

LEGEND

Q unconsolidated alluvium, colluvium, lacustrine and glacial deposits

POST-THRUSTING INTRUSIVE ROCKS

EARLY CRETACEOUS
Kg fine- to medium-grained equigranular biotite-muscovite granite
EARLY JURASSIC
Jg medium-grained equigranular hornblende-biotite granite

CLEAVER LAKE THRUST SHEET INTRUSIVE ROCKS

EARLY MISSISSIPPIAN SIMPSON RANGE PLUTONIC SUITE
MSg generally unfoliated biotite-hornblende granite and quartz monzonite; locally faulted, chloritized and hematized

LATE DEVONIAN TO EARLY MISSISSIPPIAN

DMm grey, massive medium-grained gabbro and lesser dark green pyroxenite
DMun brown weathering, dark green to black, variably serpenitized ultramafic rock; gabbro and pyroxenite locally present.

CLEAVER LAKE THRUST

MONEY CREEK THRUST SHEET INTRUSIVE ROCKS

EARLY MISSISSIPPIAN Simpson Range Plutonic Suite
MSs weakly foliated to unfoliated, medium-grained, equigranular biotite-hornblende granite to granodiorite

MISSISSIPPIAN Simpson Range Plutonic Suite
MSs hornblende-biotite meta-diorite southwest of Fire Lake

LAYERED ROCKS

LOWER PERMIAN Money Creek formation
MwC dark grey phyllite with lesser brown decimetre-scale graded beds of quartz-feldspathic sandstone

LOWER MISSISSIPPIAN Wolverine Lake Group
MwC quartzofeldspathic gneiss and pebble meta-conglomerate; lesser carbonaceous phyllite; rare meta-thylite; locally amygdaloidal

INTRUSIVE ROCKS

UPPER MISSISSIPPIAN TO LOWER PERMIAN Whitefish limestone
MPw green to white chlorite-muscovite-quartz phyllite of intermediate and lesser felsic compositions; locally quartz and feldspar augen present

LATE DEVONIAN TO EARLY MISSISSIPPIAN Grass Lakes Plutonic Suite
DMGg foliated and lineated, medium- to coarse-grained granitic to monzonitic metaplutonic rock; generally equigranular; although augen texture (DMGg) locally present.

LATE DEVONIAN

MISSISSIPPIAN Tutchius River formation
MTR pale to medium green muscovite-chlorite phyllite or schist (intermediate meta-volcanic rock) with lesser tan to white muscovite-quartz phyllite or schist (felsic meta-volcanic rock)

DMh brown-weathering, dark green to black variably serpenitized ultramafic rock; the unit is generally spatially associated and inferred to be in intrusive contact with DF

LAYERED ROCKS

INTRUSIVE ROCKS
UPPER DEVONIAN
Waters Creek Formation
DWC siliceous muscovite-quartz schist or phyllite (felsic meta-volcanic rock) and lesser chlorite schist or phyllite (intermediate to mafic meta-volcanic rock) intercalated with carbonaceous phyllite; green, white and salmon massive siliceous rock (meta-chert) at top.

UPPER DEVONIAN
Grass Lakes Group
Katz's Zn Kayah formation
DK undifferentiated foliated feldspar-muscovite-quartz schist or phyllite, massive pale siliceous muscovite-quartz schist or phyllite, locally with quartz amygdaloids; feldspar- and rarely quartz-augen schist or phyllite (meta-porphyr); interbeds of carbonaceous phyllite are common; magnetite iron formation occurs locally near the top of the unit in carbonaceous phyllite and thin felsic schist.

