

**LEGEND**

- QUATERNARY**
- Q** unconsolidated glacial, glacioluvial and glaciolacustrine deposits; fluvial silt, sand and gravel, and local volcanic ash, in part with cover of soil and organic deposits
- OVERLAP ASSEMBLAGES**
- EOCENE**
- EH** **HAYDEN LAKE SUITE (ca. 48 Ma):** salt and pepper, light and dark grey, hornblende, +/- biotite, diorite to quartz diorite; massive, medium to coarse-grained; rare gabbros; garnet common as crystals 1-10 mm in size
- PALEOCENE**
- PRp** **RHYOLITE CREEK COMPLEX (ca. 57 Ma):** light grey to purple, quartz, feldspar porphyry; quartz is often smoky grey in colour and can be up to 3 mm; occurs as thin dykes to large intrusive bodies; intrusive equivalents to intermediate and felsic volcanic rocks
  - PRv** **RHYOLITE CREEK COMPLEX (ca. 57 Ma):** light grey, brown and green, intermediate to felsic volcanic rocks; flow banding is common; local volcanic breccia at the base of volcanic pile; rare pillows and mafic volcanic rocks
  - PR** **RUBY RANGE BATHOLITH (ca. 64-57 Ma):** fine to coarse-grained, salt and pepper, hornblende +/- biotite, quartz diorite; medium-grained, light grey to pinkish, biotite +/- hornblende granodiorite; fine- to medium-grained, beige to grey tonalite with distinctive smoky grey quartz; pinkish/grey, biotite granite
  - PRf** strongly to moderately deformed equivalents to the undeformed Ruby Range batholith; often has gneissic textures near the lower structural contact; may be in part deformed screens of MKgd
- MID-CRETACEOUS**
- MKgd** **NISLING RANGE SUITE (ca. 100 Ma):** light grey, greenish weathered and fresh, medium-grained, medium to coarse-grained orthogneiss and paragneiss; mafic layers composed primarily of biotite +/- hornblende, leucocratic layers consist of quartz, potassium feldspar and plagioclase; abundant garnet up to 2 cm; could be basement to Yukon-Tanana terrane or gneissic/migmatitic Klauane Schist
- LATE CRETACEOUS**
- LKksb** **KLUANE SCHIST:** dark grey to black, fine-grained, quartz, biotite schist; local garnet and plagioclase porphyroblasts
  - LKksm** **KLUANE SCHIST:** light to dark grey, fine-grained, quartz, muscovite schist; variably carbonaceous biotite, carbonaceous in the northwest of map area; rare light grey carbonate lenses
- LATE CRETACEOUS AND OLDER**
- LKgn** **GNEISS:** beige, orange to grey/black, medium to coarse-grained orthogneiss and paragneiss; mafic layers composed primarily of biotite +/- hornblende, leucocratic layers consist of quartz, potassium feldspar and plagioclase; abundant garnet up to 2 cm; could be basement to Yukon-Tanana terrane or gneissic/migmatitic Klauane Schist
- EARLY JURASSIC**
- EJA** **Alaskite Creek pluton (ca. 177 Ma):** massive, unfoliated, medium-grained, green, pink and grey, biotite, +/- hornblende granite; greenish colour from altered plagioclase crystals; strongly to moderately magnetic
- LATE TRIASSIC**
- LTdu** **DOGHEAD ASSEMBLAGE:** deformed harzburgite and gabbro; U/Pb zircon from gabbro - ca. 205 Ma (Escayola and Friedman, unpublished data, 2010)
- YUKON-TANANA TERRANE**
- UPPER DEVONIAN TO LOWER MISSISSIPPIAN**
- DMF** **FINLAYSON ASSEMBLAGE:** polydeformed and metamorphosed mafic to felsic metavolcanic rocks; carbonaceous pelite, quartzite and psammite; quartz-muscovite schist; light grey to beige marble; rare metaplutonic rocks; locally, abundant garnet found in all rock types
- UPPER DEVONIAN AND OLDER**
- PDS** **SNOWCAP ASSEMBLAGE:** polydeformed and metamorphosed quartzite, psammite, pelite and marble; minor garnet amphibolite; quartz-muscovite schist; rare metaplutonic rocks

**LEGEND EXPLANATION**

- PLUTONIC SUITES:** grouping of plutonic rock units based on age, regional distribution and in some cases composition; some older plutonic suites are characteristic of specific terranes; younger ones are commonly more wide spread
- LAYERED ROCK ASSEMBLAGES:** regionally mappable units; generally of Group or Formation rank

**SYMBOLS**

- geologic contacts (defined, approximate, inferred).....
- fault; movement not known (defined, approximate, inferred).....
- mapping limit.....
- thrust fault (known, approximate, inferred).....
- foliation (dominant, late).....
- stretching lineation.....
- intersection lineation, s-intersection.....
- fold axis (dominant phase, m-fold, s-fold).....
- crenulation lineation.....
- dyke.....
- field station.....
- paved highway, limited use road or trail.....

