

Table of Contents

Minister's Message	iii
2013 Project Location Map.....	iv
Annual review	
by C.O. Böhm.....	1

SUPERIOR PROVINCE

GS-1 Preliminary results of bedrock mapping at Oxford Lake, northwestern Superior province, Manitoba (parts of NTS 53L13, 14) by S.D. Anderson, P.D. Kremer and T. Martins	7
GS-2 Preliminary results from bedrock mapping in the northeastern Cauchon Lake area, eastern margin of the Pikwitonei granulite domain, central Manitoba (parts of NTS 63P9, 10) by C.G. Couëslan.....	23
GS-3 Preliminary results from bedrock mapping in the Partridge Crop Lake area, eastern margin of the Thompson nickel belt, central Manitoba (parts of NTS 63P11, 12) by C.G. Couëslan.....	34
GS-4 Preliminary bedrock geology of the eastern extension of the Rice Lake mine trend, Rice Lake greenstone belt, southeastern Manitoba (parts of NTS 52M3, 4) by S.D. Anderson.....	46
GS-5 Stratigraphic and structural setting of gold deposits in the vicinity of the Central Manitoba mine, Rice Lake greenstone belt, southeastern Manitoba (part of NTS 52L14) by X. Zhou, S. Lin and S.D. Anderson.....	60
GS-6 Cat Lake–Euclid Lake area in the Neoproterozoic Bird River greenstone belt, southeastern Manitoba (parts of NTS 52L11, 12): preliminary results of bedrock geological mapping and their implications for geodynamic evolution and metallogeny by X.M. Yang, H.P. Gilbert and M.G. Houlié	70
GS-7 Euclid Lake intrusion: a revisited cross-section through a historical chrome deposit of the Bird River greenstone belt, southeastern Manitoba by V. Bécu, M.G. Houlié, X.M. Yang and H.P. Gilbert.....	85

TRANS-HUDSON OROGEN

GS-8 Geological investigations in the Rail Lake–Sewell Lake area, Flin Flon–Snow Lake greenstone belt, west-central Manitoba (parts of NTS 63K10, 15) by S. Gagné	95
GS-9 Structural analysis of the McLeod Road–Birch Lake thrust panel, Snow Lake, west-central Manitoba (parts of NTS 63K16, 63J13) by K.E. Rubingh, B. Lafrance and H.L. Gibson	106
GS-10 Rare-metals scoping study of the Trans-Hudson orogen, Manitoba (parts of NTS 64G3–6, 8, 9, 64B11) by T. Martins and P.D. Kremer.....	114

PHANEROZOIC

GS-11	Rare-earth element potential of the Gammon Ferruginous Member of the Upper Cretaceous Pierre Shale in southwestern Manitoba by J.D. Bamburak, M.P.B. Nicolas, J. Hatcher and X.M. Yang	123
GS-12	Radiometric dating of Late Cretaceous bentonite beds in southwestern Manitoba by J.D. Bamburak, M.P.B. Nicolas and J. Hatcher.....	129
GS-13	Preliminary stratigraphic correlation of subsurface and outcrop sections of the Favel Formation, southwestern Manitoba by M.P.B. Nicolas, J.D. Bamburak and S. Hosseininejad	137
GS-14	Lithofacies analysis of the Silurian Attawapiskat Formation in the Hudson Bay Lowland, northeastern Manitoba by A. Ramdoyal, M.P.B. Nicolas and N. Chow	144

QUATERNARY

GS-15	Quaternary geology between Gauer Lake and Wishart Lake, north-central Manitoba (NTS 64H4, 5, 12, 13, parts of 64G1, 8) by M.S. Trommelen.....	156
GS-16	Preliminary Quaternary geology in the Gillam area, northeastern Manitoba (parts of NTS 54D5–9, 11, 54C12) by M.S. Trommelen.....	169

COMMUNITY LIAISON

GS-17	Bridging land-use perspectives: understanding First Nations industrious participation in northern Manitoba's historical economy by L.A. Murphy.....	183
-------	--	-----

PUBLICATIONS

Manitoba Geological Survey Publications Released December 2012 to November 2013	188
External Publications	193