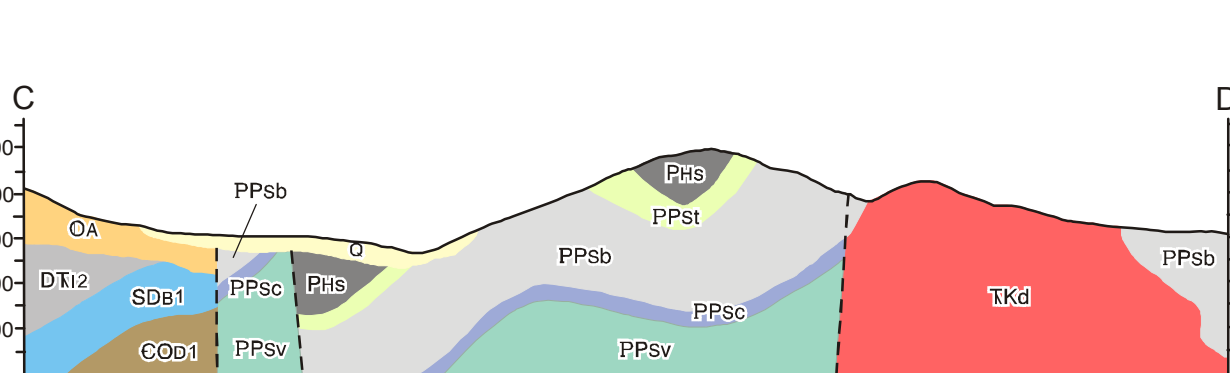


Mean Feet above Sea Level



**LEGEND**

**QUATERNARY**

**Q** unconsolidated glacial, glaciofluvial and glaciolacustrine deposits; fluvial silt, sand, and gravel, and local volcanic ash, in part with cover of soil and organic deposits

**INTRUSIVE ROCKS**

**MIOCENE**

**Wrangell Suite**

**MW** fine to medium-grained, hornblende +/- biotite granodiorite and porphyritic (K-feldspar) hornblende granodiorite; medium-grained, uniform biotite diorite and pyroxene gabbro; subvolcanic hornblende +/- biotite rhyolite, rhyodacite, dacite

**EARLY CRETACEOUS**

**Pyroxene Creek Ultramafic**

**PKP** medium-grained hornblende pyroxene gabbro, and biotite hornblende diorite; olivine and hornblende clinopyroxene

**TRIASSIC TO CRETACEOUS**

**TKd** medium to coarse-grained, unfoliated, hornblende diorite to hornblende-biotite, quartz diorite; salt and pepper appearance; locally abundant dark grey fine-grained gabbro; may in part be equivalent to Early Cretaceous Klauane Ranges Suite

**TRIASSIC**

**Maple Creek Gabbro**

**MTM** light to dark grey, medium to fine-grained hornblende, pyroxene gabbro

**PERMIAN TO TRIASSIC**

**PTU** medium to grey-green, massive, medium grained, pyroxene gabbro and greenstone sills; black pentolite, rare dunitic; may in part be related to Upper Triassic Klauane mafic-ultramafic suite of the Klauane Ranges

**LAYERED ROCKS**

**Amphitheatre Formation**

**OA** yellow-buff to grey-buff sandstone, pebbly sandstone, polymictic conglomerate, siltstone, mudstone; minor brown-grey carbonaceous shale and thin lignitic coal; mostly fluvial and lacustrine deposits, local debris-flow deposits, some shallow marine deposits

**Dezadeash Formation**

**JKd** interbedded light to dark buff-grey lithic greywacke, sandstone, siltstone, thin dark grey shale, argillite and conglomerate; mass-flow conglomerate common in middle part; rare light grey tuff

**WRANGELLIA**

**TRIASSIC**

**Nikolai formation**

**JKv** dark green/mauve weathered and fresh, massive to locally foliated, amygdaloidal and vesicular basalt flows; rare pillows, volcanic breccia and conglomerate locally developed near base of unit; breccia and conglomerate contain clasts of sedimentary and volcanic rocks of underlying Hasen Creek and Station Creek formations, as well as rounded volcanic clasts typical of the Nikolai basalts

