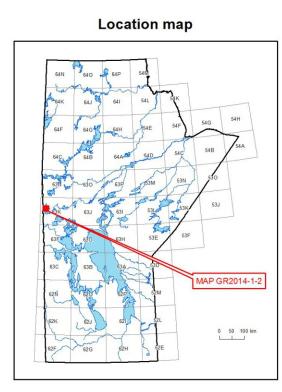


Bedrock geology of the Athapapuskow Lake area (east half), western Flin Flon belt, Manitoba (part of NTS 63K12)

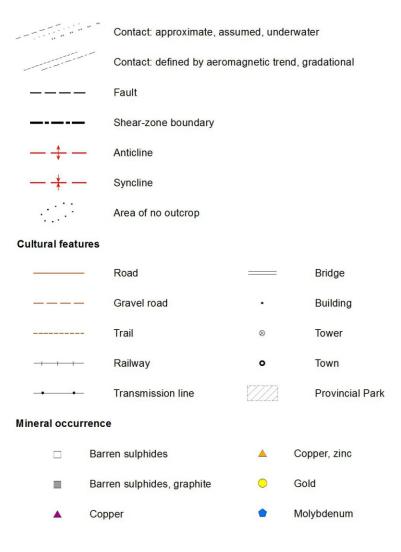


### Symbols

Planar structu	re				
ATTAT	Foliation: generation unknown, relative ages 1, 2, 3, 4				
11.4	Bedding: tops unknown, known, overturned				
AAA	Flow contact: tops unknown, known, overturned				
1	Flow banding: tops known				
1 × ×	Igneous layering: tops unknown, known, overturned				
p p f	Pillows: tops unknown, known, overturned				
J. J.	Crenulation cleavage: relative ages 2, 3				
Å	Spaced cleavage: generation unknown				
A A A	Fault: sense unknown, dextral, sinistral				
FFF	Shear zone: sense unknown, dextral, sinistral				
Linear structure					
1	Fold axis: generation unknown				
1 ŧ	Fold axis (symmetric): generation unknown, 2				
5 t	Fold axis: generation unknown, S asymmetry, Z asymmetry				



