

Proterozoic Magmatic Events of the Slave Craton, Wopmay Orogen and Environs

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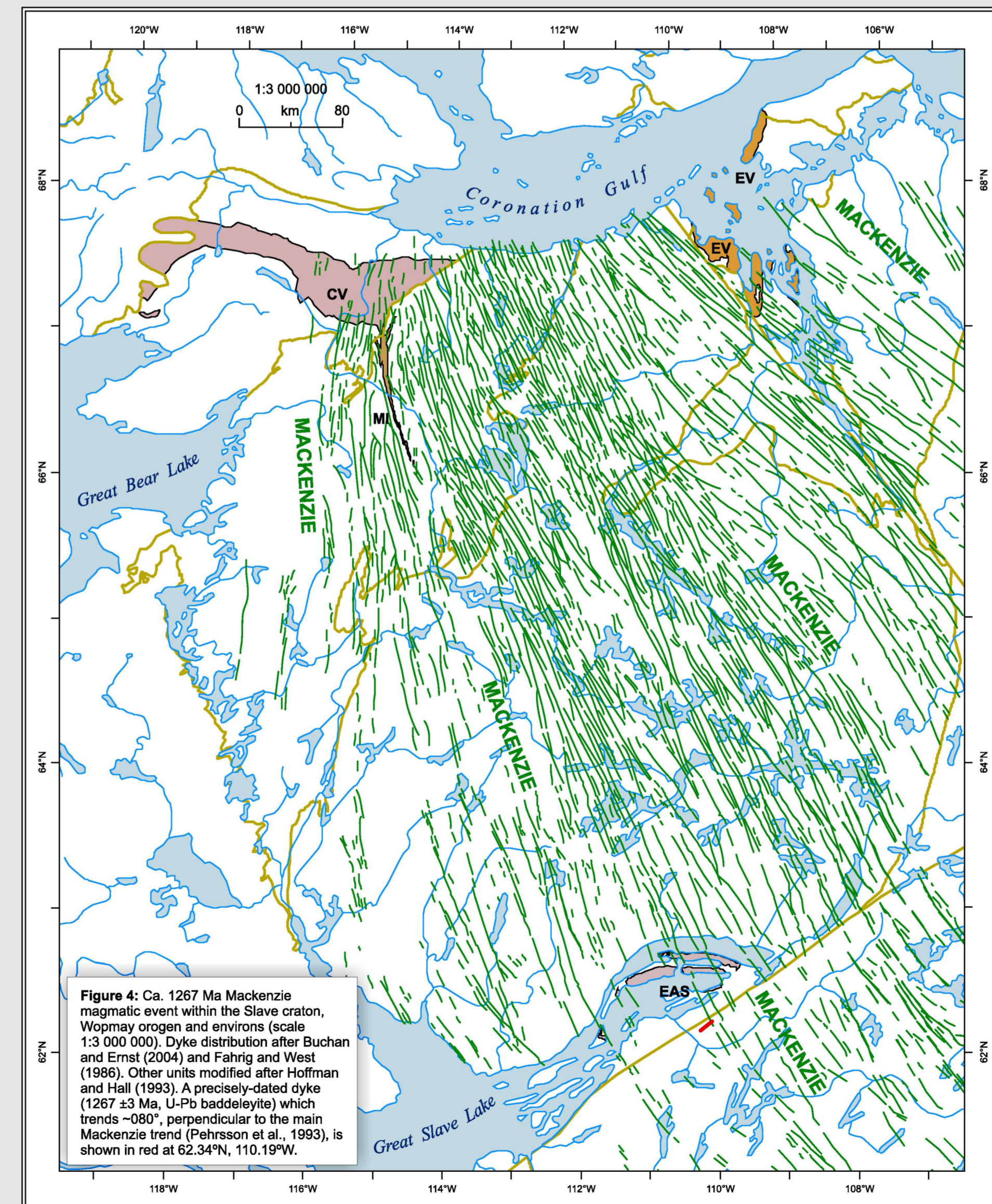
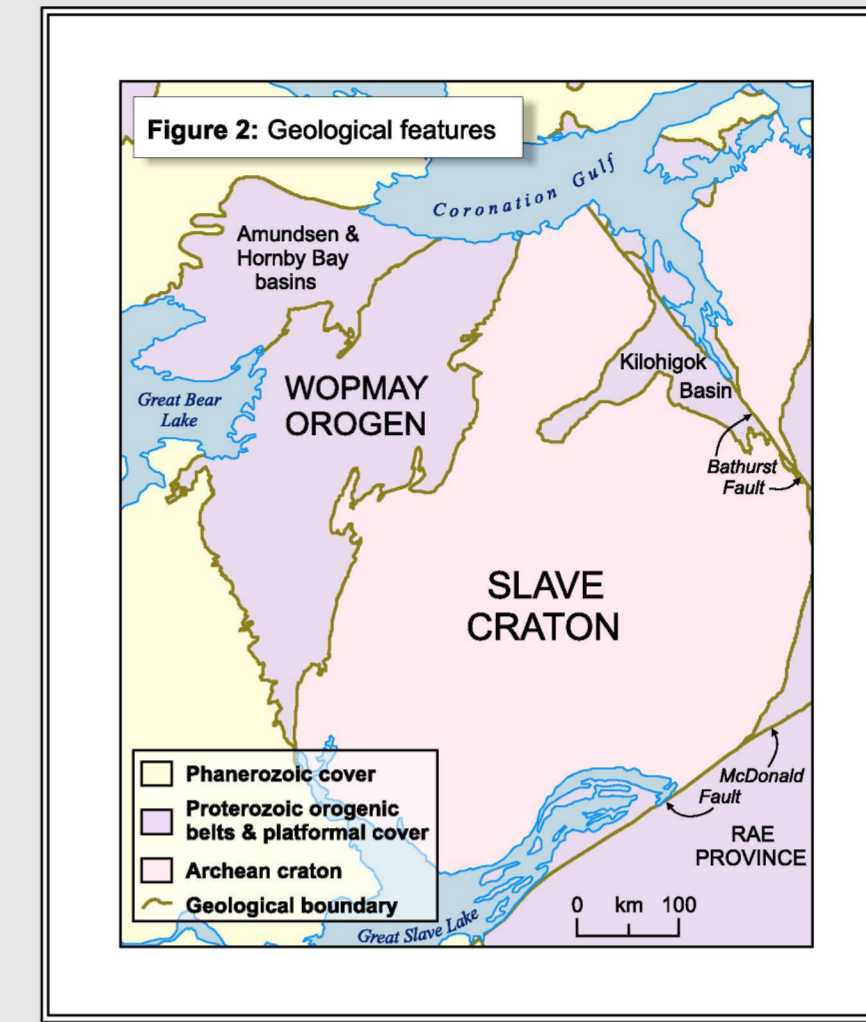
