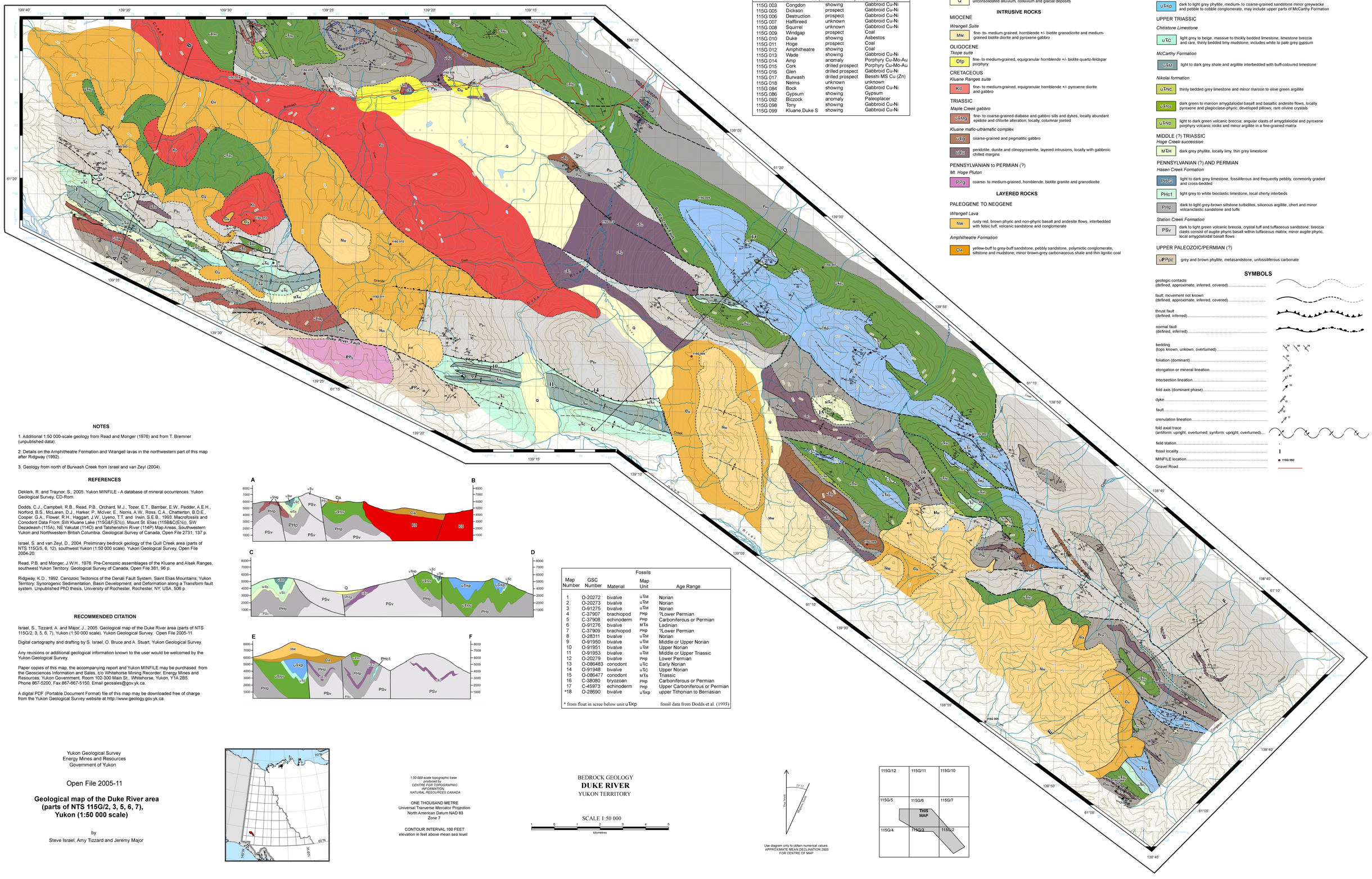
Yukon Geological Survey

Yukon
Energy, Mines and Resources



Mineral Occurrences
Yukon MINFILE (Deklerk and Traynor, 2005)

115G 003	Congdon	showing	Gabbroid Cu-Ni
115G 005	Dickson	prospect	Gabbroid Cu-Ni
115G 006	Destruction	prospect	Gabbroid Cu-Ni
115G 007	Halfbreed	unknown	Gabbroid Cu-Ni
115G 008	Squirrel	unknown	Gabbroid Cu-Ni
115G 009	Wndgap	prospect	Coal
115G 010	Duke	showing	Asbestos
115G 011	Hoge	prospect	Coal
115G 012	Amphitheatre	showing	Coal
115G 013	Wade	showing	Gabbroid Cu-Ni
115G 014	Amp	anomaly	Porphyry Cu-Mo-Au
115G 015	Cork	drilled prospect	Porphyry Cu-Mo-Au
115G 016	Glen	drilled prospect	Gabbroid Cu-Ni
115G 017	Burwash	drilled prospect	Besshi MS Cu (Zn)
115G 018	Nelms	unknown	unknown
115G 084	Book	showing	Gabbroid Cu-Ni
115G 086	Gypsum	showing	Gypsum
115G 092	Biczock	anomaly	Paleoplacer
115G 098	Tony	showing	Gabbroid Cu-Ni
115G 099	Kluane,Duke S	showing	Gabbroid Cu-Ni

