

Geological Survey of Canada Map 1968A
Manitoba Energy and Mines Map A-98-2
Saskatchewan Energy and Mines Map 258A

**Geology, NATMAP Shield Margin Project Area Flin Flon Belt,
Manitoba/Saskatchewan accompanying notes**

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This table replaces Table 1: "Selected U-Pb geochronological
information for the NATMAP Shield Margin Project area.",
p. 12–15.

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Table 1: Selected U-Pb geochronological information for the NATMAP Shield Margin Project area.

Unit	Rock Type	Type	Age (Ma)	Error (Ma)	Method	Mineral	Reference	UTM-E	UTM-N	Zone	UNIT No.
Jan Lake Complex	Quartzofeldspathic gneiss	igneous	2959	±13	U/Pb	zircon	Ashton et al. (in press)	641870	6101120	13	A2
Missi Group	Sandstone lens in conglomerate	detrital	2721	±4	Pb-Pb	zircon	Ansdell (1993)	323173	6055822	14	M1a
Stroud Felsic Breccia	Rhyolite breccia	inherited	2715		Pb-Pb	zircon	David et al. (1996)	427600	6074000	14	J7a
Mystic Lake Tonalite	Tonalite	inherited	2604		Pb-Pb	zircon	Stern et al. (in press)				E1a
Wolf Lake Turbiditic Wacke	Turbiditic wacke	detrital	2523	±12	Pb-evap	zircon	Ansdell and Connors (1994)	663224	6053536	13*	J9b
Beaverhouse Lake Tonalite	Tonalite	igneous	2518	+7/-4	U/Pb	zircon	David and Syme (1994)	327453	6069129	14	A1a
Felsic Mylonite, NE Arm Shear Zone	Granodiorite	igneous	2497	+3/-2	U/Pb	zircon	David and Syme (1994)	322420	6061324	14	A1a
Missi Group; Flin Flon Basin; Beaverdam Member	Sandstone (lower sequence)	detrital	2494	±2	U/Pb	zircon	Ansdell (1993)	702154	6072398	13*	M3a
Jan Lake Complex	Gabbro	igneous	2488	±12	U/Pb	zircon	Ashton et al. (in press)	639800	6109140	13	A1a
Jan Lake Complex	Charnockite	igneous	2450	±8	U/Pb	zircon	Ashton et al. (in press)	636290	6104700	13	A4
Burntwood Group	Greywacke	detrital	2397		Pb-Pb	zircon	David et al. (1996)	406450	6074500	14	B1a
Schist Lake Road Felsic Dyke	Aplitic dyke	inherited	2022	±2	Pb-Pb	zircon	Stern et al. (1993)	315125	6058810	14	P10a