LATE DEVONIAN TO EARLY MISSISSIPPIAN Simpson Range Plutonic Suite
DMGg weakly to strongly foliated, biotite-hornblende granite to quartz monzonite; locally potassium feldspar megacrystic augen gneiss
DMGsp weakly to strongly foliated quartz-feldspar augen schist (meta-porphyr)

UPPER DEVONIAN
Fire Lake formation
DF massive to subtly layered, plagioclase-chlorite phyllite or schist, locally with biotite and actinolite porphyroblasts; lesser carbonaceous phyllite
DFh tan muscovite-quartz phyllite or schist (felsic meta-volcanic rock) and potassium feldspar-muscovite-quartz augen phyllite or schist (meta-porphyr); locally rusty and pyritic with tourmaline and/or sericite alteration southwest of Fire Lake
DFu undifferentiated felsic and mafic meta-volcanic rocks

UPPER DEVONIAN
Waters Creek Formation
DWC siliceous muscovite-quartz schist or phyllite (felsic meta-volcanic rock) and lesser chlorite schist or phyllite (intermediate to mafic meta-volcanic rock) intercalated with carbonaceous phyllite; green, white and salmon massive siliceous rock (meta-chert) at top.

UPPER DEVONIAN AND OLDER?
North River formation
DNR interbedded tan- to brown-weathering biotite-muscovite-feldspar quartz psammitic schist and quartz-biotite-muscovite metapelite schist; thin intervals of marble and calcareous-schist, not mappable at 1:50 000-scale, occur locally

UPPER DEVONIAN AND OLDER?
North River formation
DNR interbedded tan- to brown-weathering biotite-muscovite-feldspar quartz psammitic schist and quartz-biotite-muscovite metapelite schist; thin intervals of marble and calcareous-schist, not mappable at 1:50 000-scale, occur locally

