

**INTRUSIVE ROCKS**

**EARLY CRETACEOUS**

*Pyroxenite Creek*

- EKP medium-grained hornblende, pyroxene gabbro; medium-grained hornblende gabbro
- EKP2 dark green to black pyroxene gabbro and pyroxenite

**LAYERED ROCKS**

**WRANGELLIA**

**TRIASSIC**

*Chitistone limestone*

- uTC grey massive limestone

**PERMIAN**

*Hasen Creek Formation*

- Phc light to medium grey, massive to bedded limestone; dark grey, thin-bedded siltstone

**ALEXANDER TERRANE**

**DEVONIAN TO TRIASSIC**

*Icefield assemblage: Silver Creek member*

- DT17 green and maroon, foliated conglomerate that grades upwards into maroon, medium-grained sandstone
- DT18 dark grey to black, fine-grained, calcareous siltstone; brown to grey, thin-bedded chert, rare crinoidal limestone

*Icefield assemblage*

- DT11 light green, fine-grained feldspar-quartz (?) schist and phyllite; very fine grained phyllonite
- DT12 carbonaceous, calcareous feldspar-muscovite-quartz schist to phyllite; rare muscovite-rich quartzite
- DT14 massive to thin-bedded limestone and calcareous siltstone
- DT16 light grey to white, massive marble

**ORDOVICIAN**

*Donjek formation*

- COD grey, laminated marble
- COD1 dark green, fine to medium-grained basalt; basalt breccia

Note: Legend units are from Cobbett, 2011 and Dodds and Campbell, 1992

Isotopic Age Determinations						
Type	Station #	Age	Mineral	Interpretation	Reference	
1	Ar-Ar 09-RC-063C01	111.6±0.7Ma	muscovite	cooling age	Cobbett, 2011	

Fossil Age Determinations					
Type	Station #	Age	Fossil	Reference	
1	Macro F9-J0W-53	prob. Late Carboniferous	Lithostrotian	Dodds et al., 1993	
2	Macro MV-74-185	Middle Triassic	Daonella	Dodds et al., 1993	
3	Micro 09-RC-091A01	Ordovician	Conodont	Cobbett, 2011	

**LEGEND**

**SYMBOLS**

- geologic contacts (defined, approximate, inferred).....
- mapping limit.....
- thrust fault (defined, approximate).....
- fold axial surface trace (upright - anticline, syncline; overturned - anticline, syncline).....
- bedding.....
- foliation (dominant).....
- stretching lineation.....
- crenulation lineation.....
- fold axis (dominant phase).....
- vein.....
- isotopic age sample location (Ar-Ar).....
- fossil location.....
- cross section line.....
- field station.....

**REFERENCE**

- Cobbett, R.N., 2011. Timing and kinematics of the Duke River fault: insights into the evolution of the Insular terrane, southwest Yukon. Unpublished MSc thesis, University of British Columbia, 140 p.
- Dodds, C.J. and Campbell, R.B., 1992. Geology of Mount St. Elias area (115B and F/E1/2), Yukon Territory. Geological Survey of Canada, Open File, 2189, 1:25 000 scale
- Dodds, C.F., Campbell, R.B., Read, P.B., Orchard, M.J., Tozer, E.T., Bamber, E.W., Pedder, A.E.H., Norford, B.S., McLaren, D.J., Harker, P., McIver, E., Norris, A.W., Ross, C.A., Chatterton, B.D.E., Copper, G.A., Flower, R.H., Haggart, J.W., Uyeno, T.T. and Irwin, S.E.B., 1993. Macrofossil and conodont data from: SW Klauene Lake (115G and F (East half)), Mount St. Elias (115B and C (East half)), SW Dezadeash (115A), NE Yakutat (114O) and Tatshenshini River (114P) map areas, southwestern Yukon and northwestern British Columbia. Geological Survey of Canada, Open File 2731, 137 p.

**RECOMMENDED CITATION**

- Cobbett, R., 2013. Bedrock geology along the Duke River fault near Jessie Creek, Yukon (part of NTS 115B/16) (1:10 000 scale). Yukon Geological Survey, Open File 2013-3.

