

- | Intrusive Rocks               |   | Metased Group   |   |
|-------------------------------|---|-----------------|---|
| R                             | Quartz porphyry   | MVI             | Felsic gneiss of probable volcanic derivation and intrusive equivalents   |
| Gr                            | Granite, massive; Gnp - porphyritic granites foliated granit; Gr - granits and leucogranites with microcline phenocrysts  | MS              | Sandstone, pebbly sandstone, polymictic conglomerate; MSm - metasediment, quartz-feldspathic gneiss, locally hornblende +/- biotite rich; quartz-rich gneiss +/- sillimanite                                  |
| M                             | Monzonite to granodiorite   | MC              | Metaconglomerate, metasediment  |
| Synvolcanic Gneiss Intrusions |   |                 |   |
| T                             | Tonalite-quartzdiorite-granodiorite (2: 1836 - +04-03 Ma, Bajarsai Lake pluton; 6: 1874 - +21-26 Ma, Cliff Lake pluton; 13: 1953 +/- 8 Ma, Reynard Lake -pluton); Tn - gneissic tonalite, granodiorite; Tn4 - gneissic biotite and hornblende-bearing quartz-rich leucotonalite and granodiorite; T12 - 1855 - +4/-3 Ma, Mari Lake Granodiorite) T1 - leucotonalite | 7a ⊕ TIS        | TS - Tonalite TIS - leucotonalite (7: 1886 - +17-09 Ma, Sivanai Lake pluton; 8: 1889 - +03-08 Ma, Richard Lake pluton)  |
| Tectonites                    |   |                 |   |
| G                             | Granodiorite-granite (3: 1845 - +10-08 Ma, Comoranat Bakhosh, subFelsic; 4: 1847 - +04-04 Ma, Lynx Lake pluton; 17: 1858 +/- 2 Ma, Sogd Lake - Phantom Lake pluton); Gh - hornblende granodiorite; Gn - gneissic granodiorite +/- biotite (1: 1930 - +27-19 Ma, Ham Lake pluton); Gp - porphyritic granodiorite, diorite  | P               | Shear zone rocks  |
| Amisk Group                   |   |                 |   |
| D                             | Diorite +/- biotite, quartz diorite, gabbro (5: 1859 - +20-03 Ma, Noso Lake pluton; 15: 1855 +/- 2 Ma, Wokach Lake gabbro)  | W               | Metagraywacke +/- sillimanite +/- graphite, biotite-garnet gneiss   |
| B                             | Gabbro-quartz diorite   | A               | Amphibolite; Ah - hornblende gneiss and schist  |
| GN                            | Tonalite gneiss with supracrustal enclaves  | N               | Gneiss and migmatite derived from Amisk Group rocks   |
| Flin Flon Assemblage          |   |                 |   |
| Bd                            | Diabase, gabbro; dominantly synvolcanic   | 9, 10, 11 ⊕ FFV | Patterned mafic flows, volcanoclastic rocks with arc tholeiite affinity and related intrusions; and metamorphic equivalents   |
| B                             | Gabbro-norite; layered gabbro, leucogabbro, anorthosite   | FFVI            | Rhyolite flows and volcanoclastic rocks, locally felsic intrusions (9: 1820 - +02-02 Ma, Bear Lake pluton; 10: 1892 - +4 Ma, Group Lake; 11: 1925 - +55-30 Ma, South Main shaft); and metamorphic equivalents |
| UM                            | Meladiorite, olivine gabbro, peridotite (14: 1842 +/- 3 Ma, Boundary intrusion)   | FFC             | Volcanic conglomerate   |
| I                             | Pyroxenite, peridotite  | FFS             | Sediments (uninduried), graywacke, siltstone, shale quartz-clayglass gneiss, metagraywacke, garnetiferous biotite gneiss +/- staurolite +/- sillimanite   |
| Athapapuskow Lake Assemblage  |   |                 |   |
| ALV                           | Mafic volcanic rocks of MORB affinity and related mafic and ultramafic intrusive rocks  |                 |   |
| Mystic Lake Assemblage        |   |                 |   |
| 18 ⊕ MLF                      | Felsic intrusive rocks: tonalite (16: 1908 +/- 2 Ma, Mystic Lake tonalite), granodiorite, quartz diorite, rhyolite, pegmatite, apatite  |                 |   |
| MLV                           | Tectonically laminated mafic volcanic rocks   |                 |   |

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## AEROMAGNETIC INTERPRETATION LEGEND

- Diagram illustrating four zones of magnetization:

  - Zone of low magnetization (light blue box)
  - Zone of high magnetization (pink box)
  - Zone of moderate magnetization (yellow-green box)
  - Zone of reversed magnetization (purple box)

Area inferred from potential fields data to be underlain by Amisk Group rocks

Geological contact . . . . .