Jan Lake Complex	Migmatitic paragneiss	detrital	2016		Pb-Pb	zircon	Ashton et al. (in press)	641390	6101560	13	A2
Meridian Creek Tonalite	Tonalite	igneous	1920	+18/-13	U/Pb	zircon	Stern and Lucas (1994)	309850	6067400	14	E1a
Missi Group; Flin Flon Basin	Conglomerate (lower sequence)	detrital	1914	±6	Pb-evap	zircon	Ansdell et al. (1992)	697745	6076389	13*	M1a
Mystic Lake Intrusive Suite	Tonalite	igneous	1906	±2	U/Pb	zircon	Heaman et al. (1992)	309165	6060575	14	E1a
Wolf Lake Turbiditic Wacke	Turbiditic wacke	detrital	1906	±20	Pb-evap	zircon	Ansdell and Connors (1994)	663224	6053536	13*	J9b
Athapapuskow Diabase	Diabase	igneous	1904	±4	U/Pb	zircon	Stern et al. (1995b)	323550	6047350	14	F5a
Mine Rhyolite	Rhyolite	igneous	1903	+7/-5	U/Pb	zircon	Stern et al. (in press)	314096	6073283	14	J4a
West Arm Tonalite	Tonalite	igneous	1903	+6/-4	U/Pb	zircon	Stern et al. (1993)	318378	6050352	14	E1a
Claw Lake Gabbro	Gabbro pegmatite dyke	igneous	1901	+6/-5	U/Pb	zircon	Stern et al. (1995b)	385286	6073221	14	F6a
Herblet Lake Gneiss Dome	Melanocratic gneiss	igneous	1901	±4	U/Pb	zircon	David et al. (1996)	445550	6102385	14	J14
Welsh Lake Assemblage	Greywacke	detrital	1894	±3	U/Pb	zircon	Heaman et al. (1993)	665131	6074326	13	J9b
Stroud Felsic Breccia	Rhyolite breccia	igneous	1892	±3	U/Pb	zircon	Machado and David (1992)	429129	6073267	14	J7a
Herblet Lake Gneiss Dome	Granodiorite	igneous	1890	+8/-6	U/Pb	zircon	Gordon et al. (1990)	443643	6089923	14	J14b
Richard Lake Pluton	Tonalite	igneous	1889	+8/-6	U/Pb	zircon	Bailes et al. (1990)	426880	6081044	14	J12c
Bakers Narrows Rhyolite Dyke	Porphyritic rhyolite	igneous	1888	+11/-9	U/Pb	zircon	Stern et al. (in press)	330454	6067770	14	J13c
Neagle Lake Rhyolite	Rhyolite (?)	igneous	1888	±3	U/Pb	zircon	Heaman et al. (1993)	666713	6071812	13	J7b
Laurel Lake Rhyolite	Rhyolite	igneous	1887	±3	U/Pb	zircon	Heaman et al.	676450	6065750	13	J4a