Digital cartography and drafting by Rosie Cobbett, Yukon Geological Survey.  
Any revisions or additional geological information known to the user would be welcomed by the Yukon Geological Survey.

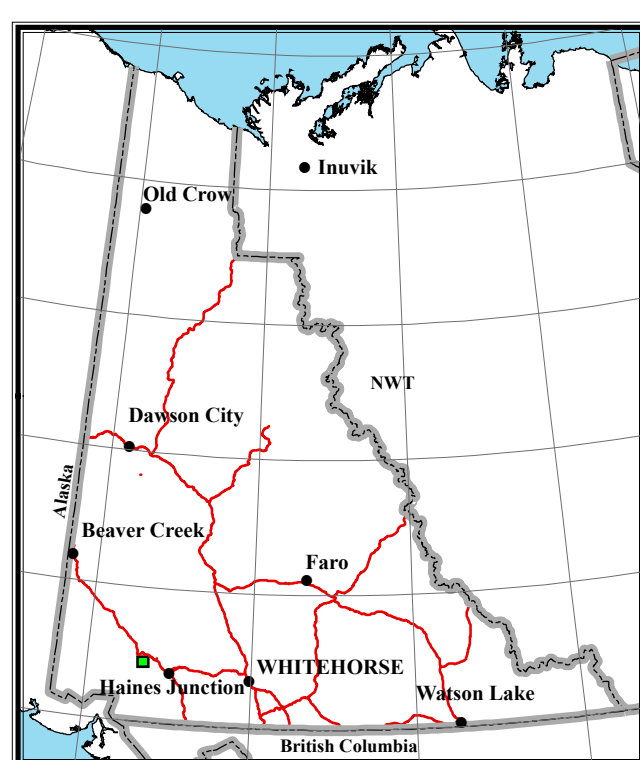
Paper copies of this map may be obtained from the Geoscience Information and Sales, Yukon Geological Survey, Energy, Mines and Resources, Government of Yukon, P.O. Box 2703 (K-102), Whitehorse, Yukon, Y1A 2C6.  
Ph. 867-667-3201, Fx. 867-667-3198, Email: [geosales@gov.yk.ca](mailto:geosales@gov.yk.ca)

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

Yukon Geological Survey  
Energy, Mines and Resources  
Government of Yukon

Open File 2013-3  
**Bedrock geology along the Duke River fault near Jessie Creek, Yukon (part of NTS 115B/16) (1:10 000 scale)**

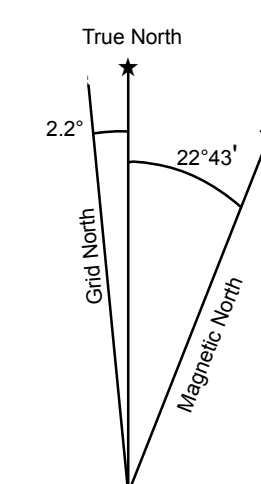
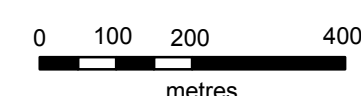
by  
Rosie Cobbett



1:50 000-scale topographic base data produced by CENTRE FOR TOPOGRAPHIC INFORMATION, NATURAL RESOURCES CANADA  
FOUR HUNDRED METRE GRID Universal Transverse Mercator Projection North American Datum 1983 Zone 7  
CONTOUR INTERVAL 40 Metres Elevations in meters above Mean Sea Level

**BEDROCK GEOLOGY  
DUKE RIVER FAULT NEAR JESSIE CREEK  
YUKON**

SCALE 1:10 000



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

115G/02 CONGDON CREEK	115G/01 CULTUS CREEK	115H/04 MCKINLEY CREEK
115B/15 SLIMS RIVER	115B/16 THIS MAP	115A/13 KLOO LAKE
115B/10 MOUNT LEACOCK	115B/09 AIRDROP LAKE	115A/12 AURIOL RANGE