

# **PUBLICATIONS**

## PRELIMINARY MAPS

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- PMAP2004-1 Geology of central and north Split Lake, Manitoba (parts of NTS 54D4, 5, 6 and 64A1)  
by R.P. Hartlaub, and Y. D. Kuiper .....scale 1:25 000
- PMAP2004-2 Structural geology of Assean Lake, Manitoba (parts of NTS 64A1, 2 and 8)  
by Y. D. Kuiper, S. Lin, C.O. Böhm and M.T. Corkery .....scale 1:25 000
- PMAP2004-3 Structural geology of the Aiken River deformation zone, Manitoba (parts of NTS 64A1 and 2)  
by Y.D. Kuiper and S. Lin .....scale 1:50 000
- PMAP2004-4 Structural geology of the Aiken River deformation zone, York Landing area, Manitoba  
(part of NTS 64A1)  
by Y.D. Kuiper and S. Lin .....scale 1:20 000

**Manitoba Geological Survey Reports and Maps**

**Geoscientific Papers**

GP2004-1

Geochemical constraints on the tectonomagmatic evolution of the Fox River Belt, northeastern Manitoba (NTS 53M15 and 16) / Desharnais, G., Peck, D.C., Halden, N.M., Scoates, R.F.J. and Hulbert, L.J.

**Geoscientific Reports**

GR2004-2

Geology and geochemistry of Archean supracrustal and intrusive rocks in the southeast Max Lake–Aswapiswanan Lake area, Manitoba (parts of NTS 53L5N, 6NW and 12SW) / Gilbert, H.P.

GR2004-1

Prairie-type microdisseminated mineralization in the Dawson Bay area, west-central Manitoba (NTS 63C14 and 15) / Fedikow, M.A.F., Bezys, R.K., Bamburak, J.D., Hosain, I.T. and Abercrombie, H.J.

**Open File Reports**

OF2004-2 (digital web release only)

Manitoba Kimberlite Indicator Mineral Database (Version 2.0) / Keller, G.R., Bogdan, D.J. and Matile, G.L.D. (supersedes OF2004-1 and OF2003-3)

OF2004-1 (digital web release only)

Manitoba Kimberlite Indicator Mineral Database (Version 1.1) / Keller, G.R., Bogdan, D.J. and Matile, G.L.D. (supersedes OF2003-3)

OF2003-3 (digital web release only)

Manitoba Kimberlite Indicator Mineral Database / Keller, G.R., Bogdan, D.J. and Matile, G.L.D.

**Exploration Reports**

EX2004-1 (digital web release only)

Detection of base-metal massive sulphide type mineralization using conductivity measurements on rock-powder slurries: an example from the Photo Lake Cu-Zn deposit, Snow Lake, Manitoba (NTS 63K16) / Fedikow, M.A.F. and Conley, G.G.

**Surficial Geology Compilation Map Series**

SG-SMB

Surficial geology of southern Manitoba (south of 53°) / Matile, G.L.D. and Keller, G.R., scale 1:500 000

## **Geoscientific Map Series**

MAP2004-4

Shaded relief topography of Manitoba / Matile, G.L.D. and Keller, G.R., scale 1:1 000 000

MAP2003-1

Surficial geology, Inwood, Manitoba (NTS 62I11, 12, 13 and 14) / Grant, N.M., scale 1:100 000

MAP2003-2

Surficial geology, Bélair, Manitoba (NTS 62I9, 10, 15 and 16) / Burt, A.K., scale 1:100 000

MAP2003-3

Surficial geology, Nopiming, Manitoba-Ontario (NTS 52L11, 12, 13 and 14) / Mann, J.D., scale 1:100 000

MAP2003-4

Surficial geology, Woodlands, Manitoba (NTS 62I3, 4, 5 and 6) / Grant, N.M., scale 1:100 000

MAP2003-5

Surficial geology, Beausejour, Manitoba (NTS 62I1, 2, 7 and 8) / Burt, A.K., scale 1:100 000

MAP2003-6

Surficial geology, Big Whiteshell Lake, Manitoba-Ontario (NTS 52L3, 4, 5 and 6) / Mann, J.D., scale 1:100 000