Minor intr K4	Intrusion breccia
	a Intrusion breccia with fine-grained, leucocratic tonalite matrix b Intrusion breccia with quartz diorite to tonalite matrix, in part pegmatitic
К3	Quartz diorite, tonalite Ledge Lake plagioclase-phyric, leucocratic quartz diorite
	b Buff-weathering, fine-grained, equigranular quartz diorite
	d Fine- to medium-grained, equigranular tonalite
K2	Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Plagioclase-phyric diorite
Gabbro si	c) Plagioclase-pyroxene-phyric gabbro, diorite
K1	White Lake sill Gabbro
	b Ferrogabbro c Quartz ferrodiorite
	38 Ga volcanic rocks of arc affinity; associated
volcanio Sedimenta	
J14	Greywacke, mudstone a) Mafic greywacke, siltstone b) Greywacke, siltstone, mudstone
Heterolith	<ul> <li>c) Pyritic mudstone, mudstone</li> <li>d) Interbedded mafic mudstone, greywacke, felsic tuff</li> <li>ologic breccia</li> </ul>
J13	Heterolithologic breccia a) Heterolithologic breccia with dominantly mafic fragments
Felsic vol	<ul> <li>b) Heterolithologic breccia with dominantly felsic fragments</li> <li>c) Heterolithologic breccia with subordinate scoria clasts</li> <li>caniclastic rocks</li> </ul>
J12	Felsic breccia, tuff a) Felsic breccia
J11	<ul> <li>b) Felsic tuff</li> <li>White Lake dacite tuff and associated sedimentary rocks</li> <li>a) Pumice-bearing dacite tuff</li> </ul>
Intermedia	b) Layered, redeposited dacite tuff and sedimentary rocks ate volcaniclastic rocks
J10	Little Spruce Lake andesitic lapilli tuff and associated sedimentary rocks a) Andesitic lapilli tuff, tuff breccia b) Fine-grained sedimentary rocks and tuff
	aniclastic rocks Mafic tuff
J9	<ul> <li>a) Mafic tuff with subordinate interbeds of scoria tuff, minor scoria breccia</li> <li>b) Fine-grained mafic tuff</li> <li>c) Mafic lapilli tuff</li> </ul>
J8	c) Matic lapilli tuff Mafic plagioclase crystal-lapilli tuff, breccia Crystal-lapilli tuff with very large plagioclase
	b Crystal-lapilli tuff, scoria breccia
J7	Mafic pyroclastic breccia, tuff Scoria breccia
	b Interlayered scoria breccia and tuff Pillow-fragment breccia
J6	<ul> <li>a) Aphyric pillow-fragment breccia</li> <li>b) Porphyritic pillow-fragment breccia</li> </ul>
Rhyolite, o J5	Rhyolite flows a) Rhyolite bodies on Northwest Arm and Inlet Arm (Schist Lake)
	<ul> <li>b) Campground rhyolite</li> <li>c) Islands rhyolite</li> <li>d) Paradise rhyolite complex</li> </ul>
	<ul><li>e) Unnamed rhyolite</li><li>f) Quartz-sericite schist derived from rhyolite</li></ul>
J4	saltic andesite, andesite Scotty Lake basalt (>1894 Ma) a) Basalt flows; synvolcanic basalt dikes, sills
J3	<ul> <li>Porphyritic mafic and intermediate flows</li> <li>a) Plagioclase±pyroxene—phyric or glomeroporphyritic mafic flows</li> </ul>
	<ul> <li>b) Plagioclase-pyroxene-phyric mafic flows</li> <li>c) Amoeboid pillow breccia</li> </ul>
J2	<ul> <li>d) Porphyritic intermediate (andesitic) flows</li> <li>Aphyric to sparsely porphyritic mafic flows         <ul> <li>a) Aphyric basalt</li> </ul> </li> </ul>
J1	<ul> <li>b) Amoeboid pillow breccia</li> <li>Bear Lake basaltic andesite (&gt;1886 Ma)</li> </ul>
	<ul> <li>Epidotized and strongly deformed pillowed and massive basaltic</li> </ul>
ca. 1.90	andesite flows, related synvolcanic dikes; derived tectonite
Mafic and	andesite flows, related synvolcanic dikes; derived tectonite Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes Gabbro, diorite
	andesite flows, related synvolcanic dikes; derived tectonite <b>Ga intrusive rocks of ocean-floor affinity</b> <u>ultramafic sills and dikes</u> Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and
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Mafic and H3 H2 H1	andesite flows, related synvolcanic dikes; derived tectonite <b>Ga intrusive rocks of ocean-floor affinity</b> <u>ultramafic sills and dikes</u> Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite mafic—ultramafic intrusions
Mafic and H3 H2 H1	andesite flows, related synvolcanic dikes; derived tectonite Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite mafic –ultramafic intrusions South Athapapuskow layered sill a Gabbro
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Mafic and H3 H2 H1 Layered n G2	andesite flows, related synvolcanic dikes; derived tectonite Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro b Pyroxenite c Peridotite Limestone Narrows mafic—ultramafic complex
Mafic and H3 H2 H1 Layered n G2	andesite flows, related synvolcanic dikes; derived tectonite  Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes  Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite  mafic—ultramafic intrusions South Athapapuskow layered sill a Gabbro b Pyroxenite c Peridotite Limestone Narrows mafic—ultramafic complex a Gabbro b Leucogabbro, gabbro, gabbroic anorthosite, anorthosite c Pyroxenite c Pyroxenit
Mafic and           H3           H2           H1           Layered n           G2           G1           ca. 1.90	andesite flows, related synvolcanic dikes; derived tectonite  Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes  Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite  Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase  Peridotite  Mafic – ultramafic intrusions South Athapapuskow layered sill Gabbro Pyroxenite C Peridotite Limestone Narrows mafic – ultramafic complex Gabbro Pyroxenite Gabbro Cabbro, gabbro, gabbroic anorthosite, anorthosite C Pyroxenite C Paridotite C Pyroxenite C Poridotite C Pyroxenite
Mafic and           H3           H2           H1           Layered n           G2           G1           ca. 1.90	andesite flows, related synvolcanic dikes; derived tectonite Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite nafic – ultramafic intrusions South Athapapuskow layered sill a Gabbro b Pyroxenite c Peridotite Limestone Narrows mafic–ultramafic complex a Gabbro b Leucogabbro, gabbro, gabbroic anorthosite, anorthosite c Pyroxenite d Peridotite Ga volcanic, volcaniclastic and sedimentary rocks of oor affinity try rocks
Mafic and H3 H2 H1 Layered n G2 G1 G1 Ca. 1.90 ocean-fl Sediment: F8	andesite flows, related synvolcanic dikes; derived tectonite Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite mafic-ultramafic intrusions South Athapapuskow layered sill a Gabbro b Pyroxenite c Peridotite Limestone Narrows mafic-ultramafic complex a Gabbro b Leucogabbro, gabbro, gabbroic anorthosite, anorthosite c Pyroxenite c Pyroxenite d Peridotite a Gabbro b Leucogabbro, gabbro, gabbroic anorthosite, anorthosite c Pyroxenite d Peridotite a Gabbro gabbroic pegmatite a Gabbro a Gabbro b Leucogabbro, pabbro, gabbroic anorthosite, anorthosite c Pyroxenite d Peridotite a Gabbro gabbroic pegmatite a Gabbro a Greywacke, mudstone, mafic tuff