**PENNSYLVANIAN - PERMIAN**

**Skolai Group**

**Hasen Creek Formation**

**Phc** light to medium grey, massive to bedded limestone; locally fossiliferous; fossils include corals and crinoids

**Phs** interbedded dark grey and brown-weathered siltstone, mudstone and medium to coarse-grained sandstone; lower part contains volcanoclastic sandstones, tuffs and rare basaltic flows; rare dark grey to black chert beds and chert-pebble conglomerate

**Station Creek Formation**

**PPst** laminated to thinly bedded, light grey to light green volcanic tuff and volcanoclastic siltstone; local crystal rich tuffs interbedded with fine-grained volcanic ash

**PPsb** interbedded volcanic breccia, agglomerate and volcanoclastic sandstone; dominated by pyroxene-phyric volcanic breccia; rare light grey-weathered, dark green to black, fresh, pyroxene-phyric basalt flows

**PPsc** thinly bedded, laminated to massive chert interbedded with crystal tuff; chert is mainly light to dark grey-banded with local black and dark brown massive beds; tuff layers from maroon to green, fine grained and laminated with phenocrysts of quartz +/- plagioclase

**PPsv** dark green to black-weathered and fresh basalt flows, pillows, pillow breccia and hyaloclastics; red, magnetite-rich jasper found locally as interstitial material between pillows and within pillow breccia, thick accumulations of laminated jasper rarely occur

**ALEXANDER TERRANE**

**DEVONIAN TO TRIASSIC**

**Iceland assemblage**

**D11** thin to medium bedded, fine to medium-grained, quartz-rich, micaceous, calcareous siltstone to sandstone, mica quartzite, or schist; minor interbedded phyllite, argillite and schist; rare limestone, marble, mafic volcanic rocks and gypsum-anhydrite

**D12** white to creamy-white gypsum and anhydrite; thin-bedded to massive, light grey to dark bluish-grey limestone or marble; minor dark grey calcareous argillite, calcareous siltstone-sandstone; local buff-grey crinoidal limestone

**SILLURIAN TO DEVONIAN**

**Bullion Creek Limestone**

**SD1** massive to well-bedded light grey limestone or marble, thin-bedded dark grey limestone or marble; minor dark blue-grey calcareous argillite or phyllite

**ORDOVICIAN TO DEVONIAN**

**Goatherd Mountain assemblage**

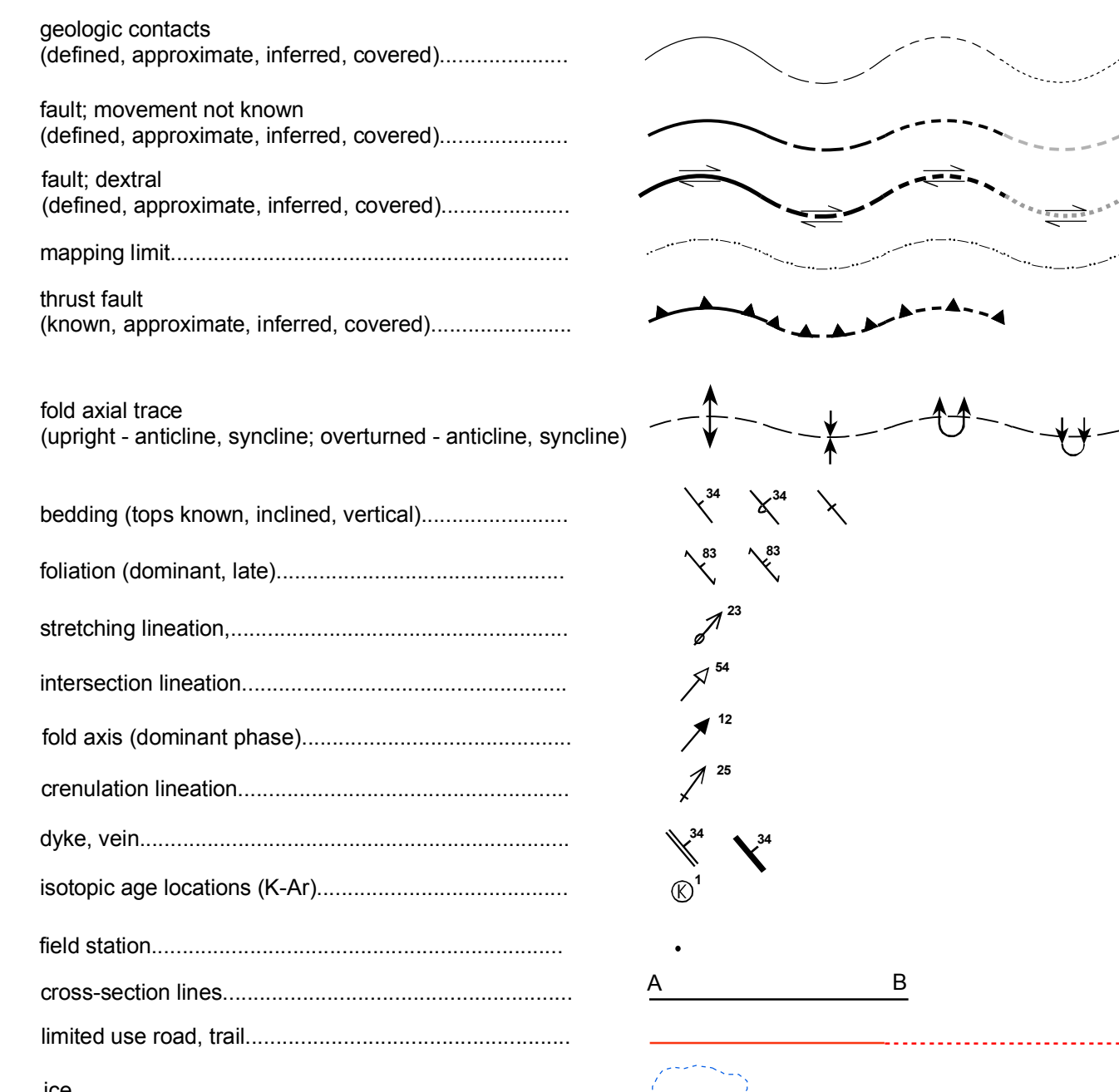
**ODG1** yellow to ochre-buff calcareous mudstone-siltstone, grey silty limestone and platy to thick-bedded, cryptocrystalline limestone; local well-bedded limestone in upper parts of unit