* approximate location

Table 1. (cont.)

Unit	Rock Type	Type	Age (Ma)	Error (Ma)	Method	Mineral	Reference	UTM-E	UTM-N	Zone	UNIT No.
							(1993)				
Cliff Lake Pluton	Quartz diorite	igneous	1886	±1	U/Pb	zircon	Stern et al. (in press)	317250	6076000	14	J12c
Sneath Lake Pluton	Tonalite	igneous	1886	+17/-9	U/Pb	zircon	Bailes et al. (1990)	428914	6069820	14	J12c
Two Portage Rhyolite Crystal Tuff	Rhyolite crystal tuff	igneous	1886	±2	U/Pb	zircon	Gordon et al. (1990)	325860	6067880	14	J2a
Vick Lake Tuff	Shoshonitic tuff	igneous	1885	±3	Pb-Pb	zircon	Stern et al. (1993)	302670	6068240	14	J8a
Herblet Lake Gneiss Dome	Melanocratic gneiss	igneous	1884	±6	U/Pb	zircon	David et al. (1996)	445550	6102385	14	J14
Mystic Lake Intrusive Suite	Tonalite-quartz diorite	igneous	1883	±4	U/Pb	zircon	Heaman et al. (1992)	309110	6060240	14	E1a
West Amisk Andesitic Tuff	Andesitic tuff	igneous	1882	±3	U/Pb	zircon	Stern and Lucas (1994)	672055	6057596	13	J6a
Mikanagan Lake Sill	Gabbro pegmatite	igneous	1881	+3/-2	U/Pb	titanite	Stern et al. (in press)	327627	6071249	14	J10
Gants Lake Batholith	Granodiorite	igneous	1876	+7/-6	U/Pb	zircon	Whalen and Hunt (1994)	385740	6081260	14	P7a
Puella Bay Dacite	Dacite	igneous	1876	±2	U/Pb	zircon	Ansdell et al. (in press)	450960	6064440	14	S3b
Hanson Lake Rhyolite	Rhyolite	igneous	1875	±1	U/Pb	zircon	Heaman et al. (1993)	639500	6061000	13	J4a
Jungle Lake Pluton	Tonalite	igneous	1874	±2	U/Pb	zircon	Machado et al. (in press)	374075	6116600	14	P6a
Finger Peninsula Sheared Granite	Granite	igneous	1873	±1.6	U/Pb	zircon	Heaman et al. (1994)	638130	6066280	13	J12a
Ragged Lake Pluton	Granite gneiss	igneous	1873	±4	U/Pb	zircon	Hunt and Zwanzig (1990)	374303	6100053	14	P9a
Hanson Lake Mine Road Granite	Granite	igneous	1870	+7/-5	U/Pb	zircon	Heaman et al. (1994)	635740	6063500	13	J12a
Schist Lake Road Felsic Dyke	Aplitic dyke	igneous	1869	±1	Pb-Pb	zircon	Stern et al. (1993)	315125	6058810	14	P10a
Scheiders Bay Rhyolite Crystal Tuff	Rhyolite crystal tuff	detrital	1867	±17	U/Pb	zircon	Stern et al. (in press)	327406	6059436	14	S1c
Annabel Lake Pluton	Granodiorite	igneous	1866	±3	U/Pb	zircon	Stern and Lucas (1994)	311450	6074850	14	P7a
East Elbow Tonalite Stock	Quartz megacrystic tonalite	igneous	1864	±3	U/Pb	zircon	Whalen and Hunt (1994)	382630	6081518	14	P6a
Elbow Lake Pluton	Tonalite	igneous	1864	+5/-4	U/Pb	zircon	Whalen and Hunt (1994)	381225	6074488	14	P6a
Missi Group	Cross-bedded sandstone	detrital	1864	±7	Pb-Pb	zircon	Ansdell et al. (in press)				M3a
West Arm Sandstone	Turbiditic sandstone	detrital	1863	±3	Pb-Pb	zircon	Stern et al. (in press)	320782	6071821	14	S1b
Pluton intruding Hanson Lake metasediments	Quartz-feldspar porphyry	igneous	1861	+4/-3	U/Pb	zircon	Heaman et al. (1997)	639327	6065954	13	P10b
Missi Group; Flin Flon Basin	Conglomerate (lower sequence)	detrital	1861	±17	Pb-evap	zircon	Ansdell et al. (1992)	697745	6076389	13*	M1a
Puffy Lake Tonalite	Tonalite	igneous	1860	±2	U/Pb	zircon	Machado et al. (in press)	370150	6099500	14	P7e
Batty Lake Intrusive Complex	Tonalite gneiss	igneous	1859	+14/-7	U/Pb	zircon	Hunt and Zwanzig (1993)	391400	6114890	14	P8c