Mafic and H3 H2 H1 Layered n G2 G1 G1 Ca. 1.90 ocean-fl Sediment: F8	andesite flows, related synvolcanic dikes; derived tectonite Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite nafic – ultramafic intrusions South Athapapuskow layered sill a Gabbro b Pyroxenite c Peridotite Limestone Narrows mafic–ultramafic complex a Gabbro b Leucogabbro, gabbro, gabbroic anorthosite, anorthosite c Pyroxenite d Peridotite Ga volcanic, volcaniclastic and sedimentary rocks of oor affinity try rocks
Mafic and H3 H2 H1 G2 G1 G1 Ca. 1.90 ocean-fl Sediment: F8 Mafic volc	andesite flows, related synvolcanic dikes; derived tectonite  Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes  Gabbro, diorite  a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite  Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase  Peridotite  mafic—ultramafic intrusions South Athapapuskow layered sill Gabbro Pyroxenite Peridotite Limestone Narrows mafic—ultramafic complex Gabbro Pyroxenite Gabbro, gabbro, gabbroic anorthosite, anorthosite Pyroxenite Gabbro B Reridotite Gabbro, gabbro, gabbroic and sedimentary rocks of Coor affinity ury rocks a) Greywacke, mudstone, mafic tuff
Mafic and H3 H2 H1 Layered n G2 G1 G1 G1 G2 G1 G1 G2 G1 G2 G1 F8 Sediment F8 Mafic volc F7 F6 Basalt	andesite flows, related synvolcanic dikes; derived tectonite
Mafic and H3 H2 H1 G2 G1 G1 G1 G1 G2 G1 F8 Mafic volc F7 F6	andesite flows, related synvolcanic dikes; derived tectonite Ga intrusive rocks of ocean-floor affinity utramafic sills and dikes Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Cloty gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotte mafic-ultramafic intrusions South Athapapuskow layered sill a) Gabbro b) Pyroxenite c) Peridotite Limestone Narrows mafic-ultramafic complex a) Gabbro b) Leucogabbro, gabbro, gabbroic anorthosite, anorthosite c) Pyroxenite d) Peridotite a) Gabbro b) Leucogabbro, gabbro, gabbroic anorthosite, anorthosite c) Pyroxenite d) Peridotite a) Gabbro b) Leucogabbro, gabbro, gabbroic anorthosite, anorthosite c) Pyroxenite d) Peridotite a) Gabbroic pegmatite Gabbroic pegmatite a) Greywacke, mudstone, mafic tuff a) Greywacke, mudstone, mafic tuff Athapapuskow mafic volcaniclastic rocks Undivided mafic flows
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Mafic and H3 H2 H1 G2 G1 G1 G1 G2 G1 G1 G2 G1 F8 Ca. 1.90 Ocean-f1 Sedimenta F8 Mafic volc F7 F6 Basalt F5	andesite flows, related synvolcanic dikes; derived tectonite Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Clotty gabbro, diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite Diabase (1904 ±4 Ma) b) Pyroxenite c) Peridotite C) Peridotite Limestone Narrows mafic—ultramafic complex Gabbro, gabbro, gabbro, gabbroic anorthosite, anorthosite c) Pyroxenite c) Gabbroic pegmatite Ga volcanic, volcaniclastic and sedimentary rocks Millwater mafic volcaniclastic rocks Millwater mafic volcaniclastic rocks Undivided mafic flows South Schist Lake basalt a) Aphyric basalt b) Porphyritic basalt C) Aphyric basalt, plagioclase±pyroxene—phyric/glomeroporphyritic basalt
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Mafic and H3 H2 H1 G2 G1 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G2 G1 G2 G2 G1 G2 G1 G2 G2 G1 G2 G2 G1 G2 G2 G2 G2 G2 G2 G2 G2 G2 G2 G2 G2 G2	andesite flows, related synvolcanic dikes; derived tectonite  Ga intrusive rocks of ocean-floor affinity ultramfic sills and dikes  Gabbro, diorite  ) Cloty gabbro, diorite  ) Cloty gabbro, diorite  ) Cloty gabbro, diorite  ) Cloty gabbro, diorite and quartz diorite, commonly with xenoliths and rafts of amphibolitie, veins and dikes in amphibolite  Diabase (1904 ±4 Ma)  a) Fine- to medium-grained diabase  Peridotite  Peridotite  South Athapapuskow layered sill  Gabbro Pyroxenite Peridotite  Gabbro, gabbro, gabbro, gabbroic anorthosite, anorthosite Peridotite  Gabbroic pegmatite  Gavolcanic, volcaniclastic and sedimentary rocks ov affinity ury rocks a) Greywacke, mudstone, mafic tuff  aniclastic and volcaniclastic rocks  Millwater mafic volcaniclastic rocks  Lundivided mafic flows  South Schist Lake basalt  ) Aphyric basalt  Vest Arm (Schist Lake) basalt  Millwater, Limestone Narrows basalt
Mafic and H3 H2 H1 G2 G1 G1 G1 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G2 G1 G1 G1 G1 G2 G1 G1 G1 G2 G1 G1 G1 G1 G1 G1 G1 G1 G1 G1 G1 G1 G1	andesite flows, related synvolcanic dikes; derived tectonite Gaintrusive rocks of ocean-floor affinity ultramfic sills and dikes Gabbro, diorite  i fine- to medium-grained, equigranular gabbro, diorite i diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite  mafic—ultramafic intrusions South Athapapuskow layered sill a Gabbro b Pyroxenite c Peridotite Limestone Narrows mafic—ultramafic complex a Gabbro c Gabbroic pegmatite Ga volcanic, volcaniclastic and sedimentary rocks of cor affinity ury rocks a) Greywacke, mudstone, mafic tuff aniclastic and volcaniclastic rocks Millwater mafic volcaniclastic rocks Undivided mafic flows South Schist Lake basalt a) Aphyric basalt Millwater pillowed basalt a Millwater pillowed basalt b) Context Particle and polytic basalt a Millwater pillowed basalt b) Context Particle C C Context Particle C C C Context Particle C C C C Context Particle C C C C C C C C C C C C C C C C C C C
Mafic and         H3         H2         H1         Layered n         G2         G1         G2         G3         F3         F4         F3         F2         F1         1.90 – 1.4	andesite flows, related synvolcanic dikes; derived tectonite Gaintrusive rocks of ocean-floor affinity ultramatic sills and dikes Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Cloty gabbro, diorite c) Meduim-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite affic=ultramafic intrusions South Athapapuskow layered sill Gabbro b Pyroxenite c) Peridotite Limestone Narrows mafic—ultramafic complex Gabbroic pegmatite Gabbroic pegmatite Gabbroic pegmatite Gabbroic pegmatite Gabbroic pegmatite Gabbroic pegmatite aniclastic and volcaniclastic and sedimentary rocks of milwater mafic volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Undivided mafic flows South Schist Lake basait a) Aphyric basait b) Porphyritic basait Chainstone Narrows basait C