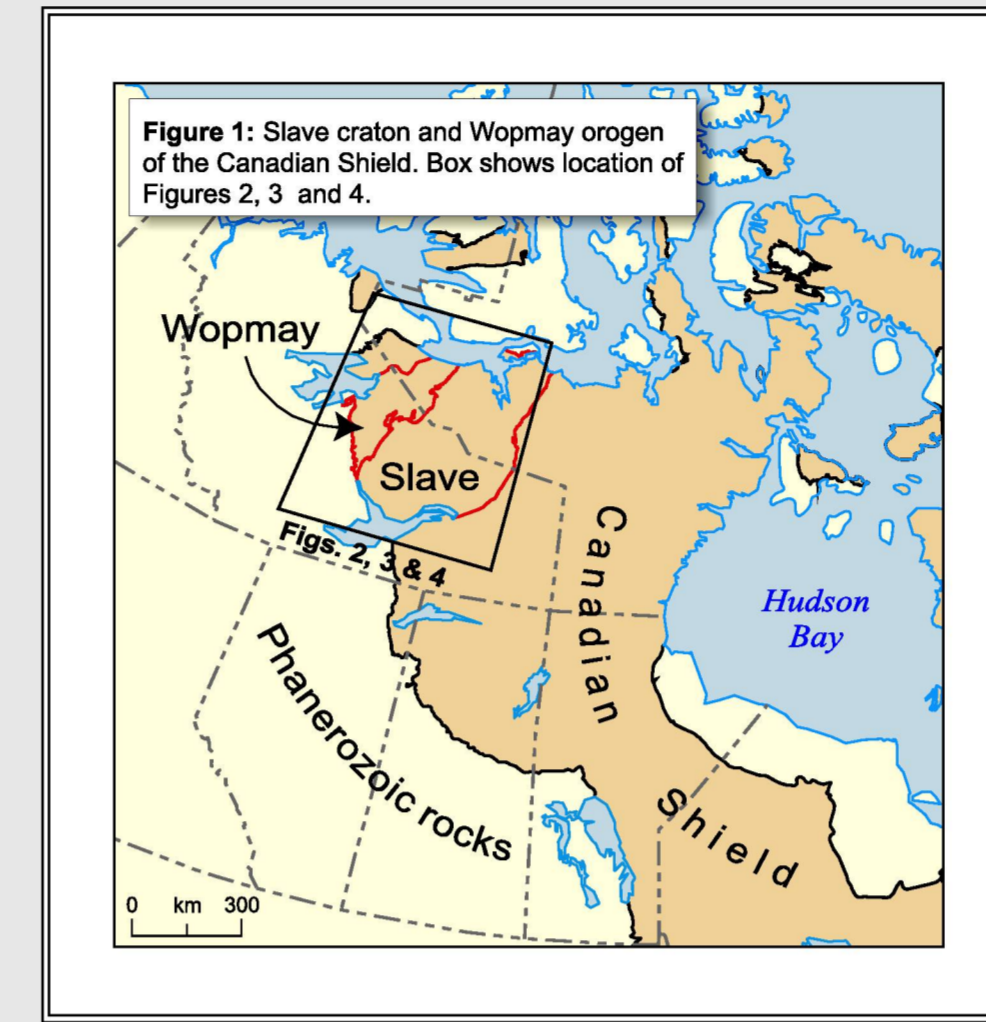
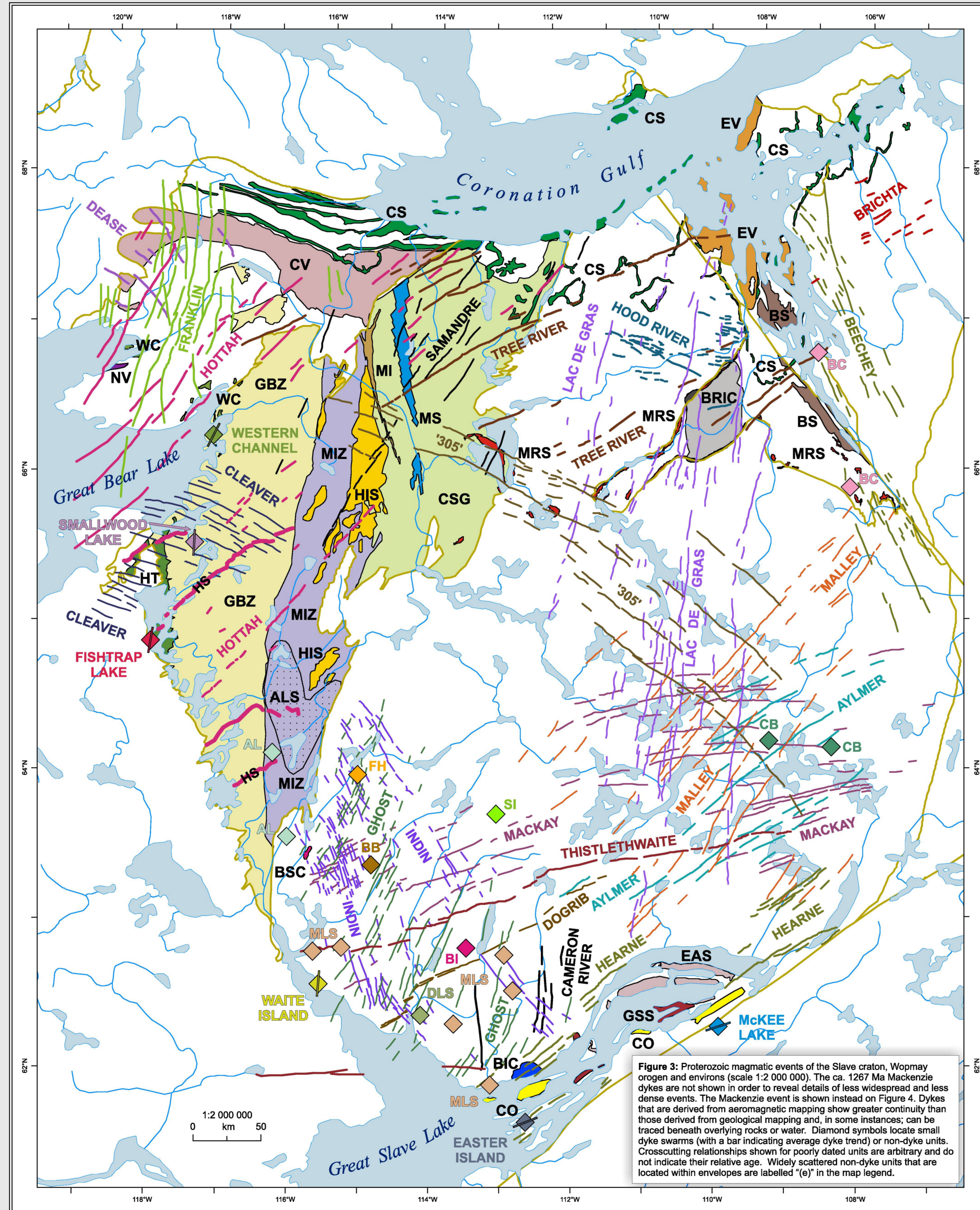
Legend for Figures 3 and 4

