation by
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Cartography by D.L. McShane

MINERAL DEPOSITS

Deposit #	Name	Tonnes/Grade	Status
1	"A" Mine	137712?0/1.02% Ni, 0.49% Cu	Produced 1953-1969
2	Farley Mine	1608899?9/0.93% Ni, 0.57% Cu	Produced 1961-1976
3	"EL" Mine	1732073/2.07% Ni, 0.76% Cu	Produced 1954-1964
4	FL	4500000/0.9% Cu, 2.2% Zn	Drilled
5	Z	217680/1.25% Cu, 2.4% Zn	Drilled
17	Francis Lake	136000/0.48% Cu, 6.6% Zn	Drilled
18	Goodenough	1700000/2.63% Cu, 1.21% Zn, 2 g Au	Drilled

UTM COORDINATES FOR MINERAL DEPOSITS/OCCURRENCES

MINERAL OCCURRENCE NUMBER	U.T.M. NORTHING (METRES)	U.T.M. EASTING (METRES)	MINERAL OCCURRENCE NUMBER	U.T.M. NORTHING (METRES)	U.T.M. EASTING (METRES)
1	6302694	376249	30	6296193	367638
2	6301524	375803	31	6308281	356321
3	6299010	376009	32	6298111	358886
4	6300080	377105	33	6295013	358658
5	6300035	376246	34	6308681	372417
6	6300493	365718	35	6305448	369722
7	6298996	373349	36	6302220	369965
8	6291869	373523	37	6295059	353559
9	6290641	377461	38	6295053	377362
10	6301706	373064	39	6301336	372598
11	6304925	371730	40	6300271	370665
12	6303420	374510	41	6311886	377266
13	6296352	370765	42	6309296	376111
14	6295172	375621	43	6307785	372606
15	6294726	377381	44	6309685	375339
16	6294068	352216	45	6295838	369643
17	6299821	371455	46	6310583	376389
18	6307583	374742	47	6295249	374709
19	6303420	373679	48	6293999	373737
20	6291825	372361	49	6295649	375104
21	6291640	377578	50	6296090	374105
22	6299035	376800	51	6295856	374203
23	6304063	377668	52	6293104	373924
24	6299048	374852	53	6292739	372440
25	6300030	368849	54	6292759	371233
26	6293072	369184	55	6294401	370516
27	6291617	363344	56	6295535	370746
28	6300096	371317	57	6299720	374944
29	6297786	375893	58	6292346	377637

MINERAL DEPOSIT TYPE

- STRATABOUND MASSIVE SULPHIDE TYPE DEPOSITS
  - a) Volcanic rock — associated
  - b) Sedimentary rock — associated
  - c) Alteration zone associated with a or b
- CHEMICAL-SEDIMENT TYPE DEPOSITS
  - a) Sulphide facies Iron Formation
  - b) Oxide facies Iron Formation
  - c) Carbonate facies Iron Formation
  - d) Silicate facies Iron Formation
  - e) Other chemical sediments
- VEIN TYPE DEPOSITS
  - a) Single vein
  - b) Multiple veins or lenses
  - c) Stockwork
- MAGMATOGENIC TYPE DEPOSITS ASSOCIATED WITH MAFIC/ULTRAMAFIC ROCKS
  - a) Disseminated
  - b) Layered
  - c) Net textured
  - d) Podiform
- DEPOSITS WITH PORPHYRY AFFINITIES
- PEGMATITE TYPE DEPOSITS
- CLASTIC SEDIMENT TYPE DEPOSITS
- REPLACEMENT TYPE DEPOSITS
- DISSEMINATED MINERALIZATION — NOT CLASSIFIED

IMMEDIATE HOST ROCK* TO MINERALIZATION

(Appendage in the 9 o'clock position)

- Rhyolitic volcanic rocks
- Dacitic volcanic rocks
- Intermediate volcanic rocks
- Basaltic volcanic rocks
- Ultramafic volcanic rocks
- Chert, cherty rocks
- Sericitic schist
- Chloritic schist
- Shale, slate, phyllite
- Sandstone, arkose
- Greywacke
- Quartzite
- Calc-silicate-rich rocks (limestone, dolomite)
- Chemical sediments
- Breccia
- Conglomerate
- Felsic intrusive rocks
- Intermediate intrusive rocks
- Mafic intrusive rocks
- Ultramafic intrusive rocks

*or metamorphic equivalent

TYPE OF MINERALIZATION

(Appendage in the 6 o'clock position)

- Trace (<1%*)
- Minor (1-10%*)
- Moderate (10 - 50%*)
- Near solid (50-75%*) to solid (>75%*)
- Near solid to solid stratified
- Near solid to solid zoned

*by volume

EXPLANATION OF MINERAL DEPOSIT AND OCCURRENCE SYMBOLS

AuCuZn AuCuZn

- •1 — Occurrence location* and reference number
- Mineral deposit
- Mineral occurrence
- Immediate host rock to mineralization
- Type of mineralization
- AuCuZn — Elements present (in order of increasing abundance)

*Exact locations indicated by a dot or outline of mineralization in solid black. Approximate locations indicated by an x.

MINERAL DEPOSIT SERIES

The corresponding sheet of the National Topographic Series is 64C-14

The magnetic declination at the centre of the map is approximately 11°49' East (1989) and is decreasing by 12.0' annually.