

PUBLICATIONS

Data Repository Items

DRI2014001 (re-release)

Whole-rock geochemical data from pegmatites at South Bay, Southern Indian Lake and Partridge Breast Lake, and fluorine granite at Thorsteinson Lake, Manitoba (parts of NTS 64G3–6, 8, 9, 64B11)

by T. Martins

Microsoft® Excel® file supplements:

Martins, T. and Kremer, P.D. 2013: Rare-metals scoping study of the Trans-Hudson orogen, Manitoba (parts of NTS 64G3–6, 8, 9, 64B11); *in* Report of Activities 2013, Manitoba Mineral Resources, Manitoba Geological Survey, p. 114–122.

DRI2022002 (re-release)

Bedrock geochemistry from the Stuart Bay–Chickadee Lake area (east of Wekusko Lake), north-central Manitoba (parts of NTS 63J12, 13)

by K.D. Reid

Microsoft® Excel® file supplements:

Reid, K.D. 2019: Bedrock geological mapping of the Puella Bay area (Wekusko Lake), north-central Manitoba (part of NTS 63J12); *in* Report of Activities 2019, Manitoba Natural Resources and Northern Development, Manitoba Geological Survey, p. 42–51.

Reid, K.D. 2021: Results of bedrock geological mapping in the Stuart Bay–Chickadee Lake area (east of Wekusko Lake), north-central Manitoba (parts of NTS 63J12, 13); *in* Report of Activities 2021, Manitoba Natural Resources and Northern Development, Manitoba Geological Survey, p. 29–39.

DRI2023001

Sediment gold grain count data from the Little Bear Lake property (AFN 74096), southeastern Manitoba

By T.J. Hodder

DRI2023002

Field-based ice-flow data collected during the 1998 NATMAP II field season, southeastern Manitoba (parts of NTS 52L, 62I)

By G.L.D. Matile, L.H. Thorleifson, T.J. Hodder and A.B. Martin

DRI2023003

Sandilands rotosonic drillcore data, southeastern Manitoba (parts of NTS 52E, 62H)

By G.L.D. Matile, M.S. Gauthier and M.P.B. Nicolas

DRI2023004

Till-matrix geochemistry data from the Gillam area, northeastern Manitoba: additional 2022 data (NTS 54D5–8, 64A2)

By M.S. Gauthier and T.J. Hodder

DRI2023005

Rotosonic borehole stratigraphy, southeastern Manitoba (parts of NTS 52E, 62H)

By G.L.D. Matile, H. Thorleifson and M.S. Gauthier

DRI2023006

Salvaged diamond-drillcore at the Thompson Facility and Compound, from east-central Manitoba (parts of NTS 54C, 63P, 64A)

by C.G. Couëslan

Microsoft® Excel® file supplements:

Couëslan, C.G. 2023: Thompson Facility and Compound core recovery project, east-central Manitoba (parts of NTS 54C, 63P, 64A); *in* Report of Activities 2023, Manitoba Economic Development, Investment, Trade and Natural Resources, Manitoba Geological Survey, p. 90–92.

DRI2023008

Till geochemistry and heavy mineral analyses (gold, MMSIM®, visual KIM) from three sections near the confluence of the Hayes and Gods rivers, northeastern Manitoba (part of NTS 54C7)

by M.S. Gauthier and T.J. Hodder

DRI2023009

Quaternary field site data collected during the 1993–1994 NATMAP field seasons, southeastern Manitoba (parts of NTS 52E, 62A, H)

by G.L.D. Matile, L.H. Thorleifson, A.B. Martin and T.J. Hodder

DRI2023010

Quaternary field site data collected during the 1997–1998 NATMAP field seasons, southeastern Manitoba (parts of NTS 52L, 62H, I)

by G.L.D. Matile, L.H. Thorleifson, A.B. Martin and T.J. Hodder

DRI2023011

Gold and indicator-mineral data derived from glacial sediments (till) in southeastern Manitoba (parts of NTS 52L, 62P, 63A): 2022 pilot study results

by T.J. Hodder

Microsoft® Excel® file supplements:

Hodder, T.J. and Martins, T. 2023: Current Quaternary geology investigations in southeastern Manitoba and implications for mineral exploration (parts of NTS 52L, 62P, 63A); *in* Report of Activities 2023, Manitoba Economic Development, Investment, Trade and Natural Resources, Manitoba Geological Survey, p. 105–119.