**CAMBRIAN TO ORDOVICIAN**

**Field Creek Volcanics (may include Northern Aisek Ranges assemblage and Donjek Range assemblage)**

**OD1** massive to well-bedded, coarse to medium-grained greywacke; minor siltstone-sandstone, argillite, phyllite or schist, and mafic intrusions; conglomerate, mafic flows (some pillowed), pyroclastic (?), and volcanic breccia; greenstone

**SYMBOLS**



Isotopic Age Determinations						
Type	Station #	Age	Mineral	Interpretation	Reference	
1	K-Ar	55-CA-78-7	237±24	hornblende	crystallization	Dodds and Campbell, 1988

Mineral Occurrences Yukon MINFILE (Deklerk, 2008)					
115A-001	Jackpot	drilled prospect	Cu, Zn	vein	
115A-002	Dalton	drilled prospect	Cu	porphyry	
115A-003	Kane	past producer	Ag, Pb	vein	
115A-004	Chickaloon	unknown		unknown	
115A-005	Photo	showing	Cu	vein	
115A-006	Mush	prospect	Cu	vein	
115A-010	Alder	unknown		unknown	
115A-011	Three Bears	unknown		unknown	
115A-012	Cave	prospect	Cu	vein	
115A-019	Sickle	anomaly		unknown	
115A-042	Bonj	unknown		unknown	
115A-045	Tatshenshi	showing	Cu	porphyry	
115A-049	Dollis	prospect	Cu	vein	
115A-050	Cashin	unknown		unknown	
115A-051	Beaton	unknown		unknown	

**NOTE:**  
Geology for the area west of the Duke River fault and east of the Denali fault modified from Gordey and Makepeace (2003).

**REFERENCES**

Deklerk, R. (compiler), 2008. Yukon MINFILE - A database of mineral occurrences. Yukon Geological Survey, www.geology.gov.yk.ca/database\_gis.html  
 Dodds, C.J. and Campbell, R.B., 1988. Potassium argon ages of mainly intrusive rocks in the St. Elias Mountains, Yukon. Geological Survey of Canada Paper 87-16.  
 Gordey, S.P. and Makepeace, A.J. (compilers), 2003. Yukon digital geology, version 2.0. Geological Survey of Canada, Open File 1749, and Yukon Geological Survey, Open File 2003-9(D), 2 CD-ROMs.