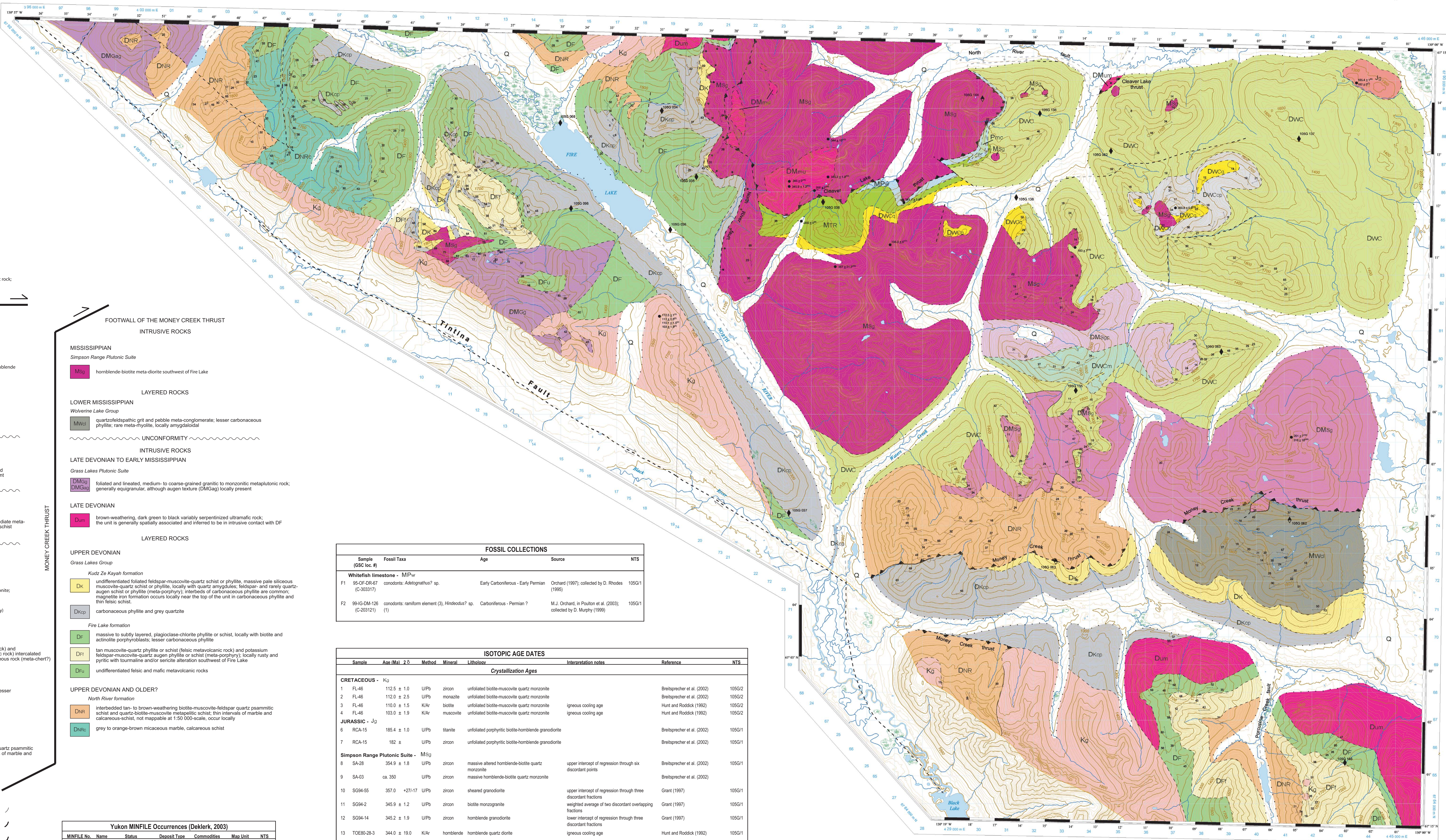
SYMBOLS

geological contact (defined, approximate)
fault or vein-fault, displacement unknown (approximate)
thrust fault (approximate, teeth on hanging wall)
normal fault (approximate, dot on downthrown side)
unhealed fault (approximate)
limit of outcrop
limit of mapping
isotopic age determination sample location (mineral codes: bi = biotite, hb = hornblende, mo = monazite, ms = muscovite, z = zircon, w = whole rock, gr = zircon)

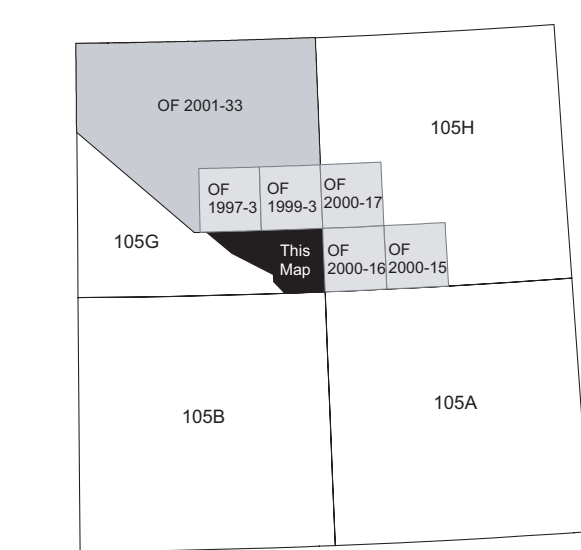
Table with 7 columns: MINFILE No., Name, Status, Deposit Type, Commodities, Map Unit, NTS. Lists various mineral occurrences like Kona, Top, Dub, Black, North River, etc.

Table with 5 columns: Sample (SSC loc. #), Fossil Taxa, Age, Source, NTS. Lists fossil collections like Whitefish limestone and 99-IG-DM-126.

Table with 7 columns: Sample, Age (Ma), z, Method, Mineral, Lithology, Interpretation notes, Reference, NTS. Contains isotopic age dates and metamorphic cooling ages.



Part of Waters Creek and Fire Lake YUKON Scale 1:50 000



REFERENCES
Breitsprecher, K., Mortensen, J.K. and Villeneuve, M.E., 2002. YukonAge 2002: A database of isotopic age determinations for rock units from Yukon Territory, Canada. Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, CD-ROM.

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Open File 2004-11
Geological map of part of Waters Creek and Fire Lake map areas (part of NTS 105G/1 and 2), southeastern Yukon (1:50 000 scale)
by
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