

## Table of Contents

Minister's Message.....	iii
In Memoriam: Peter Theyer .....	iv
Foreword by C.J. Beaumont-Smith .....	vii
GS2017 Project Location Map .....	viii
<b>PRECAMBRIAN</b>	
GS2017-1 Detailed stratigraphic and structural mapping of the Oxford Lake–Knee Lake greenstone belt at southern and central Knee Lake, Manitoba (parts of NTS 53L15, 53M2) by S.D. Anderson .....	1
GS2017-2 Reconnaissance work at Reekie Lake in the Munro Lake greenstone belt, Superior province, central Manitoba (part of NTS 63L11) by C.G. Couëslan.....	12
GS2017-3 Preliminary results of bedrock mapping at Bigstone Lake and Knight Lake, northwestern Superior province, Manitoba (parts of NTS 53E11, 12, 13, 14) by M.L. Rinne.....	19
GS2017-4 Discriminative study of genetically diverse carbonate rocks in the northwestern Pikwitonei granulite domain and Split Lake block, central Manitoba (parts of NTS 63P11, 12, 64A1) by J.A. Macdonald, A.R. Chakhmouradian, C.G. Couëslan and E.P. Reguir .....	30
GS2017-5 Whole-rock and mineral geochemistry as exploration tools for rare-element pegmatite in Manitoba: examples from the Cat Lake–Winnipeg River and Wekusko Lake pegmatite fields (parts of NTS 52L6, 63J13) by T. Martins, R.L. Linnen, M.A.F. Fedikow and J. Singh .....	42
GS2017-6 Evaluation of diamond-drill core from the Tower Cu-Zn-Ag-Au deposit, sub-Phanerozoic Thompson nickel belt, central Manitoba (part of NTS 63G14) by C.G. Couëslan.....	52
GS2017-7 Sub-Phanerozoic basement geology south of Wekusko Lake, eastern Flin Flon belt, north-central Manitoba (parts of NTS 63J5, 12, 63K8, 9): insights from drillcore observations and whole-rock geochemistry of mafic rocks by K.D. Reid .....	65
GS2017-8 New occurrences of kimberlite-like intrusive rocks in drillcore from south of Wekusko Lake, eastern Flin Flon belt, north-central Manitoba (NTS 63J12) by A.R. Chakhmouradian and K.D. Reid.....	78

GS2017-9		
Examination of exploration drillcore from the Reed Lake area and the sub-Phanerozoic extension of the Paleoproterozoic Flin Flon belt, west-central Manitoba (parts of NTS 63K7, 8, 9, 10)		
by S. Gagné.....	91	
GS2017-10		
Prehnite-pumpellyite– to amphibolite-facies metamorphism in the Athapapuskow Lake area, west-central Manitoba (parts of NTS 63K12, 13)		
by M. Lazzarotto, D.R.M. Pattison and S. Gagné .....	104	
GS2017-11		
Geological investigations of the Wasekwan Lake area, Lynn Lake greenstone belt, northwestern Manitoba (parts of NTS 64C10, 15)		
by X.M. Yang and C.J. Beaumont-Smith.....	117	
<b>PHANEROZOIC</b>		
GS2017-12		
Update on Paleozoic stratigraphic correlations in the Hudson Bay Lowland, northeastern Manitoba and northern Ontario		
by M.P.B. Nicolas and D.K. Armstrong .....	133	
GS2017-13		
Sedimentary facies variability of the Upper Ordovician Williams Member in the Williston Basin, southern Manitoba: lithostratigraphic implications		
by C.Y.C. Zheng, M.G. Mángano and L.A. Buatois .....	148	
GS2017-14		
Detailed examination of drillcore RP95-17, west-central Manitoba (NTS 63C7): evidence of potential for Mississippi Valley-type lead-zinc deposits		
by K. Lapenskie and M.P.B. Nicolas.....	158	
GS2017-15		
Stratigraphy and geochemistry of the Cretaceous Boyne Member, Carlile Formation, in the Manitoba Potash Corporation core at 3-29-20-29W1, southwestern Manitoba (part of NTS 65K1)		
by D.J. Shaw, M.P.B. Nicolas and N. Chow .....	173	
GS2017-16		
Preliminary investigation of the potential for lithium in groundwater in sedimentary rocks in southwestern Manitoba		
by M.P.B. Nicolas .....	183	
<b>QUATERNARY</b>		
GS2017-17		
Till sampling and ice-flow mapping between Leaf Rapids, Lynn Lake and Kinoosao, northwestern Manitoba (parts of NTS 64B12, 64C9, 11, 12, 14–16, 64F3, 4)		
by M.S. Gauthier and T.J. Hodder .....	191	
GS2017-18		
Quaternary stratigraphy and till sampling in the Kaskattama highland region, northeastern Manitoba (parts of NTS 53N, O, 54B, C): year two		
by T.J. Hodder .....	205	

## **PUBLICATIONS**

Manitoba Geological Survey Publications Released December 2016 to November 2017 .....	216
External Publications .....	219