Manitoba
Energy and Mines

MDS MAP NO. 8 (1996)

MINERAL DEPOSITS AND OCCURRENCES IN THE COCKERAM LAKE (64C/15) AREA, MANITOBA

The base for this map is taken from map sheet N.T.S. Map 64C/15- 1981. Her Majesty the Queen in Right of Canada with permission of Energy, Mines and Resources Canada.

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.

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,b,c,d,e — 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

- 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

Intrusive rocks are subdivided after the mapping of J. D. Allan, G. P. Crombie, A. P. Fawley, G. C. Milligan, T. A. Oliver and M. S. Stanton. Additional data are after R. H. Pinsent.

Units 1 to 9 (Wasekwan Group) are not in stratigraphic order; unit 10 overlies or is equivalent to the upper part of the Wasekwan Group; units 1A, 1B and 1C are in stratigraphic order but units 1D and 1E are interlayered with 1C.

Units 11a and 12a (Sickle Group) unconformably overlie the Wasekwan Group and early plutons (units 13 to 17); units 11 and 12b to 12g (Sickle Metamorphic Suite) conformably or disconformably overlie units 1A to 1E (Burntwood River Metamorphic Suite and Zed Lake greywacke).

The terminology used in this map is that of primary rock types wherever the metamorphic grade ranges from low to medium. However, certain metamorphic mineral names are used to modify the primary terms to indicate distinctions in composition. Metamorphic terms are used for the highest grade rocks.

Geological base map derived or modified from:

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

Mineral Deposit information and compilation by

K.J. Ferreira and D.A. Baldwin

Cartography by E. Truman, D. Zerr and C. Cuddy

MINERAL DEPOSITS

Deposit #	Name	Tonnes/Grade	Status
1	MacLellan	932 000/6.0 g/t Au, 18.89 g/t Ag	Past producer (1986-1989)
	Nisku	114 900/7.7 g/t Au	
	Rainbow	539 000/8.57 g/t Au	
2	Y	45 360/4.5% Zn, 1.0% Pb	Exploration
3	Bonanza	655 000/2.40 g/t Au	Exploration
6	Burnt Timber	1 014 000/2.9 g/t Au	Producer (1993-)
16	Dot Lake	1 023 000/4.4 g/t Au	Exploration
40	T1A Zone	260 000/1.9 g/t Au	Exploration

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
- BT road

U.T.M. 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	6307261	380701	26	6307658	407224
2	6302320	378168	27	6304063	382968
3	6293174	396610	28	6301858	383475
4	6294359	395979	29	6303355	385292
5	6293694	393969	30	6303708	385590
6	6292028	385060	31	6302058	388725
7	6308083	383106	32	6297802	387421
8	6305997	385271	33	6295306	378186
9	6308791	385883	34	6296303	379971
10	6310964	382776	35	6291752	378381
11	6309016	381597	36	6291672	383477
12	6313162	381508	37	6298783	393525
13	6312328	391577	38	6297413	391676
14	6311256	393650	39	6294301	387656
15	6306282	378727	40	6291637	381206
16	6306693	380223	41	6298013	396540
17	6314264	399477	42	6295936	398791
18	6312022	397695	43	6294641	398656
19	6311872	402764	44	6294555	405821
20	6309995	404703	45	6297228	407537
21	6310253	400456	46	6312303	379175
22	6310494	401893	47	6312653	394076
23	6309180	402286	48	6318094	390039
24	6308664	405532	49	6300244	378131
25	6311812	406574			

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.

Scale 1:50 000

KILOMETRES 0 1 2 3 4 5 KILOMETRES

MINERAL DEPOSIT MAP SERIES

The magnetic declination at the centre of the map is approximately 10°58' East (1990) and is decreasing by 11.8' annually.