DRI2023012

Field-based ice-flow–indicator data collected during 2023 field season in southeastern Manitoba (parts of NTS 52L, M)

by T.J. Hodder and M.S. Gauthier

Microsoft® Excel® file supplements:

Hodder, T.J. and Martins, T. 2023: Current Quaternary geology investigations in southeastern Manitoba and implications for mineral exploration (parts of NTS 52L, 62P, 63A); *in* Report of Activities 2023, Manitoba Economic Development, Investment, Trade and Natural Resources, Manitoba Geological Survey, p. 105–119.

DRI2023013

Geochemical data of gabbroic rocks from the Lynn Lake greenstone belt, northwestern Manitoba (parts of NTS 64C10–12, 14–16)

by X.M. Yang

Microsoft® Excel® file supplements:

Yang, X.M. 2023: Field relationships, geochemical characteristics and metallogenic implications of gabbroic intrusions in the Paleoproterozoic Lynn Lake greenstone belt, northwestern Manitoba (parts of NTS 64C10–12, 14–16); *in* Report of Activities 2023, Manitoba Economic Development, Investment, Trade and Natural Resources, Manitoba Geological Survey, p. 73–89.

DRI2023014

Rock Volatiles Stratigraphy data from drill cuttings from three oil wells in southwestern Manitoba (parts of NTS 62F2, K3)

by M.P.B. Nicolas, C.M. Smith and M.P. Smith

Microsoft® Excel® file supplements:

Nicolas, M.P.B., Smith, C.M. and Smith, M.P. 2023: Volatiles analysis of drill cuttings to evaluate the helium prospectivity of southwestern Manitoba (parts of NTS 62F2, K3); *in* Report of Activities 2023, Manitoba Economic Development, Investment, Trade and Natural Resources, Manitoba Geological Survey, p. 93–104.

GeoFile

GeoFile 6-2023

Manitoba radiocarbon ages

by M.S. Gauthier

Geoscientific Paper

GP2023-1

Metamorphic map of the Flin Flon domain, west-central Manitoba (parts of NTS 63J, K, N, O)

by M. Lazzarotto, D.R.M. Pattison, S. Gagné and C.G. Couëslan

Open Files

OF2022-2 (re-release)

Bedrock geology of Manitoba

by Manitoba Geological Survey (scale 1:1 000 000)

OF2022-3

Progress report on the study of granitoids in Manitoba: petrogenesis and metallogeny

by X.M. Yang

OF2023-1

Indicator mineral and gold grain data from till sampled in the Churchill to Little Churchill rivers area, northeastern Manitoba

by T.J. Hodder and M.S. Gauthier

OF2023-2

Age and petrology of zirconium- and light rare-earth element-enriched quartz monzonite in drillcore from the Huzyk Creek property, sub-Phanerozoic Kisseynew domain, central Manitoba (NTS 63J6)

by C.G. Couëslan

OF2023-3

Quaternary site data, till composition and ice-flow indicators in the Roseau River area, southeastern Manitoba (parts of NTS 62H2, 7)