Mafic and         H3         H2         H1         Layered n         G2         G1         G2         G3         F3         F4         F3         F2         F1         1.90 – 1.4         affinity of	andesite flows, related synvolcanic dikes; derived tectonite Gaintrusive rocks of ocean-floor affinity ultramatic sills and dikes Cabbro; diorite a) Fine-to medium-grained, equigranular gabbro, diorite b) Cloty gabbro, diorite a) Cloty gabbro, diorite a) Fine-to medium-grained diabase Peridotite affic-ultramafic intrusions South Athapapuskow layered sill Gabbro b Pyroxenite c Peridotite Gabbro; gabbro; gabbro; gabbro; anorthosite, anorthosite c Peridotite Gaboro b Leucogabbro; gabbro; gabbro; anorthosite, anorthosite c Peridotite c Gabbro; gabbro; gabbro; gabbro; anorthosite, anorthosite c Peridotite c Gabbro; gabbro; gabbro; gabbro; anorthosite, anorthosite c Peridotite c Gabbro; gabbro; gabbro; gabbro; anorthosite, anorthosite c Peridotite c Gabbro; gabbro; gabbro; gabbro; anorthosite, anorthosite c Peridotite c Gabbro; pegmatite Cavolcanic, volcaniclastic and sedimentary rocks of or affinity urrocks a) Greywacke, mudstone, mafic tuff aniclastic and volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Milwater mafic volcaniclasti; pagiclases; proxene-phyric/glomeroporphyritic basalt b) Porphyritic basalt b) Linestone Narrows pallowed basalt b) Linestone Narrows pallowed basalt b) Linestone Narrows pallowed basalt b) Thic massive flows Cathapapuskow basalt (~1904 Ma) a) Thin massive flows Cathapapuskow b
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Mafic and         H3         H2         H1         Layered n         G2         G1         G2         G3         F3         F4         F3         F2         F1         1.90 – 1.4         affinity (         W5         W4	andesite flows, related synvalcanic dikes; derived tectonite Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes Gabbro, diorite a) Fine- to medium-grained, equigranular gabbro, diorite b) Cloty gabbro, diorite a) Medium-grained diorite and quartz diorite, commonly with xenoliths and rafts of amphibolite; whis and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase South Athapapuskow layered sill a Gabbro Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase South Athapapuskow mafic-ultramafic complex a Gabbro Diabase (1904 ±4 Ma) a) Gabbro Diabase (1904 ±4 Ma) a) Gabbro Diabase (1904 ±4 Ma) a) Greywacke, mudstone, mafic tuff aniclastic and volcaniclastic sedimentary rocks a) Greywacke, mudstone, mafic tuff aniclastic and volcaniclastic rocks Milwater mafic volcaniclastic rocks Milwater mafic volcaniclastic rocks Undivided mafic flows South Schist Lake basait a) Aphyric basait b) Porphyritic basait Milwater, Limestone Narrows basait Athapapuskow basalt (>1904 Ma) a) Thin massive flows b) Filowed flows BGa 'contaminated arc' rocks and rocks of unknows b) Filowed flows BGGa 'contaminated arc' rocks and rocks of unknows Diabase flowed flows BGGa 'contaminated arc' rocks and rocks of unknows b) Filowed flows BGGa 'contaminated arc' rocks and rocks of unknows b) Filowed flows BGGa 'contaminated arc' r
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Mafic and         H3         H2         H1         Layered n         G2         G1         G2         G3         F3         F4         F3         F2         F1         1.90 – 1.4         affinity (         W5         W4         W3         W2         W1	andesle flows, related synvolcanic dikes; derived tectonie Ga intrusive rocks of ocean-floor affinity uttramafic sills and dikes Gabbro, diorite a) Fine: to medium-grained, equigranular gabbro, diorite b) Cloby gabbro, diorite c) Medium-grained diorite and quartz diorite, commonly with xendiths and rafts of amphbolic; versions and dikes in amphbolite Diabase (1904 ±4 Ma) a) Fine: to medium-grained diabase Peridotite artic-ultramafic intrusions South Athapapuskow layered sill a) Gabbro b) Pyroxenite c) Peridotite c) Peridotite c) Peridotite d) Peridotite c) Gabbroic pegmatite c) Greywacke, mudstone, mafic tuff aniclastic and volcaniclastic sedimentary rocks Milwater mafic volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Milwater mafic volcaniclastic pocks c) Propynitic basatt c) Thick massive flows c) Pilowed flows c
Mafic and         H3         H2         H1         Layered n         G2         G1         G2         F3         F2         F1         1.90 -1.4         affinity (         W3         W2         W1         Neoarch         V2         W1	andesile flows, related synvicence dikes; derived tectonie Ga intrusive rocks of ocean-floor affinity ultramafic sills and dikes Gabbro, diorite •) Fide-ultramafic directed equiranular gabbro, diorite •) Fide-ultramafic directed quart diorte, commonly with xendiths and rats of amphibolite; veins and dikes in amphibolite Diabase (1904 ±4 Ma) a) Fine- to medium-grained diabase Peridotite affic-ultramafic intrusions South Athapapuskow layered sill a Gabbro B Pyroxenite G Peridotite Linestone Narrows mafic-ultramafic complex: a Gabbro C Gabbro, gabbro, gabbroic anorthosite, anorthosite G Pyroxenite G Pyroxenite G Aolocianic, volcaniclastic and sedimentary rocks of or affinity ury rocks a) Greywacke, mudstone, mafic tuff anticastic and volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Milwater mafic volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Milwater mafic volcaniclastic rocks Athapapuskow mafic volcaniclastic rocks Milwater mafic volcaniclastic rocks Athapapuskow basalt b) Porphyritic basalt b) Porphyritic basalt b) Porphyritic basalt a) Aphyric basalt b) Proteinit Lake basalt a) Aphyric basalt b) Thick massus flows b) Thick massus flows c) Pillowed flows BG ac contaminated arc' rocks and rocks of unknows 'Mystic Lake assemblage') Late intrusive rocks a) Bolte-hombiende metadiorite Felsic plupoits rocks a) Bolte-hombiende metadiorite Felsic plupoits rocks a) West Arm (Athapapuskow Lake) granite Felsic plupoits rocks a) Pretonially rimpic to plagioclase-phyric diabase; apilite: b) Perionalite upilicy to plagioclase-phyric diabase; apilite: b) Perionalite minited andfic rocks derived from amygdaloidal basalt, diabase and mafic tuff.