MAP2003-7

Surficial geology, Winnipeg, Manitoba (NTS 62H11, 12, 13 and 14) / Matile, G.L.D., scale 1:100 000

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Surficial geology, Steinbach, Manitoba (NTS 62H9, 10, 15 and 16) / Matile, G.L.D., scale 1:100 000

MAP2003-9

Surficial geology, West Hawk Lake, Manitoba-Ontario (NTS 52E11, 12, 13 and 14) / Matile, G.L.D., scale 1:100 000

MAP2003-10

Surficial geology, Winkler, Manitoba (NTS 62H3, 4, 5 and 6) / Matile, G.L.D., scale 1:100 000

MAP2003-11

Surficial geology, Sandilands, Manitoba (NTS 62H1, 2, 7 and 8) / Matile, G.L.D., scale 1:100 000

MAP2003-12

Surficial geology, Whitemouth Lake, Manitoba-Ontario-Minnesota (NTS 52E3, 4, 5 and 6) / Matile, G.L.D., scale 1:100 000

## **Report of Activities 2003**

Annual review / Syme, E.C., p. 1-7.

## FLIN FLON-SNOW LAKE

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Volcanogenic massive sulphide deposit documentation in the Snow Lake area, Manitoba (NTS 63J13 and 63K16): progress report / Heine, T.H., 22-24

Platinum group element investigations in the Flin Flon greenstone belt: Mikanagan Lake and Tartan Lake gabbroic complexes, Manitoba (NTS 63K13) / Theyer, P. and Heine, T.H., p. 25-28

Geochemical studies of dwarf birch twigs, peat, bog iron and clay at Reed Lake, Manitoba (NTS 63K10) / Gale, G.H., p. 29-36

Activities of the Manitoba Geological Survey's Flin Flon Regional Office / Heine, T.H., p. 37-38

## LYNN LAKE-LEAF RAPIDS

Tectonic evolution and gold metallogeny of the Lynn Lake greenstone belt, Manitoba (NTS64C10, 11, 12, 14, 15 and 16) / Beaumont-Smith, C.J. and Böhm, C.O., p. 39-49

Rare earth element studies of soils and vegetation over the MacBride Lake massive sulphide deposit and the MacLellan mine Rainbow gold zone, Lynn Lake area, Manitoba (NTS 64C15 and 64B13) / Gale, G.H., p. 50

Trace-element signatures of massive sulphides from the Fox Mine, Lynn Lake (NTS 64C12) / McClenaghan, S.H., Gale, G.H. and Lentz, D.R., p. 51-53

Vectoring volcanogenic massive sulphide deposits using rare earth elements and other pathfinder elements at the Ruttan mine, Manitoba (NTS 63B5) / Gale, G.H., p.54-73

Determining residual mineral potential in drillcore from the Ruttan and Lynn Lake areas, Manitoba (NTS 64B and 64C) / Gale, G.H., p. 74-78

Hydrothermal iron-sulphide copper-graphite mineralization in the northern Kisseynew Domain, Trans-Hudson Orogen, Manitoba (NTS 63O and 64B): evidence for deep-seated IOCG (Olympic Dam)-style metal deposition? / Mumin, A.H. and Trott, M., p. 79-85

## SUPERIOR BOUNDARY ZONE, THOMPSON NICKEL BELT

Superior margin programs in the lower Nelson River region, Manitoba (parts of NTS 54D and 64A): year one / Böhm, C.O., Corkery, M.T., Bowerman, M.S., Downey, M.W., Hartlaub, R.P., Kuiper, Y.D., Heaman, L.M. and Lin, S., p. 86-91

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Structural geology of the Assean Lake and Aiken River deformation zones, northern Manitoba (NTS 64A1, 2 and 8) / Kuiper, Y.D., Lin, S., Böhm, C.O., and Corkery, M.T., p. 105-113

Split Lake Block revisited: new geological constraints from the Birthday to Gull Rapids corridor of the lower Nelson River (NTS 54D5 and 6) / Hartlaub, R.P., Heaman, L.M., Böhm, C.O. and Corkery, M.T., p. 114-117