Geological boundary

- 305° dykes ca. 1250 Ma
- Aylmer dykes poorly dated
- Beechey dykes poorly dated
- Brichta dykes ca. 2100 Ma
- Cameron River dykes poorly dated
- Cleaver dykes ca. 1740 Ma
- Dease dykes poorly dated
- Dogrib dykes ca. 2188 Ma
- Easter Island dyke ca. 2170 Ma
- Fishtrap Lake dykes ca. 1900–1870 Ma
- Franklin dykes ca. 728–716 Ma
- Ghost dykes ca. 1886–1884 Ma
- Hearne dykes ca. 1901 Ma
- Hood River dykes poorly dated
- Hottah dykes ca. 767 Ma
- Indin dykes ca. 2126–2108 Ma
- Lac de Gras dykes ca. 2027–2023 Ma
- MacKay dykes ca. 2210 Ma
- Mackenzie dykes ca. 1267 Ma (on Figure 4)
- Malley dykes ca. 2230 Ma
- McKee Lake dykes ca. 2038 Ma
- Samanré dykes poorly dated
- Smallwood Lake dykes ca. 1900–1740 Ma
- Thistlethwaite dykes ca. 1167 Ma
- Tree River dykes poorly dated
- Waite Island dykes ca. 1850 Ma
- Western Channel dykes ca. 1592–1590 Ma