**MINFILE**

(number refers to MINFILE database number)

Volcanic Associated	Porphyry/Sheeted Veins
▲ Cu	▲ Au
▲ Ni	▲ Unknown
Mafic-UM Associated	Vein/Breccia
▲ Ni,Cr	▲ Au
Skarn/Replacement	Unknown
● Cu	● Pb,Zn,Barite
● Pb,Zn,Barite	● Cu
● Au	● Unknown
■ Industrial	■ Coal

**ACKNOWLEDGEMENTS**

This map is the product of collaboration between the Yukon Geological Survey and the Geological Survey of Canada, under the Geo-mapping for energy and minerals (GEM) program.

This map benefited from geologic contributions from Don Murphy (Yukon Geological Survey) and Cees van Staal and Monica Escayola (Geological Survey of Canada).

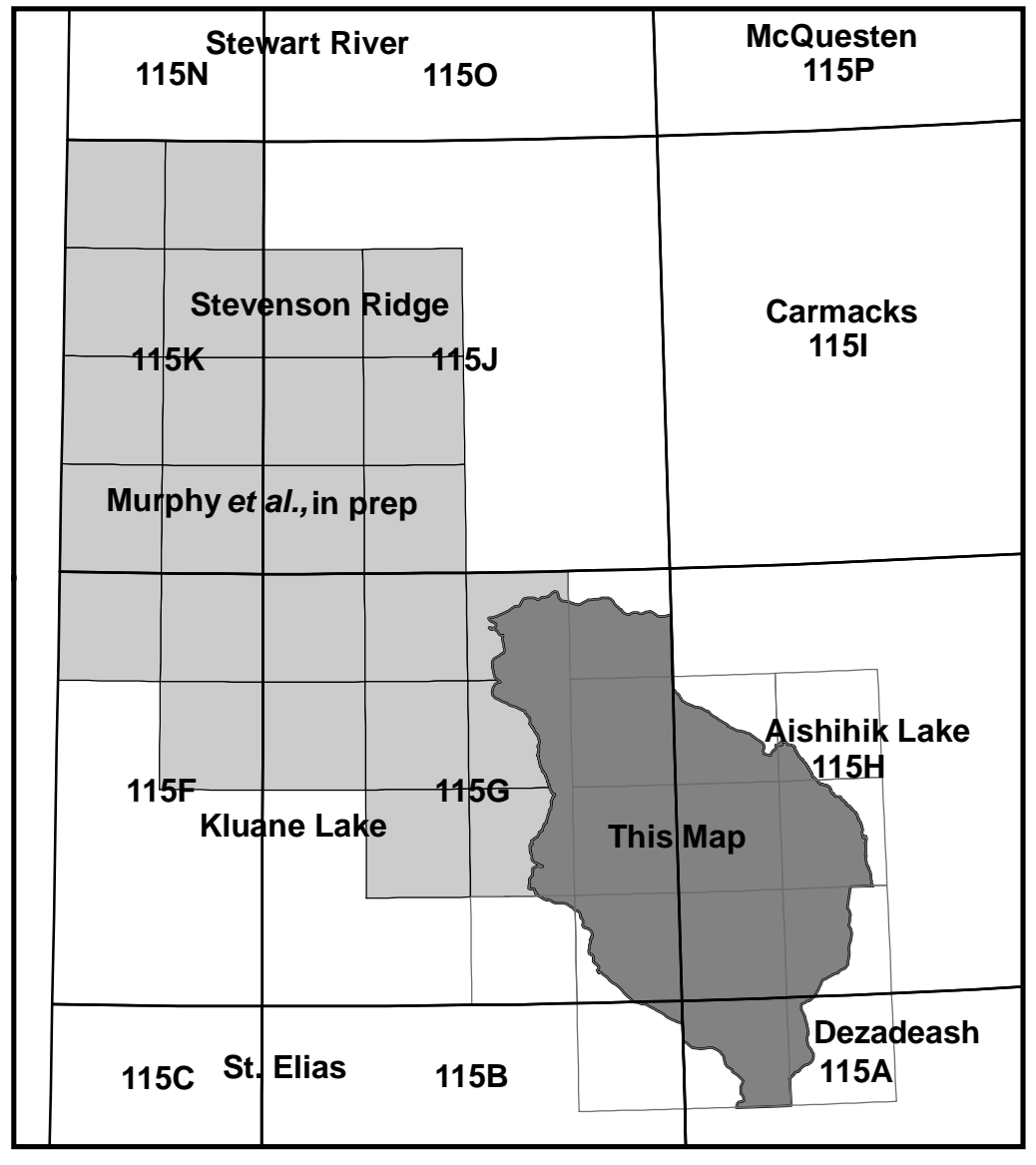
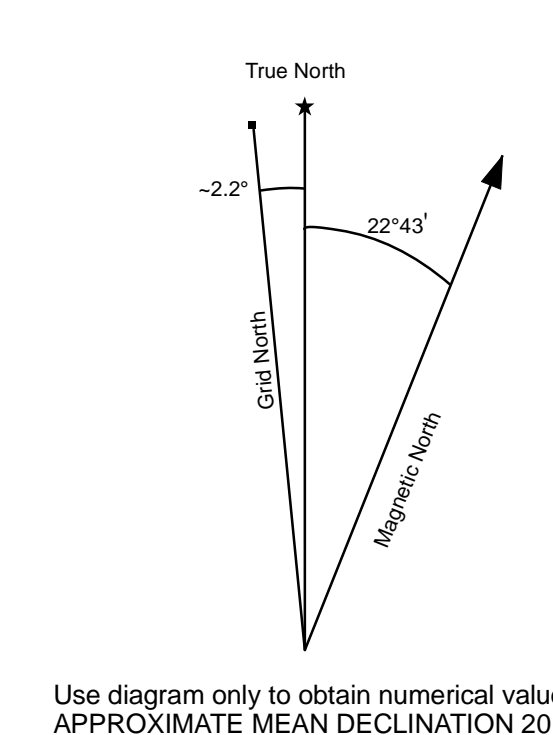
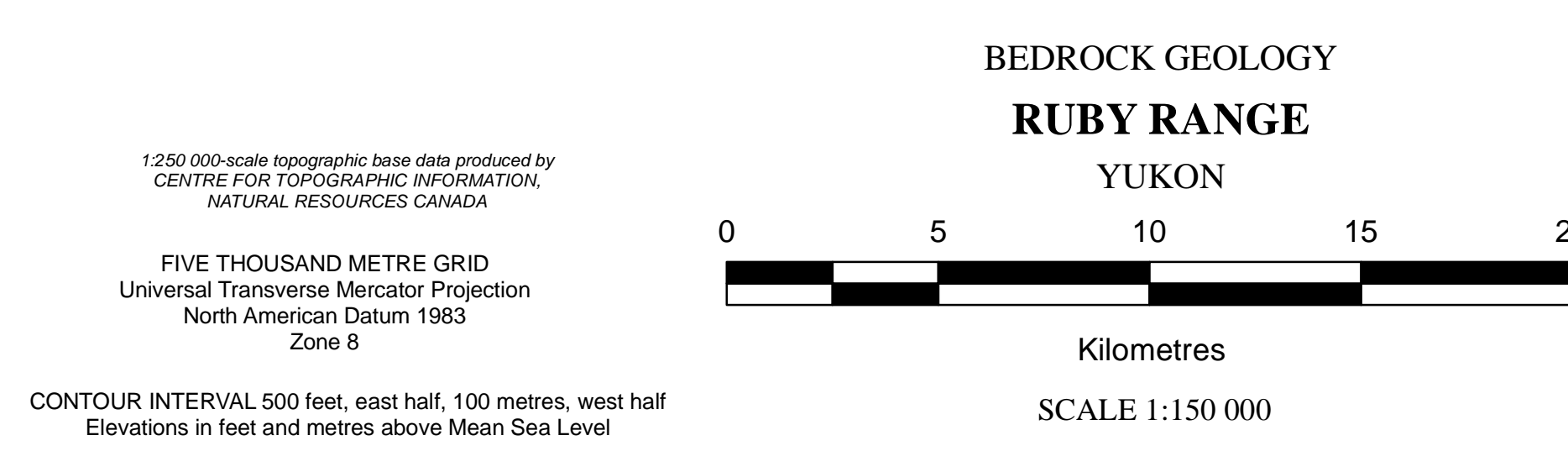
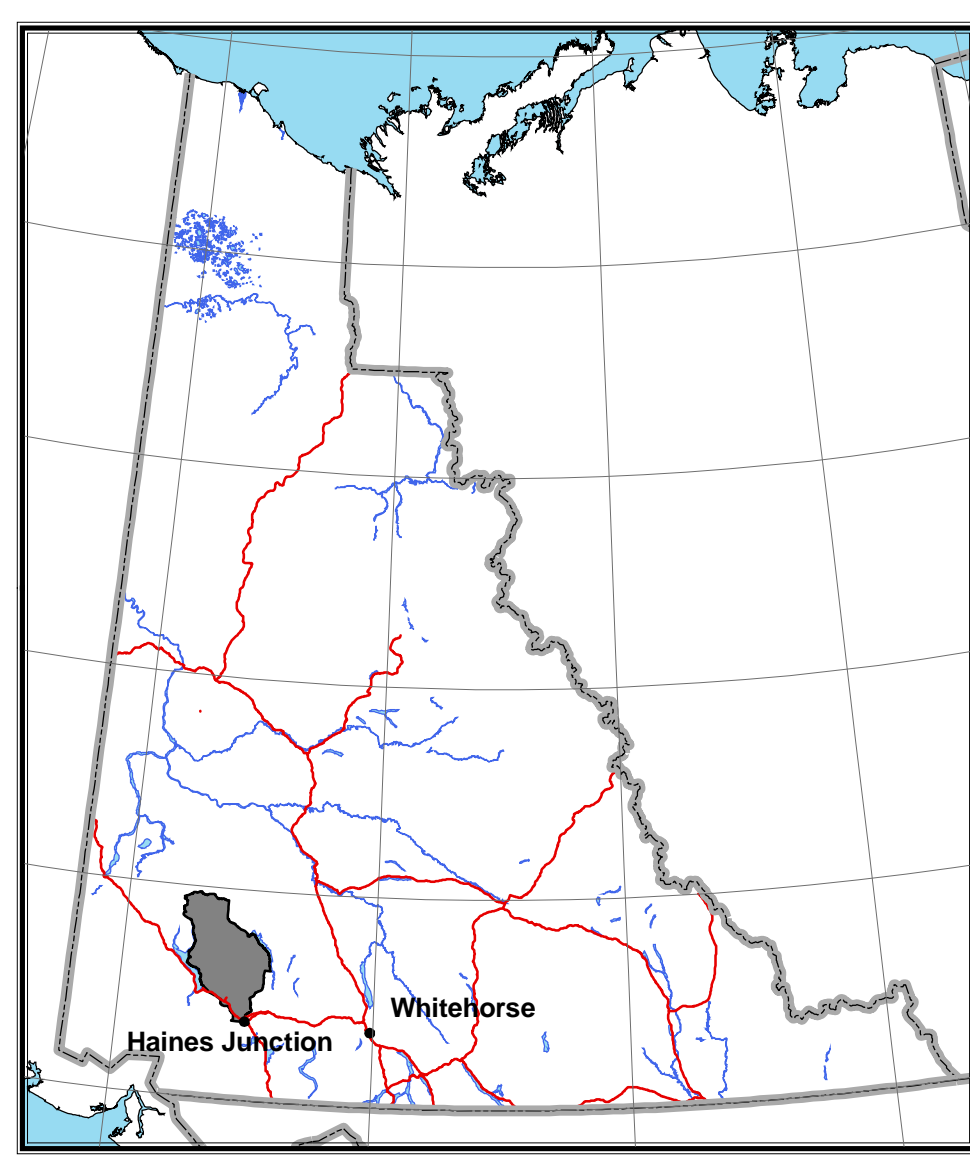
**RECOMMENDED CITATION**

Israel, S., Cobbett, R., Westberg, E., Stanley, B. and Hayward, N., 2011. Preliminary bedrock geology of the Ruby Ranges, southwest Yukon (Parts of NTS 115G, 115H, 115A and 115B) (1:150 000 scale), Yukon Geological Survey Open File 2011-2.

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 YEG report and Yukon MINFILE may be obtained from Geoscience Information and Sales, Yukon Geological Survey, Government of Yukon, P.O. Box 2703 (K-102), Whitehorse, Yukon, Y1A 2C6. Ph. 867-667-3201, Fax. 867-667-3198, email: geosales@gov.yk.ca.

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



**Preliminary bedrock geology map of the Ruby Ranges, southwest Yukon (Parts of NTS 115G and 115H) (1:150 000-scale)**

by  
Steve Israel, Rosie Cobbett, Elizabeth Westberg, Ben Stanley and Nathan Hayward