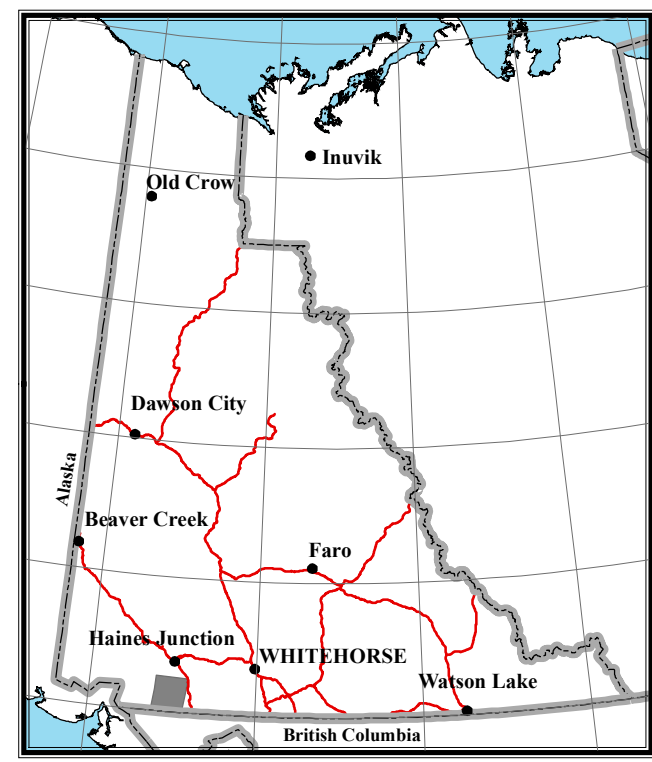
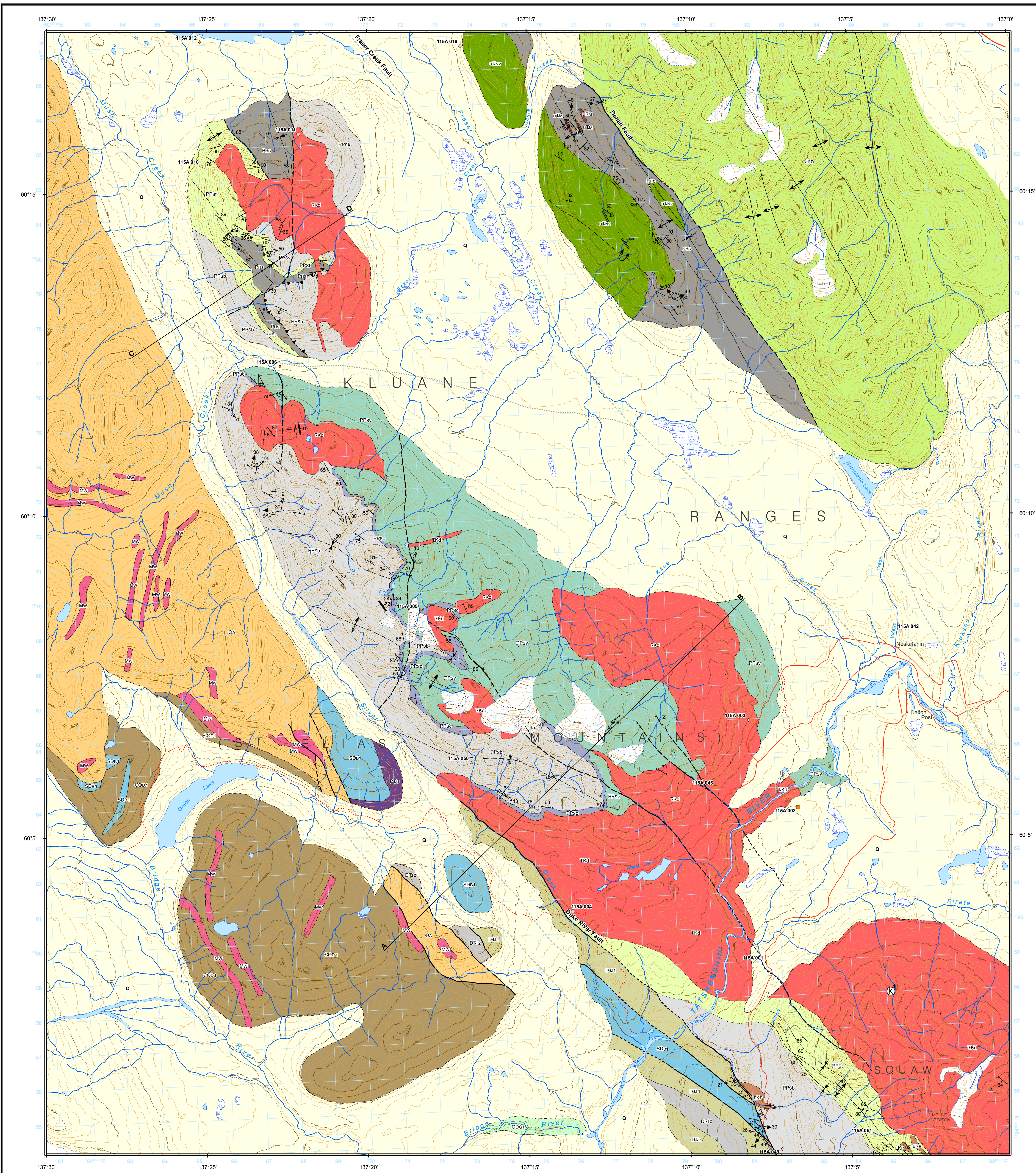
**RECOMMENDED CITATION**

