Manitoba
Energy and Mines

M.D.S. MAP NO. 9 (1993)

MINERAL DEPOSITS AND OCCURRENCES IN THE LAURIE LAKE AREA (NTS 64 C/12), MANITOBA

To Accompany Report No. 9 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 with accurate geographic locations of 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 is 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 resides 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,e / 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
- Wasekwan Group undivided

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

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

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

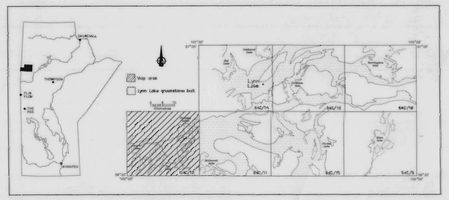
EXPLANATION OF MINERAL DEPOSIT AND OCCURRENCE SYMBOLS

AuCuZn ·1 AuCuZn ·1

- ·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



UTM COORDINATES FOR MINERAL DEPOSITS/OCCURRENCES

MINERAL OCCURRENCE NUMBER	UTM NORTHING (METRES)	UTM EASTING (METRES)	MINERAL OCCURRENCE NUMBER	UTM NORTHING (METRES)	UTM EASTING (METRES)
1	6279231	337470	23	6274128	329317
2	6280799	337695	24	6274113	325145
3	6280634	342369	25	6274222	324581
4	6281619	344929	26	6268832	324617
5	6283005	341548	27	6271433	326378
6	6280580	345259	28	6274042	339646
7	6286701	345883	29	6285258	344365
8	6277899	340833	30	6284624	337454
9	6275979	340901	31	6288029	332487
10	6277244	341917	32	6274927	346206
11	6275101	339725	33	6268738	344430
12	6279539	344771	34	6265921	344808
13	6283092	340431	35	6266511	340400
14	6274812	335988	36	6267767	334623
15	6277271	335766	37	6267870	338265
16	6277762	332201	38	6270004	330719
17	6276875	331703	39	6274891	319738
18	6280191	331881	40	6270886	321527
19	6279527	328675	41	6268480	319031
20	6281107	326905	42	6266985	320677
21	6279802	323118	43	6269714	316137
22	6276615	327911			

SYMBOLS

- Electromagnetic anomaly
- Magnetic anomaly
- Geological contact (approximate, assumed, gradational, underwater)
- Geological contact inferred from aeromagnetic trends, signature, and nearest measured structural attitude
- Limit of drift-covered area
- Fault (defined, approximate, inferred; dip)
- Axial trace of anticline (approximate; upright, overturned)
- Axial trace of syncline (approximate; upright, overturned)
- Minor fold axis (horizontal, inclined, vertical)
- Minor fold, e.g., asymmetric S-fold with axis plunging 45 degrees and axial plane dipping 60 degrees
- Bedding tops known (inclined, vertical, overturned)
- Bedding tops unknown (inclined, vertical, dip unknown)
- Igneous layering, tops unknown (inclined, vertical, dip unknown)
- Pillows, tops known (inclined, overturned, dip unknown)
- Foliation (inclined, vertical, dip unknown)
- Second generation foliation (inclined, vertical, dip unknown)
- Foliation and parallel layering (inclined, vertical, dip unknown)
- Fracture cleavage (inclined, vertical, dip unknown)
- Mineral lineation (inclined, vertical)
- Microcrenulation (inclined, vertical)
- Deformed clasts (inclined, vertical)
- Eskers, direction of flow unknown
- Drumlinoid ridge

Scale 1:50 000

KILOMETRES 1 0 1 2 3 4 5 KILOMETRES

Mineral Deposits interpretation and compilation by K.J. Ferreira
Cartography by J.C. Morales and L. Chackowsky

MINERAL DEPOSITS

DEPOSIT #	NAME	TONNES/GRADE	STATUS
1	Fox	11 958 182/1.82% Cu, 1.78% Zn	Past Producer (1970-85)
10	X	907 000/0.04% Cu, 0.81% Zn, 26.1 g/t Ag	Drilled
21	Lar	1 361 000/0.8% Cu, 2.15% Zn	Drilled

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.