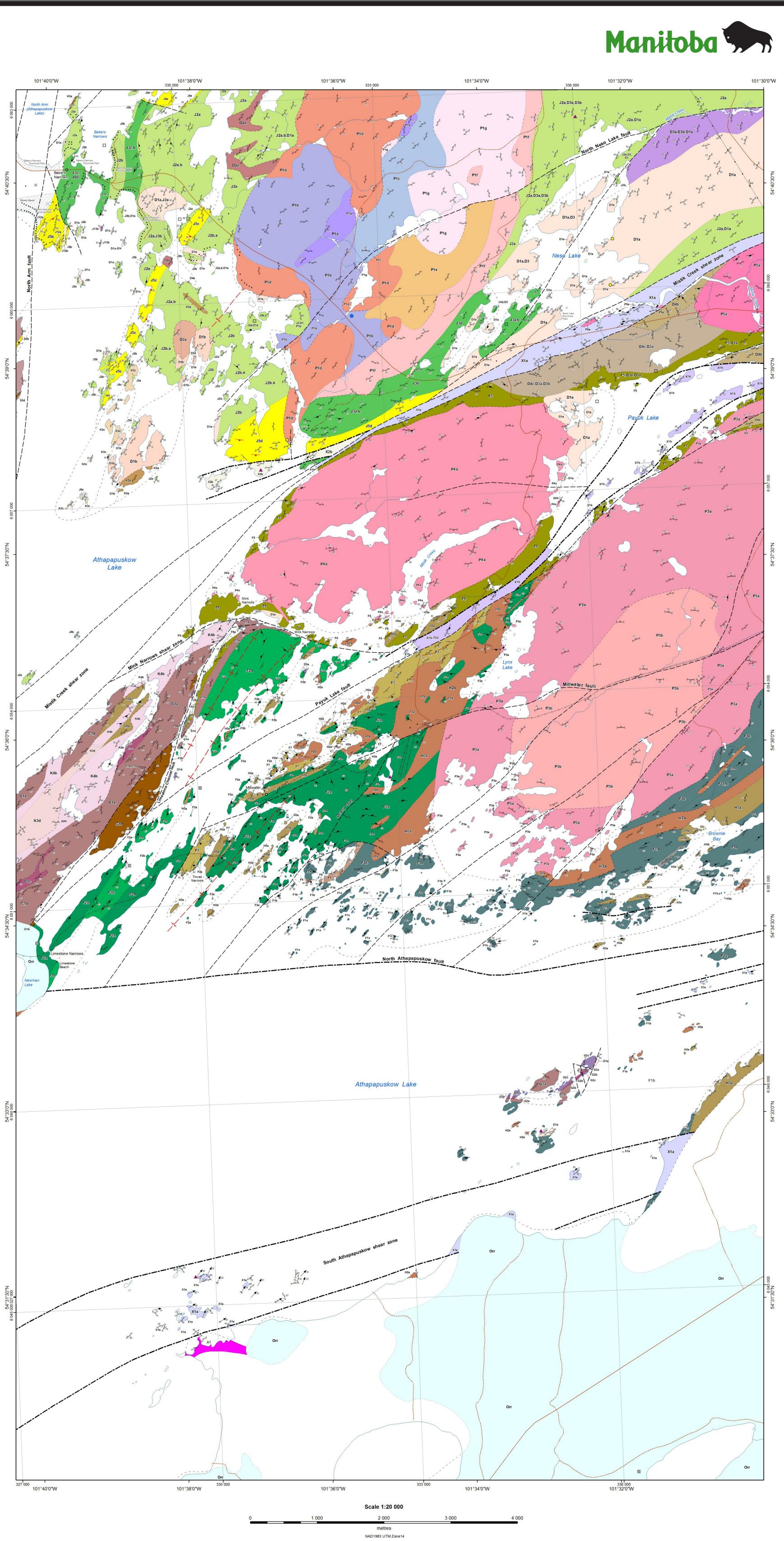
#### Geology by: E.C. Syme Digital cartography by: M.E. McFarlane