Field relations, U-Pb zircon ages and Nd model ages of granitoid intrusions along the Thompson Nickel Belt-Kisseynew Domain boundary, Setting Lake area, Manitoba (NTS 63J15 and 63O2) / Zwanzig, H.V., Böhm, C.O., Protrel, A. and Machado, N., p. 118-129

Thompson Nickel Belt Project, Manitoba (parts of NTS 63J, 63O and 63P): progress report / Macek, J.J. and McGregor, C.R., p 130-131

Mineral modes of gneiss along the Thompson Nickel Belt-Kisseynew Domain boundary, Manitoba (parts of 63J, 63O, 63P, 64A and 64B) / Parson, T.L. and Zwanzig, H.V., p. 132-137

Petrogenesis of the Thompson Formation T1 member, Thompson Nickel Belt, Manitoba (NTS 63P12) / Couëslan, C.G., p. 137-139

#### NORTHERN SUPERIOR

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New insights into supracrustal assemblages and regional correlations for the Island Lake greenstone belt, north-western Superior Province, Manitoba (parts of NTS 53E15 and 16) / Parks, J., Lin, S., Corker, M.T. and Davis, D.W., p. 159-164

#### NORTHERN MANITOBA

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Paleozoic drillcore from the Churchill area, northern Manitoba: preliminary results (NTS 54K and 54L) / Young, G.A., Elias, R. J. and Dobrzanski, E.P., p. 171-177

#### SOUTHEASTERN MANITOBA

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Platinum group element investigation in the Mayville igneous complex, southeastern Manitoba (NTS 52L12) / Theyer, P., p. 196-199

Phytoremediation of mine tailings and bio-ore production: progress report on seed germination, plant growth and metal accumulation in seedlings planted at Central Manitoba (Au) minesite (NTS 52L13) / Renault, S., Szczerski, C., Nakata, C., Sailerova, E. and Fedikow, M.A.F., p. 200-208

Understanding drought in the Winnipeg River basin, Manitoba / St. George, S., p. 209-212

#### SOUTH-CENTRAL MANITOBA

Preliminary karst inventory of areas north and south of Grand Rapids, Manitoba (NTS 63B and 63G) / Bezys, R.K. and Kobylecki, A.J., p. 213-223

Grassy Bay aeromagnetic-anomaly cluster: a potential source for the Porcupine Hills kimberlite indicator minerals in west-central Manitoba (NTS 63C13NE) / Hosain, I.T. and Bamburak, J.D., p. 224-230

Quaternary mapping progress in southern Manitoba Phanerozoic terrane: 2-D and 3-D / Matile, G.L.D., Keller, G.R., Thorleifson, L.H. and Pyne, D.M., p. 231-238

#### MANITOBA GENERAL

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Manitoba's Precambrian Drillcore Libraries Program / Prouse, D.E., p. 247-249

The Manitoba Stratigraphic Database: an update / Conley, G.G., p. 250-254

#### **Manitoba Mining & Minerals Convention Speaker Abstracts Winnipeg, Manitoba, November 13-15, 2003**

Aelick, R. 2003: Discoveries Start Here - An Inco Perspective; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 38

Ames, D., Bailes, A., Devine, C., Galley, A., Gibson, H., Jonasson, I., MacLachlan, K., Mitchinson, D., Tardif, N. and Taylor, B. 2003: Results of the Flin Flin Targeted Geoscience Initiative; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 42

Anderson, S. 2003: Geology and Structure of the Garner Lake Area: New Results, with Implications for the Metallogeny of Orogenic Lode-Gold Deposits in the Archean Rice Lake Greenstone Belt, Manitoba; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 39

Aubut, A. 2003: Geological Interpretation of the Thompson Nickel Belt Using 3D Magnetic Inversion Techniques; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 39

Beaumont-Smith, C.J. and Böhm, C.O. 2003: Tectonic Evolution and Gold Metallogeny of the Lynn Lake Greenstone Belt, Manitoba; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 42