Non-Dyke Units

- AL: Arm-Labrish peridotites ca. 1868
- ALS: Arseno Lake sills (e) ca. 1890–1880 Ma
- BB: Baby Bear syenite poorly dated
- BC: Bear Creek group ash beds ca. 1969–1963 Ma
- BSC: Big Spruce complex ca. 2188 Ma
- BIC: Blachford Lake complex ca. 2185–2175 Ma
- BI: Blob intrusion poorly dated
- BRIC: Both River igneous complex (exposed) ca. 2026–2023 Ma
- BRIC: Both River igneous complex (unexposed) ca. 2026–2023 Ma
- BS: Brown Sound formation volcanics (e) ca. 1890–1870
- CB: Carpenter Bay peridotites poorly dated
- CO: Compton laccoliths ca. 1865 Ma
- CV: Coppermine River volcanics ca. 1270 Ma
- CS: Coronation sills ca. 723–718 Ma
- CSG: Coronation super-group magmatism (e) ca. 2020–1880 Ma
- DLS: Duck Lake sill ca. 2181 Ma
- EAS: East Arm sills ca. 1268 Ma
- EV: Ekaluita volcanics ca. 1270 Ma
- FH: Fishhook sills poorly dated
- GBZ: Great Bear magmatic zone (e) ca. 1880–1840 Ma
- GSS: Great Slave super-group magmatism (e) ca. 1970–1870
- HIS: Hepburn intrusive suite ca. 1895–1878 Ma
- HS: Hottah sheets ca. 779 Ma
- HT: Hottah terrane magmatism (e) ca. 2100–1883 Ma
- MRS: Mara River sheets ca. 1870 Ma
- MIZ: Metamorphic internal zone magmatism (e) ca. 1970–1840 Ma
- MLS: Mill sheets poorly dated
- MS: Morel sills (e) ca. 1890–1880 Ma
- MI: Muskox intrusion ca. 1270 Ma
- NV: Nararak volcanics ca. 1668 Ma
- SI: Squalus Lake intrusion ca. 2180 Ma
- WC: Western Channel sills ca. 1592–1590 Ma



EVENT	UNIT	AGE (Ma)
MALLEY	Malley dykes	Ub ca. 2230
MACKAY	MacKay dykes	Ub ca. 2210
DOGRIB	Dogrib dykes	Ub 2188±4
(SW Slave Magmatic Province)	Big Spruce Complex	Ub 2188±16-10
	Duck Lake sill (symbol)	Ub 2181±2
	Squalus Lake intrusion (symbol)	U 2180±1
DOGRIB?	Blachford Lake igneous complex	Uz 2185±5; Uz,m 2176±1; Uz 2175±7
	Easter Island (Simpsco Islands) dyke (symbol)	K ca. 2170
INDIN	Indin (formerly Indin NW) dykes	Ub 2126±3; 2116±1; 2108±2
	Brichta dykes	K ca. 2100
?	Magmatism of Hottah terrane (envelope)	ca. 2100–1883
	Mafic to intermediate volcanics of Holy Lake metamorphic suite (G ≤ 2100)	
?	Caliche igneous plutons (Uz 1914±5; 1902±7) in Holy Lake suite	
	Mafic to felsic Zebulon Fm. volcanics (Uz 1898-716) in lower Bell Island Gp.	
BLOOM	Bloom Basalt Fm. (probably corral with Fishtrap Lake dykes and sills) in upper Bell Island Gp.	
?	McKee Lake dykes (symbol)	Ub 2038±3
	Lac de Gras dykes	Ub 2027±4; 2023±2
?	Both River igneous complex	U 2026±1; 2025±1; 2023±4/2
	Magmatism of Coronation Supergroup (envelope)	ca. 2020–1880
?	Carousell igneous suite basaltic volcanics and sills (ca. 1880–1963 based on correlation with Bear Creek Gp. of Klotigok Basin) of Epworth Gp.	
	Ash beds (Uz 1882±4) of Recluse Gp.	
?	Magmatism of Great Slave Supergroup (envelope)	ca. 1970–1870
	Mafic volcanics and Jackson gabbro sills and dykes of Klotigok Basin (ca. 1880)	
?	Mafic volcanics of Christie Bay Gp. (ca. 1890–1870)	
	Basalt in Slave Gp. (correlated with Epworth Gp. ca. 1870–1890)	
?	Bishop intrusive suite (correlated with Great Bear intrusive suite, ca. 1880–1840)	
	Lundifferentiated granitoids and supracrustal rocks	
HEARNE	Hearne dykes	Ub 1901±4
?	Smallwood Lake dykes (symbol)	G ca. 1900–1740; probably older than Cleaver dykes
	Fishtrap Lake dykes, sills and sheets (symbol)	G ca. 1900–1870 (probably corral with Bloom Basalt Fm. of Hottah Terrane)
HEPBURN	Hepburn Intrusive Suite (within Metamorphic Internal Zone)	Uz ca. 1895–1878
?	Magmatism of the Klotigok Basin	ca. 1970–1870
	Bear Creek Gp. ash beds (Uz 1899±1–1963±8) (symbols)	
CAROUSEL?	Bear Creek Gp. (symbol)	Uz 1899±1–1963±8
?	Volcanics within Brown Sound Fm. (G ca. 1890–1870) (envelope)	