* approximate location

Table 1. (cont.)

Unit	Rock Type	Type	Age (Ma)	Error (Ma)	Method	Mineral	Reference	UTM-E	UTM-N	Zone	UNIT No.
Burntwood Group	Greywacke	detrital	1859	±7	Pb-Pb	zircon	David et al. (1996)	442400	6075300	14	B1a
Missi Group	Cross-bedded sandstone	detrital	1859	±8	Pb-Pb	zircon	Ansdell et al. (in press)				M3a
Neso Lake Pluton	Quartz diorite	igneous	1858	±3	U/Pb	zircon	Syme et al. (1991)	332482	6059654	14	P5a
Schist Lake Conglomerate	Trachyandesite	igneous	1858	±4	U/Pb	zircon	Stern et al. (in press)	320374	6058788	14	S1a
Schist Lake Conglomerate	Qz-fp phytic rhyolite cobble	igneous	1858	±1	U/Pb	zircon	Stern et al. (in press)	320782	6058583	14	S1a
Missi Group; Flin Flon Basin; Beaverdam Member	Sandstone (lower sequence)	detrital	1857	±2	U/Pb	zircon	Ansdell (1993)	702154	6072398	13*	M3a
East Wekusko Rhyolite	Rhyolite	igneous	1856	±1	U/Pb	zircon	Ansdell et al. (in press)	449180	6069140	14	S3a
Kaminis Lake Pluton	Granodiorite	igneous	1856	±2	U/Pb	zircon	Stern and Lucas (1994)	313750	6059750	14	P7a
Mari Lake Pluton	Biotite granodiorite	igneous	1855	+4/-3	U/Pb	zircon	Heaman et al. (1992)	308025	6096090	14	P8b
Kakinagimik Lake Leucotonalite	Biotite leucotonalite	igneous	1852	+6/-4	U/Pb	zircon	Heaman et al. (1993)	669565	6104335	13	P8b
Reynard Lake Pluton	Porphyritic granodiorite	igneous	1850	±3	U/Pb	zircon	Stern et al. (1993)	689775	6062125	13	P7a
Wekach Lake Pluton	Gabbro	igneous	1850	±2	U/Pb	zircon	Heaman et al. (1992)	311400	6063775	14	P2a
Missi Island Trondhjemite	Trondhjemite	igneous	1848	±11	Pb-evap	zircon	Ansdell and Kyser (1991)	678000	6064250	13	P8a
Puffy Lake Metadacite	Dacite	igneous	1848	±4	U/Pb	zircon	Machado et al. (in press)	372150	6100100	14	M5d
Lynx Lake Pluton	Granodiorite	igneous	1847	±4	U/Pb	zircon	Gordon et al. (1990)	333749	6052482	14	P7a
Syn-Meridian-West Arm Shear Zone Dyke	Plagioclase-porphry dyke	igneous	1847	±2	U/Pb	zircon	Stern and Lucas (1994)	309400	6069012	14	P10b
Missi Group	Pebble sandstone	detrital	1847	±2	Pb-Pb	zircon	Ansdell (1993)	317480	6073800	14	M2a
Neagle Lake Pluton	Granodiorite to quartz monzodiorite	igneous	1846	+14/-6	Pb/Pb	titanite	Ashton (1992)	667191	6073948	13	P6c
Missi Group	Sandstone lens in conglomerate	detrital	1846	±6	Pb-Pb	zircon	Ansdell (1993)	323173	6055822	14	M1a
Big Rat Lake Pluton	Granodiorite	igneous	1845	±3	Pb-Pb	zircon	Whalen and Hunt (1994)	377307	6077068	14	P7a
Hanson Lake Pluton	Granodiorite	igneous	1844	±2	U/Pb	zircon	Heaman et al. (1993)	642921	6064730	13	P7a
Hanson Lake Pluton	Gabbro	igneous	1843	±2	U/Pb	zircon	Heaman et al. (1994)	640833	6060206	13	P2a
Pelican Décollement Zone	Quartz monzodiorite	igneous	1843	±2	U/Pb	zircon	Ashton et al. (in press)	652450	6086575	13	P9c
Boundary Intrusion	Metagabbro	igneous	1842	±3	U/Pb	zircon	Heaman et al. (1992)	315770	6065500	14	P2g
Burntwood Group	Psammite	detrital	1842	±2	U/Pb	zircon	Machado et al. (in press)	390650	6116675	14	B1b
Post-Meridian-West Arm Shear Zone Dyke	Microcline-porphry dyke	igneous	1839	±3	U/Pb	zircon	Stern and Lucas (1994)	309475	6068919	14	P10b
Boot Lake Intrusion	Monzodiorite	igneous	1838	±2	U/Pb	zircon	Heaman et al. (1992)	315770	6065500	14	P4c

* approximate location

Table 1. (cont.)