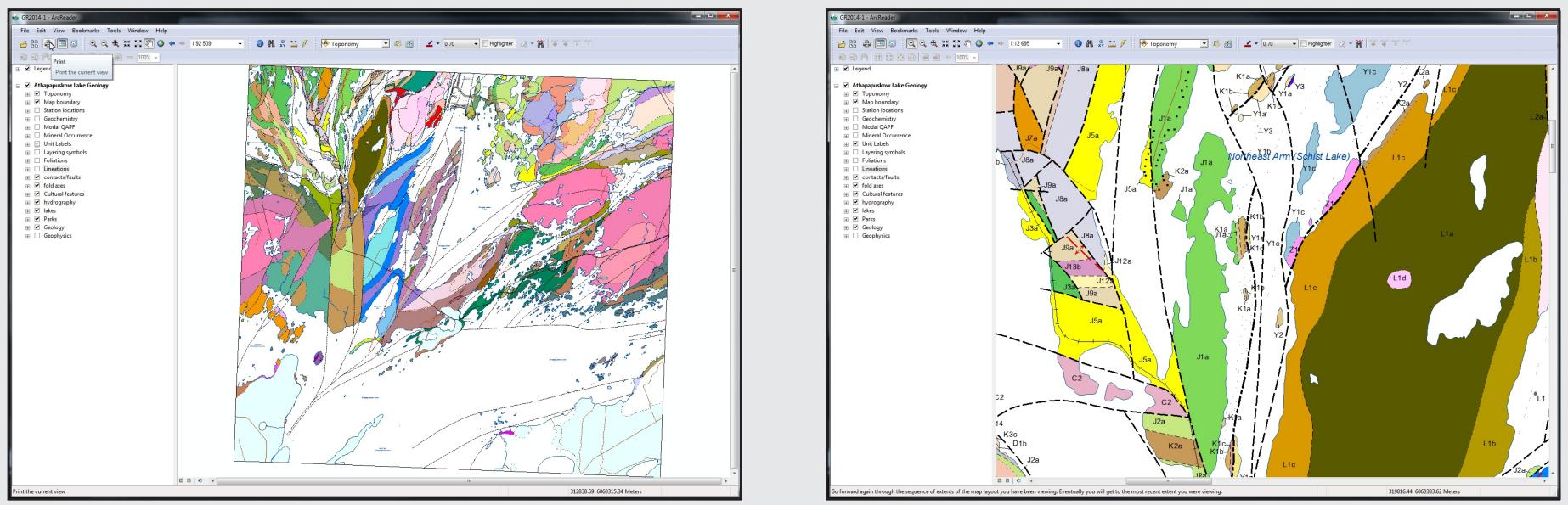
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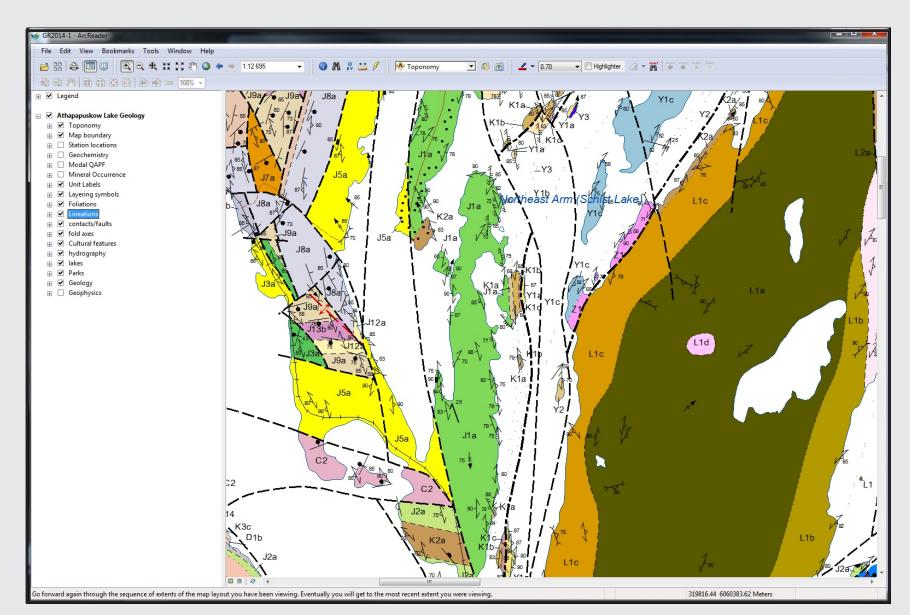
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This map accompanies Geoscientific Report GR2014-1: Syme, E.C. 2015: Geology of the Athapapuskow Lake area, western Flin Flon belt, Manitoba (part of 63K12), Manitoba Mineral Resources, Manitoba Geological Survey, Geoscientific Report GR2014-1, 210 p. Suggested reference for Map GR2014-1-2: ne, E.C. 2015: Bedrock geology of the Athapapuskow Lake area (east half), western Flin Flon belt, Manitoba (part of NTS 63K12); Manitoba Mineral Resources, Manitoba Geological Survey, Geoscientific Report GR2014-1, Map GR2014-1-2,