Israel, S. and Cobbett, R., 2008. Bedrock geology of the Silver Creek area, Yukon (NTS 115A/3 and parts of 115A/6) (1:50 000 scale). Yukon Geological Survey, Open File 2008-21.  
 Digital cartography and drafting by Steve Israel, Yukon Geological Survey.

Any revisions or additional geological information known to the user would be welcomed by the Yukon Geological Survey.

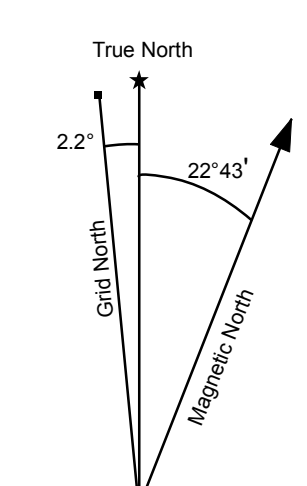
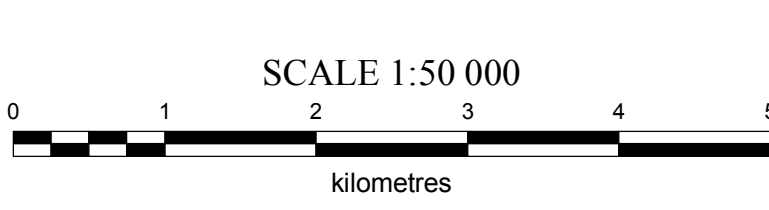
Paper copies of this map, the accompanying report and Yukon MINFILE may be purchased from Geoscience Information and Sales, c/o Whitehorse Mining Recorder, Energy, Mines and Resources, Yukon Government, Room 102 - 300 Main St., Whitehorse, Yukon, Y1A 2B5. Ph. 867-667-5200, Fx. 867-667-5150, Email gesales@gov.yk.ca.

A digital PDF (portable document file) of this map may be downloaded free of charge from the Yukon Geological Survey website: http://www.geology.gov.yk.ca.



1:50 000-scale topographic base data  
produced by  
CENTRE FOR TOPOGRAPHIC  
INFORMATION  
NATURAL RESOURCES CANADA  
  
ONE THOUSAND METRE GRID  
Universal Transverse Mercator Projection  
North American Datum 1983  
Zone 8  
  
CONTOUR INTERVAL 100 Feet  
Elevations in feet above Mean Sea Level

**BEDROCK GEOLOGY  
SILVER CREEK  
YUKON**



Use diagram only to obtain numerical values  
APPROXIMATE MEAN DECLINATION 2008  
FOR CENTRE OF MAP

115A/5 COTTON WOOD LAKES	115A/6 MUSH LAKE	115A/7 KLUHNI RIVER
115A/4 BATES RIVER	THIS MAP	115A/2 TAKKANNE RIVER
115P/13 RANGE LAKE	114P/14 SURVEY LAKE	114P/15 PARTON RIVER