- Böhm, C.O. and Heaman, L.M. 2003: Kimberlite Potential of the NW Superior Craton and Superior Boundary Zone; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 41
- Corrigan, D., Rayner, N., Beaumont-Smith, C.J., Corkery, T., Zwanzig, H., Douma, S., and Maxeiner, R.O. 2003: Tectonostratigraphy of the Northern Reindeer Zone, Trans-Hudson Orogen: An Improved Regional Framework for Mineral Exploration; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 43.
- Glenn, G. 2003: Something for Everybody - Commodity Price Recap and Outlook; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 42
- Hendsbee, D. 2003: Using Innovation to Bridge the Knowledge Gap; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 44
- Hilliard, T. 2003: The Continuing Life of TANCO; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 43
- Kaszycki, C. and Syme E.C. 2003: Diamond Potential in Manitoba: An Overview; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 38
- Kormylo, T. 2003: Mining for Money - Rules of the Game; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 41
- Leshner, C.M., Burnham, O.M., Halden, N.M., Heaman, L., Hulbert, Layton-Matthews, L.D., Liwanag, J., Machado, N., Michalak, D., Pacey, M., Peck, D.C., Potrel, A., Theyer, P., Toope, K. and Zwanzig, H. 2003: Geology, Stratigraphy, Petrogenesis, and Metallogenesis of the Thompson Nickel Belt: Results of CAMIRO Project 97E-02; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 39
- Mathers, K. 2003: Groundwater Modeling Applications for Acid-Mine Drainage Site Mitigation; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p.40
- McGregor, C.R. and Macek, J.J. 2003: Sedimentary Processes in the Osgwagan Group Supracrustal Rocks; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 42
- Mumin, H. 2003: Advancements at Eden Lake and the New South Bay Nickel-Copper-Cobalt-PGE Discovery; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 38
- Payne, A.V. 2003: Quin Kola: Tom Payne's Search for Gold; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 41
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- Rivet, R. 2003: Raising Money in the Private and Public Domains; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 42



- Sherriff, B. 2003: Innovative Techniques for the Characterization of Mine Tailings; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 40
- Simpson, M. 2003: The Monument Bay Gold Project Update; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 43
- Stebbe, W.L. 2003: Exploration Finance - Confidence Returns - Future Prospects on the Rise; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 39
- Strong, K. 2003: TSX Venture Exchange: Discoveries Grow Here; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 43
- Wu, X., Ferguson, I. and Craven, J. 2003: Geoelectric Images of the Western Superior Province, Canada; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 39
- Zwanzig, H.V. and Böhm, C.O. 2003: Mapping Out Extensions of the Thompson Nickel Belt: Sm-Nd Isotope Data and Trace Element Geochemistry of Siliciclastic Rocks and Basement Gneiss; Manitoba Industry, Economic Development and Mines, Manitoba Mining & Minerals Convention 2003: program, p. 41

## EXTERNAL PUBLICATIONS

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- Böhm, C.O., Kaszycki, C.A., Lenton, P.G., Syme, E.C., Keller, G.R. and Matile, G.L. 2004: Revealing Manitoba's hidden kimberlites; (abstract); Geological Association of Canada–Mineralogical Association of Canada, Joint Annual Meeting 2004, St. Catharines, Ontario, Abstracts Volume 29, p. 260.
- Brooks, G.R., St. George, S., Lewis, C.F.M., Medioli, B.E., Nielsen, E., Simpson, S. and Thorleifson, L.H. 2003: Geoscientific insights into Red River flood hazards in Manitoba: the final report of the Red River Flood Project; Natural Resources Canada, 1 v.
- Downey, M.W., Lin, S. and Böhm, C. 2004: Preliminary investigations on the structural geology at the Superior craton margin at Gull Rapids, northern Manitoba (abstract); Geological Association of Canada–Mineralogical Association of Canada, Joint Annual Meeting 2004, St. Catharines, Ontario, Abstracts Volume 29, p. 473.
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- Zwanig, H.V. 2004: Hot, thin and mineral-rich—evolution of the Paleoproterozoic Trans-Hudson Orogen in western Canada (abstract); Geological Association of Canada, 2004 Howard Street Robinson Lecture Tour, ([URL<http://sparky2.esd.mun.ca/~gac/OutReach/tour.htm#HSR>](http://sparky2.esd.mun.ca/~gac/OutReach/tour.htm#HSR))