Early (pre-1830 Ma) fault . . . . .

Late (post-1830 Ma) fault . . . . .

Contact between exposed Precambrian and  
Paleozoic bedrock (edge of Precambrian Shield), with  
outliers of Paleozoic on Precambrian . . . . .

Sample locality for U-Pb zircon age determination . . . . .

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OTTAWA  
1993

Sheet 2 of 3

## MINERAL OCCURRENCES

[illegible]

## COMMODITIES

Metals	
Ag	Silver
Au	Gold
Cd	Cadmium
Co	Cobalt
Cu	Copper
Ni	Nickel
Pb	Lead
Se	Selenium
Te	Tellurium
W	Tungsten
Zn	Zinc
Pt	Platinum
Pd	Palladium

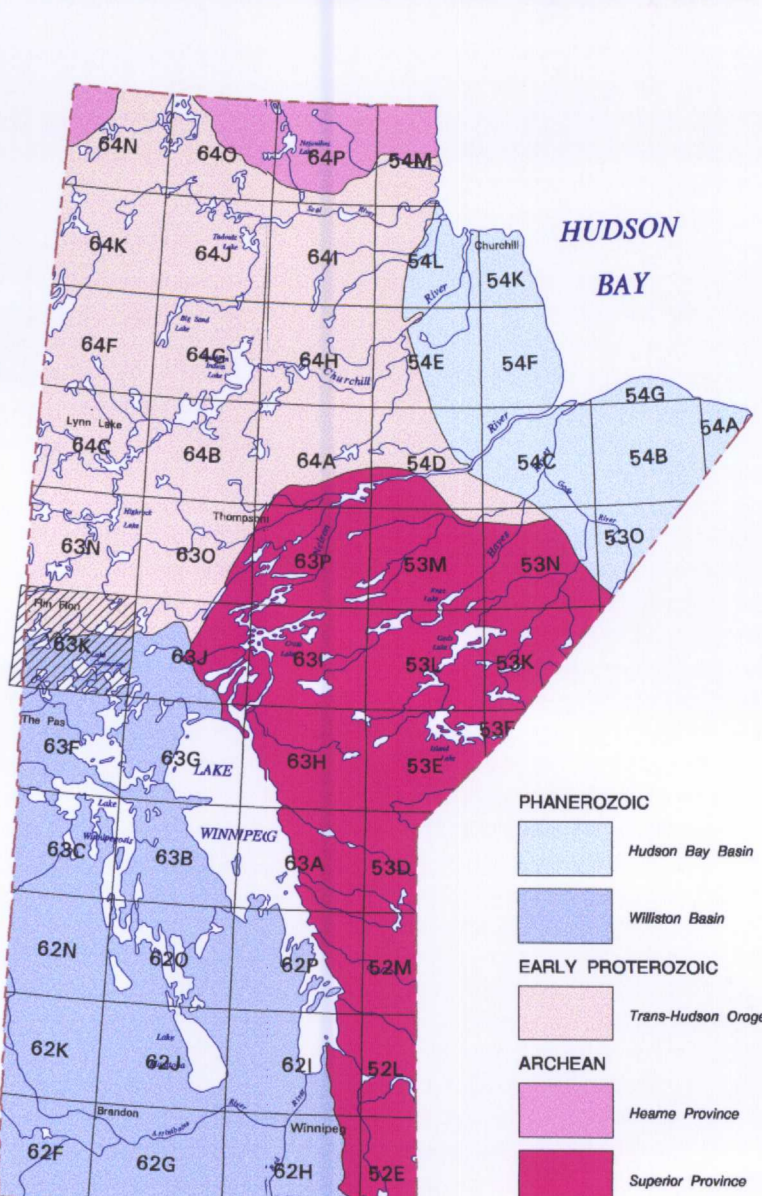
## Industrial Minerals

cs . . . . . crushed stone  
dl . . . . . dolomite  
ds . . . . . dimension stone

Further information is contained in the Mineral Inventory, Manitoba Energy and Mines and the Saskatchewan Mineral Index File, Saskatchewan Energy and Mines.