EVENT	UNIT	AGE (Ma)
GHOST	Ghost (formerly Indin NE) dykes (envelope)	Ub 1884±6; 1884±2; 1886±5
	Morel sills (envelope)	G ca. 1890–1880
GHOST?	Arseno Lake sills and dykes (envelope)	G ca. 1890–1880; post Slave Gp.; possibly corral with Morel sills
MARA RIVER	Mara River sheets	Sheets in Klotigok basin (Ub 1870±1); Peninsular sill at (Jajajaj Lake (Ub ca. 1871±1))
?	Arm-Labrish peridotites (symbol)	Ap 1868±8
?	Compton laccoliths	Uz 1865±15
?	Waite Island lamprophyre dykes (symbol)	As p ca. 1850
?	Great Bear magmatic zone (envelope)	ca. 1890–1840
?	Granite pluton (Uz 1832±2) in Treasure Lake Gp. (1885±5–1873±2)	
?	Felsic to mafic volcanics of MacTavish Gp. (ca. 1875–1850)	
GREAT BEAR	Great Bear intrusive suite (ca. 1880–1840)	
CLEAVER	Cleaver dykes	Ub 1740±5-4
NARAKAY	Narakay volcanic rocks	Uz 1668±8
WESTERN CHANNEL	Western Channel sills & dykes (outflows and symbol)	Ub 1592±3; 1590±4
MACKENZIE	Mackenzie dykes (shown on Figure 4)	Ub 1267±2
?	Coppermine River volcanic rocks	Ub ca. 1270
	Ekaluita volcanic rocks	G ca. 1270
BLOOM	Muskox intrusion	Ub 1270±4
	East Arm (Fortress, Christie Bay) sills	Ub ca. 1268
MACKENZIE?	305° dykes	M ca. 1250
THISTLETHWAITE	Thistlethwaite dykes (including Murn and Dyonides dykes)	Ub 1167±11
GUNBARREL	Hottah sheets	Ub 779±2
THULE-FRANKLIN	Franklin dykes	Ub ca. 723–716; A 728±5
	Coronation sills	Ub ca. 723–718

VERY POORLY DATED UNITS

?	Aylmer dykes	?
?	Baby Bear syenite (symbol)	?
?	Beechey dykes	?
?	Blob intrusion (symbol)	?
?	Cameron River dykes	?
?	Cleaver dykes (symbol)	?
?	Dease dykes	G <1668±8 (Narakay volcanic rocks)
?	Fishhook sills (symbol)	?
?	Hood River dykes	?
?	Mill sheets (symbols)	?
?	Samanré dykes	?
?	Tree River dykes	?

EXPLANATORY NOTES

UNIT: Units are shown in Figure 3, except for the Mackenzie dykes which are shown along with their related volcanic rocks and intrusions in Figure 4. Some units of limited geographical extent are shown with diamond symbols on Figure 3 and identified in the Table. Some non-dyke units that are widely scattered are shown within envelopes on Figure 3 and identified in the Table.

AGE: Events are listed in approximate chronological order, except very poorly dated events which are compiled alphabetically at the end. Ages are established by geochronological correlation (G) such as crosscutting relationships, paleomagnetic correlation (M), or by radiometric (isotopic) dating (U = U-Pb; K-K-Ar; Ar-Ar; Rb-Sr; Sm-Nd; zirconium).

REFERENCES: For references for unit distributions, descriptions and ages see accompanying report.

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