by M.S. Gauthier and T.J. Hodder

EXTERNAL PUBLICATIONS

- Breasley, C.M., Groat, L.A., Martins, T., Linnen, R.L., Moser, D., Landry, E., Hutchins, A., Deveau, C. and Barker, I. 2023: Trace element geochemistry, quantitative analyses, and origins of spodumene and quartz intergrowth textural groups at the Tanco pegmatite, Manitoba; Geological Association of Canada–Mineralogical Association of Canada, Joint Annual Meeting, May 24–29, 2023, Sudbury, Ontario, oral presentation.
- Breasley, C.M., Martins, T., Deveau, C., Hutchins, A., Linnen, R.L., Groat, L.A., Landry, E.M.K. and Moser, D. 2023: Mining and processing of micro spodumene-quartz intergrowths at the Tanco pegmatite, Manitoba; Prospectors & Developers Association of Canada, PDAC 2023, March 5–8, 2023, Toronto, Ontario, poster presentation.
- Breasley, C.M., Martins, T., Deveau, C., Hutchins, A., Linnen, R.L., Groat, L.A., Landry, E.M.K. and Moser, D. 2023: The geochemistry, origins and implications for mining and processing of micro spodumene-quartz intergrowths at the Tanco pegmatite, Manitoba; Association for Mineral Exploration, AME Roundup, January 23–26, 2023, Vancouver, British Columbia, poster presentation.
- Chinaglia, S., Miles, A., Martins, T., Groat, L. and Goodenough, K. 2023: Field observations on pegmatites from Araçuaí (Brazil): structural control and mineralogy; Geological Association of Canada–Mineralogical Association of Canada, Joint Annual Meeting, May 24–29, 2023, Sudbury, Ontario, Program with Abstracts, v. 46, and poster presentation.
- Couëslan, C.G. 2023: The Pikwitonei Granulite Domain, Manitoba: a large-hot orogen along the northwestern margin of the Superior craton; Geological Association of Canada–Mineralogical Association of Canada, Joint Annual Meeting, May 24–29, 2023, Sudbury, Ontario, Program with Abstracts, v. 46.
- Dias, F., Lima, A., Roda-Robles, E. and Martins, T. 2023: Li-exploration and processing: the case study of spodumene from the Barroso-Alvão field, northern Portugal; Geological Association of Canada–Mineralogical Association of Canada, Joint Annual Meeting, May 24–29, 2023, Sudbury, Ontario, Program with Abstracts, v. 46.
- Dias, F., Lima, A., Roda-Robles, E. and Martins, T. 2023: Textural and mineralogical characterization of one lithium deposit, from the Barroso-Alvão aplite-pegmatite field: preliminary study; Society of Economic Geologists, SEG 2023 Conference, August 26–29, 2023, London, England, poster presentation.
- Dias, F., Ribeiro, R., Gonçalves, F., Lima, A., Roda-Robles, E. and Martins, T. 2023: Calibrating a handheld LIBS for Li exploration in the Barroso–Alvão aplite-pegmatite field, northern Portugal: textural precautions and procedures when analyzing spodumene and petalite; *Minerals*, v. 13, art. 470, URL <<https://doi.org/10.3390/min13040470>>.
- Dias, F., Ribeiro, R., Soares, F., Lima, A., Roda-Robles, E. and Martins, T. 2023: Calibrating a handheld LIBS SciAps Z300 to analyze spodumene and petalite for Li-exploration in the Barroso-Alvão aplite-pegmatite field, northern Portugal; EMS LIBS 2023, September 4–7, 2023, Porto, Portugal, poster presentation.
- Dias, F., Ribeiro, R., Soares, F., Lima, A., Roda-Robles, E. and Martins, T. 2023: Evaluating the purity of the NIST standard reference material 182 (petalite) when compared with the petalite from the Barroso-Alvão field, Portugal; Mineral Deposits Studies Group, Annual Meeting, January 4–6, 2023, Leicester, England, poster presentation.
- Errandonea-Martin, J., Roda-Robles, E., Garate-Olave, I., Menuge, J.F., Müller, A., Pesquera, A., Martins, T. and Lima, A. 2023: Exo-metasomatism prompted by spodumene-bearing pegmatites and its implications in lithium exploration: the case study from Alijó (northern Portugal); Geological Association of Canada–Mineralogical Association of Canada, Joint Annual Meeting, May 24–29, 2023, Sudbury, Ontario, poster presentation.
- Hart, B.S., Hofmann, M., Plint, G. and Nicolas, M. 2022: Shale compositional trends in the Cenomanian–Turonian Cretaceous Western Interior Seaway: facies and sequence stratigraphic models; *in* The Cenomanian-Turonian Stratigraphic Interval across the Americas: Argentina to Alaska, J. Macquaker, P. Markwick, K.J. Whidden and J. Suter (ed.), Proceedings of the 38th annual GCSSEPM Foundation Perkins-Rosen Research Conference and Core Workshop, December 5–9, 2022, Houston, Texas, p. 105–119.
- Hodder, T.J., Gauthier, M.S., Ross, M. and Grunsky, E. 2023: Discriminating tills of mixed provenance in central Canada to decipher the influence of two major ice dispersal centres of the Laurentide Ice Sheet; International Union for Quaternary Research, XXI Inqua Congress, July 14–20, 2023, Rome, Italy, poster presentation.