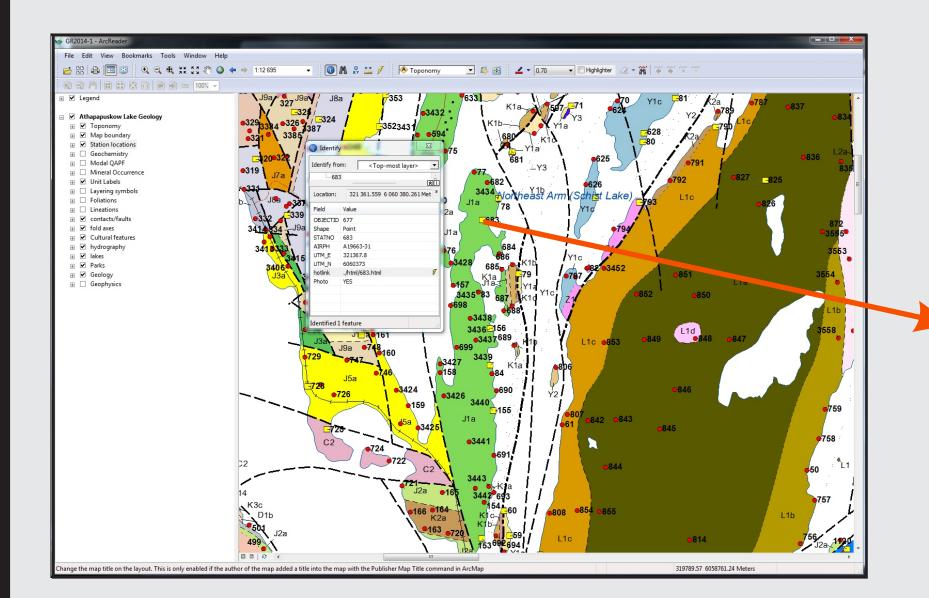


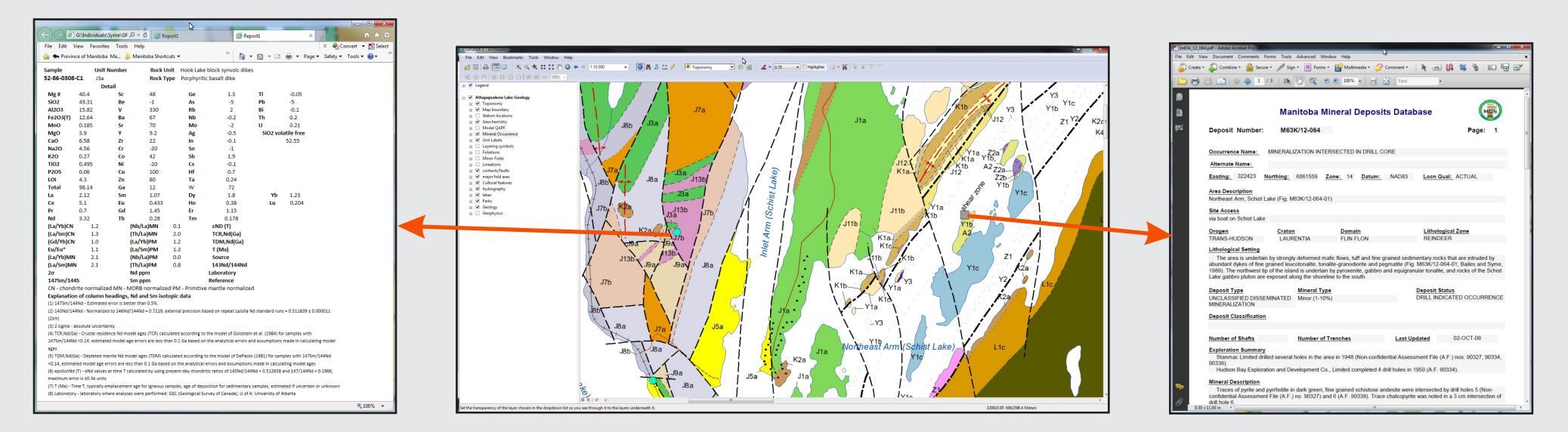


ArcGIS<sup>™</sup> version 10.2.1 or newer.



The map provides independent control of visibility for all elements of the map including structure symbols, unit numbers and station locations. All together there are 3552 individual station locations and 3520 structural symbols visible on the map.





The database associated with the Athapapuskow Lake digital map contains links to 184 geochemical analyses and 50 mineral occurrence descriptions. Using the hyperlink tool and selecting the appropriate tool will open windows to both geochemical records (left side) and mineral occurrence documents (right side). Both of these popup windows can be printed seperately from the ArcReader projects. The geochemical data is also available in Excel spreadsheet in the Appendices folder of the DVD.