Unit	Rock Type	Type	Age (Ma)	Error (Ma)	Method	Mineral	Reference	UTM-E	UTM-N	Zone	UNIT No.
Phantom Lake Granodiorite Dyke	Granodiorite	igneous	1838	±2	U/Pb	zircon	Heaman et al. (1992)	315770	6065500	14	P7a
Tramping Lake Pluton	Granite	igneous	1837	+8/-6	U/Pb	zircon	David et al. (1996)	436260	6072890	14	P9a
Missi Group	Metasandstone	detrital	1837	±4	Pb-Pb	zircon	Machado et al. (in press)				M1b
Bujarski Lake Pluton	Quartz diorite	igneous	1836	+4/-3	U/Pb	zircon	Bailes et al. (1990)	425128	6067841	14	P5a
Chickadee Rhyolite	Rhyolite	igneous	1836	±1	U/Pb	zircon	Ansdell et al. (in press)	452840	6071083	14	M5a
Wekusko Granite	Granite	igneous	1834	+8/-6	U/Pb	zircon	Gordon et al. (1990)	438981	6068838	14	P9a
Herb Lake Felsic Volcanic	Rhyolite	igneous	1833	+6/-2	U/Pb	zircon	Ansdell et al. (in press)	450860	6071110	14	M5a
Nelson Bay Gneiss Dome	Granodiorite gneiss	igneous	1832	±2	U/Pb	zircon	David et al. (1996)	413226	6085967	14	P7e
Rex Lake Plutonic Complex	Granodiorite	igneous	1832	+4/-3	U/Pb	zircon	Gordon et al. (1990)	450113	6076491	14	P7a
Ham Lake Pluton	Granodiorite	igneous	1830	+27/-19	U/Pb	zircon	Gordon et al. (1990)	417475	6083464	14	P7a
Mirond Lake Enderbite	Homogeneous calc-alkaline enderbite	igneous	1830	±1	U/Pb	zircon	Ashton et al. (in press)	645450	6103970	13	P5d
Touchbourne Intrusive Suite	Enderbite	igneous	1830	+11/-5	U/Pb	zircon	Gordon et al. (1990)	414000	6130900	14	P5d
Little Swan Lake Pluton	Granodiorite	igneous	1828	±6	Pb-Pb	titanite	Whalen and Hunt (1994)	338380	6073200	14	P9b
Missi Group	Quartz porphyry / pink gneiss	igneous	1826	+11/-5	U/Pb	zircon	Hunt and Schledewitz (1992)	353834	6097861	14	M6b
Anderson Rhyolite	Rhyolite	metamorphic	1812	±15	U/Pb	titanite	David et al. (1996)	438778	6078845	14	J4a
Hanson Lake Psammopelitic Schist	Psammopelitic schist	metamorphic	1808	±2.6	U/Pb	monazite	Heaman et al. (1994)	639450	6066280	13	J9b
Pelican Décollement Zone	Quartz monzodiorite	metamorphic	1808	±3	U/Pb	titanite	Ashton et al. (in press)	652450	6086575	13	P9c
Attiti Lake Felsic Volcanic	Felsic gneiss (volcanic ?)	metamorphic	1807	+3/-2	U/Pb	zircon	Heaman et al (1992)	664360	6104205	13	U1b
Herblet Lake Gneiss Dome	Tonalite gneiss	metamorphic	1807	±3	U/Pb	zircon	David et al. (1996)	446780	6102510	14	J14a
Pre-Sturgeon-weir Shear Zone Pegmatite	Granitoid pegmatite	igneous	1806	±2	U/Pb	zircon	Ashton (1992)	658530	6095230	13	L4
Hanson Lake Mine Road Rhyodacite	Rhyodacite	metamorphic	1804	+5/-4	U/Pb	titanite	Heaman et al. (1994)	634400	6064980	13	J4a
Pegmatitic Granite	Granite	igneous	1799	±2	U/Pb	monazite	Ansdell and Norman (1993)	337814	6097681	14	L1
Mystic Lake Intrusive Suite	Porphyritic rhyolite dyke	igneous	1797		Pb-Pb	zircon	Heaman et al. (1991)	308910	6059950	14	L1
Pegmatite Dyke	Pegmatite	igneous	1796	±1	Pb-Pb	monazite	Hunt and Zwanig (1993)	388430	6116480	14	L1
Kakinagimak Lake Leucotonalite	Biotite leucotonalite	metamorphic	1789	±3	U/Pb	titanite	Heaman et al. (1993)	669565	6104335	13	P8b
Jan Lake Granite Suite	Aplitic-pegmatitic granite	igneous	1773	±9	U/Pb	zircon	Bickford et al. (1987)	633396	6086198	13	L3a
Post Sturgeon-weir Shear Zone Pegmatite	Granitoid pegmatite	metamorphic	1767	±1	U/Pb	monazite	Ashton (1992)	653620	6091600	13	L4

* approximate location