- Hodder, T.J., Gauthier, M.S., Ross, M. and Lian, O.B. 2023: Was there a nonglacial episode in the western Hudson Bay Lowland during Marine Isotope Stage 3?; *Quaternary Research*, v. 116, p. 148–161, URL <<https://doi.org/10.1017/qua.2023.35>>.
- Hodder, T.J., Gauthier, M.S., Ross, M., Lian, O.B., Schaarschmidt, M. and Dalton, A.S. 2023: Constraining the evolution of the Laurentide Ice Sheet through multiple glacial-interglacial cycles in central Canada; *International Union for Quaternary Research, XXI Inqua Congress*, July 14–20, 2023, Rome, Italy, oral presentation.
- Koopmans, L., Martins, T., Linnen, R., Gardiner, N.J., Breasley, C.M., Palin, R.M., Groat, L., Silva, D. and Robb, L.J. 2023: The formation of lithium-rich pegmatites through multi-stage melting; *Geological Society of America, Geology*, URL <<https://doi.org/10.1130/G51633.1>>.
- Lawley, C.J.M., Schneider, D.A., Camacho, A., McFarlane, C.R.M., Davis, W.J. and Yang, X.M. 2023: Post-orogenic exhumation triggers gold mineralization in the Trans-Hudson orogen: new geochronology results from the Lynn Lake greenstone belt, Manitoba, Canada; *Precambrian Research*, v. 395, art. 107127, URL <<https://doi.org/10.1016/j.precamres.2023.107127>>.
- Martins, T. 2023: Lithium in Manitoba, production and exploration potential; *Society of Economic Geologists, SEG 2023 Conference*, August 26–29, 2023, London, England, abstract and oral presentation.
- Martins, T. 2023: Pegmatites: concepts and exploration techniques; *Critical Minerals Conference*, June 26–27, 2023, Kelowna, British Columbia, oral presentation.
- McMartin, I., Gauthier, M.S. and Page, A.V. 2022: Updated post-glacial marine limits along western Hudson Bay, central mainland Nunavut and northern Manitoba; *Geological Survey of Canada, Open File 8921*, 19 p.
- Nicolas, M.P.B. 2023: Bakken and Torquay formations in southwestern Manitoba; *American Association of Petroleum Geologists, Rocky Mountain Section, 2023 Williston Basin Core Workshop*, June 3–4, 2023, Bismarck, North Dakota, program book, p. 173–185.
- Nicolas, M.P.B. 2023: Helium potential of southwestern Manitoba, Canada; *Rocky Mountain Association of Geologists, 2023 North American Helium Conference*, March 22–23, 2023, Westminster, Colorado, Program Book 3.7.23, p. 49–50.
- Ren, Y., Yang, X.Y., Yang, X.M., Ling, M. and Liu, Y. 2023: Mineralogical study on the distribution regularity of niobium in various types of ores in the giant Bayan Obo Fe-REE-Nb deposit; *Ore Geology Reviews*, v. 161, art. 105602, URL <<https://doi.org/10.1016/j.oregeorev.2023.105602>>.
- Ribeiro, R., Dias, F., Soares, F., Lima, A., Roda-Robles, E. and Martins, T. 2023: Handheld LIBS analysis in Li-minerals from the Barroso-Alvão Field, in Portugal; *International Workshop on the Characterisation and Quantification of Lithium, from the Micro- to the Nano-Scale, from Mining to Energy*, June 26–27, 2023, Paris, France, poster presentation.
- Schaarschmidt, M., Lian, O.B., Hodder, T.J., Gauthier, M.S., Ross, M., Brewer, V. and Ferguson, N. 2023: Assessing the timing of the extent of the Laurentide Ice Sheet using optical dating of quartz, Hudson Bay Lowland, Manitoba, Canada; *17th International Luminescence and Electron Spin Resonance Dating Conference*, June 25–30, 2023, Copenhagen, Denmark, oral presentation.
- Silva, D., Groat, L., Martins, T. and Linnen, R. 2023: Structural controls on the origin and emplacement of lithium-bearing pegmatites; *The Canadian Journal of Mineralogy and Petrology*, v. 61.
- Silva, D., Martins, T., Groat, L. and Linnen, R., 2023: Emplacement controls of Li pegmatites in Wekusko Lake pegmatite field, Manitoba; *Association for Mineral Exploration, AME Roundup*, January 23–26, 2023, Vancouver, British Columbia, poster presentation.
- Silva, D., Martins, T., Groat, L. and Linnen, R. 2023: Preliminary observations on emplacement controls and Li mineral partition of pegmatite dikes from the Wekusko Lake pegmatite field, central Manitoba; *Geological Association of Canada–Mineralogical Association of Canada, Joint Annual Meeting*, May 24–29, 2023, Sudbury, Ontario, Program with Abstracts, v. 46, and oral presentation.
- Zhao, Y., Lyu, J., Han, X., Lin, S., Zhang, P., Yang, X.M. and Chen, C. 2023: Geochronology and geological implications of Paleoproterozoic post-collisional monzogranitic dykes in the Ne Jiao-Liao-Ji Belt, North China Craton; *Minerals*, v. 13, art. 928, URL <<https://doi.org/10.3390/min13070928>>.