# NEW RELEASE

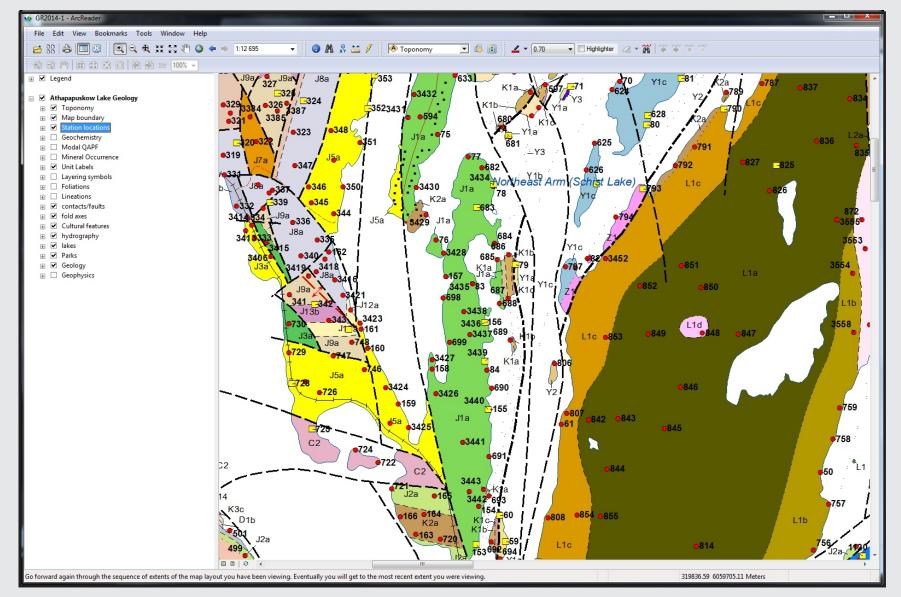
## **Geoscientific Report GR2014-1** Geology of the Athapapuskow Lake area, western Flin Flon belt, Manitoba (part of NTS 63K12)

### by E.C. Syme

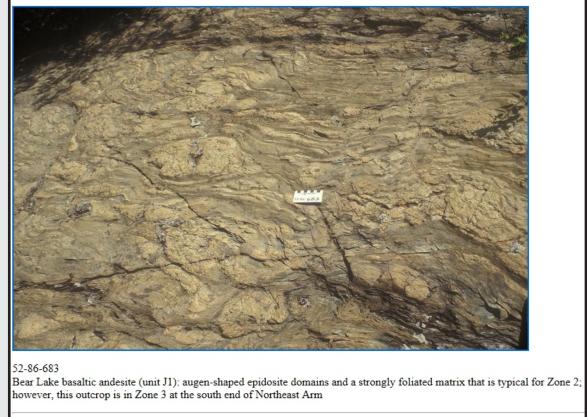
Digital compilation by P.G. Lenton Manitoba Geological Survey Manitoba Mineral Resources

The digital version of the Athapapuskow Lake map is included on the DVD as an ESRI© ArcReader™ project and as an ESRI© ArcMap™ document. The required ArcReader™ software is included on the DVD in the folder \ArcReader1021\. You can use the mxd project file if you have

When the map is first opened only the simplest presentation is used comprising geology polygons and contacts, hydrography and cultural features. When the user zooms to the native scale of the map at 1:20 000 other features such as unit number text and structure symbols appear. Optional layers such as station location, geochemistry, mineral occurrence and QAPF points can be made visible.



Athapapuskow	/ Lake	Proj	ect (1985-89)	Manitoba 🗫
Geologist E.C. EASTING 3213 Date of mapping	851 N	ORT	HING 6060377	683 CONE 14 DATUM NAD83
STRUCTURAL	DATA			
	ar Struc			
Structure type	Strike	Dip	Separation	
schistosity	30	70		
kink band	2	85		
PETROLOGIC	DATA			
Rock Number: 1				
Rock Type: epid	otized, d	leforn	ed, Bear Lake basal	ic andesite
Is, or occurs in,	nap uni	it: J1a		
Weathered colou	ır: buff			
Field Description	1:			
"matrix" brown so present. NE trend folds with N axia	chistose ing folia l plane f	portion ation 1 old fo	n. No primary strict is predominant, alth liation 1 and deform	ge augen-shaped epidote domains (buff) which deflect foliation in the re relicts whatever, but not as strongly deformed as 682 - lamination is not ough there is still a Z - north trending overprint locally. Few amygdules. Z epidosite. Intruded by common diorite sheets cm's to m's wide - these are al pseudo lamination.
Rock Number: 2				
Rock Type: diori	te			
Is, or occurs in,	nap uni	it: J1a		
Field Description	1:			
Intrude epidosites				



Manitoba Geological Survey, 2014 Geological Report GR2014-1

Every station location contains a hyperlink to documents containing the full-text description of the outcrop as recorded in the field by E.C. Syme during field mapping. To enhance the utility of these station notes, locations that have good quality photographs that are representative of the outcrop include one or more photographs in the note document. In total there are 372 field photos available from links in the map.