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## INDEX MAP AND MAJOR TECTONIC DIVISIONS



Coordinated by: S.B. Lucas<sup>1</sup> and W. Weber<sup>2</sup>  
Compiled by: A.B. Leclair<sup>1</sup>, D. Linda<sup>3</sup>, S.B. Lucas<sup>1</sup> and D.J. Thomas<sup>3</sup>  
Precambrian bedrock geology by: K. Ashton<sup>1</sup>, A.H. Baltes<sup>1</sup>, H.P. Gilbert<sup>1</sup>, B.A. Reilly<sup>4</sup>, D.C.P. Schledowitz<sup>1</sup>,  
W.L. Simmon<sup>5</sup>, E.C. Syme<sup>6</sup>, D.J. Thomas<sup>3</sup> and H.V. Zwanzig<sup>7</sup>  
Paleozoic geology by: R.K. Bezy<sup>8</sup> and F. Haid<sup>9</sup>  
Geophysical interpretation by: H.J. Broome<sup>1</sup>, A.D. Leclair<sup>1</sup>, S.B. Lucas<sup>1</sup> and M.D. Thomas<sup>1</sup>  
Digital Cartography by: M. Sigouin<sup>1</sup>, L. Chackowsky<sup>2</sup>,  
Cartography by: D. Linda<sup>3</sup>

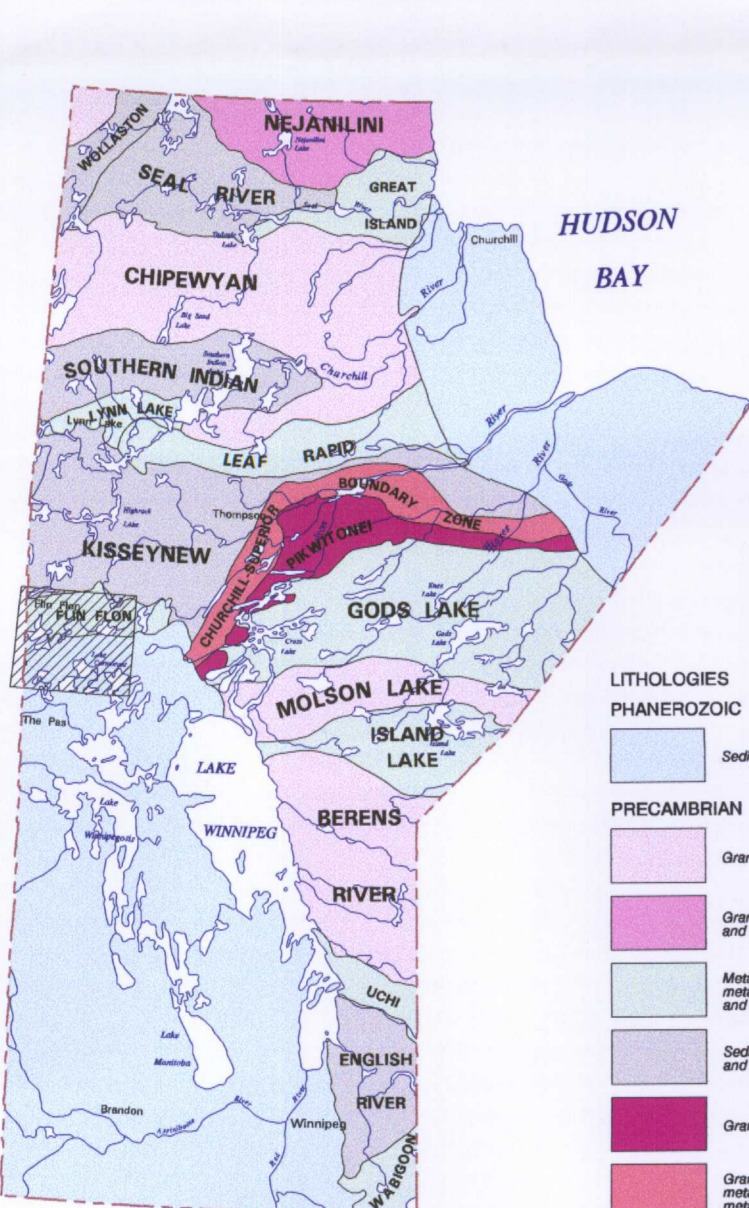
Suggested reference:  
Lucas, S.B. and the NATMAP Shield Margin Project Working Group  
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Geological Survey of Canada, Open File 2581, 3 sheets, scale 1:250 000

Technical production by Manitoba Geological Services (Manitoba Energy and Mines) and the Geological Survey of Canada (Energy Mines and Resources, Canada). Scientific production by Manitoba Geological Services (Manitoba Energy and Mines) and the Geological Survey of Canada (Energy Mines and Resources, Canada) as a contribution to the NATMAP Shaded Margin Project. Partial funding for this project was provided under the Canada-Manitoba and Canada-Saskatchewan Partnership Agreement on Mineral Development (1990-1995).



Saskatchewan  
Energy and Mines  
Saskatchewan  
Geological Survey

## PRINCIPAL GEOLOGICAL DOMAINS



This map is a provisional compilation. It is not to be regarded as a final interpretation of the geology of the area. Canada and the provinces of Manitoba and Saskatchewan do not assume the liability for any errors that may occur. References are included for users wishing to verify critical information.

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In addition, recent unpublished data have been incorporated