LEGEND

QUATERNARY
- Q — unconsolidated alluvium, colluvium and glacial deposits

INTRUSIVE ROCKS
MIOCENE
Wrangell Suite
- Mw — fine- to- medium grained, hornblende +/- biotite granodiorite and medium-grained biotite diorite and pyroxene gabbro

OLIGOCENE
Tkope suite
- Ofp — fine- to medium-grained, equigranular hornblende +/- biotite quartz-feldspar porphyry

CRETACEOUS
Kluane Ranges suite
- Kgl — fine- to medium-grained, equigranular hornblende +/- pyroxene diorite and gabbro

TRIASSIC
Maple Creek gabbro
- uTMg — fine- to coarse-grained diabase and gabbro sills and dykes, locally abundant epidote and chlorite alteration; locally, columnar jointed

Kluane mafic-ultramafic complex
- uTg — coarse-grained and pegmatitic gabbro
- uTu — peridotite, dunite and clinopyroxenite, layered intrusions, locally with gabbroic chilled margins

PENNSYLVANIAN to PERMIAN (?)
Mt. Hoge Pluton
- PPg — coarse- to medium-grained, hornblende, biotite granite and granodiorite

LAYERED ROCKS
PALEOGENE TO NEOGENE
Wrangell Lava
- Nw — rusty red, brown phyric and non-phyric basalt and andesite flows, interbedded with felsic tuff, volcanic sandstone and conglomerate

Amphitheatre Formation
- OA — yellow-buff to grey-buff sandstone, pebbly sandstone, polymictic conglomerate, siltstone and mudstone; minor brown-grey carbonaceous shale and thin lignitic coal

TRIASSIC TO CRETACEOUS
Tatamagouche succession
- uTKp — dark to light grey phyllite, medium- to coarse-grained sandstone minor greywacke and pebble to cobble conglomerate, may include upper parts of McCarthy Formation

UPPER TRIASSIC
Chitistone Limestone
- uTc — light grey to beige, massive to thickly bedded limestone, limestone breccia and rare, thinly bedded limy mudstone; includes white to pale grey gypsum

McCarthy Formation
- uTM — light to dark grey shale and argillite interbedded with buff-coloured limestone

Nikolai formation
- uTNc — thinly bedded grey limestone and minor maroon to olive green argillite
- uTNv — dark green to maroon amygdaloidal basalt and basaltic andesite flows, locally pyroxene and plagioclase-phyric; developed pillows; rare olivine crystals
- uTNb — light to dark green volcanic breccia; angular clasts of amygdaloidal and pyroxene porphyry volcanic rocks and minor argillite in a fine-grained matrix

MIDDLE (?) TRIASSIC
Hoge Creek succession
- MTH — dark grey phyllite, locally limy, thin grey limestone

PENNSYLVANIAN (?) AND PERMIAN
Hasen Creek Formation
- PHc2 — light to dark grey limestone, fossiliferous and frequently pebbly, commonly graded and cross-bedded
- PHc1 — light grey to white bioclastic limestone, local cherty interbeds
- PHp — dark to light grey-brown siltstone turbidites, siliceous argillite, chert and minor volcaniclastic sandstone and tuffs

Station Creek Formation
- PSv — dark to light green volcanic breccia, crystal tuff and tuffaceous sandstone; breccia clasts consist of augite phyric basalt within tuffaceous matrix; minor augite phyric, local amygdaloidal basalt flows

UPPER PALEOZOIC/PERMIAN (?)
- uPPpc — grey and brown phyllite, metasandstone, unfossiliferous carbonate

SYMBOLS
- geologic contacts (defined, approximate, inferred, covered)
- fault; movement not known (defined, approximate, inferred, covered)
- thrust fault (defined, inferred)
- normal fault (defined, inferred)
- bedding (tops known, unkown, overturned)
- foliation (dominant)
- elongation or mineral lineation
- intersection lineation
- fold axis (dominant phase)
- dyke
- fault
- crenulation lineation
- fold axial trace (antiform: upright, overturned; synform: upright, overturned)
- field station
- fossil locality
- MINFILE location — 1150 092
- Gravel Road

NOTES
1. Additional 1:50 000-scale geology from Read and Monger (1976) and from T. Bremner (unpublished data).

2. Details on the Amphitheatre Formation and Wrangell lavas in the northwestern part of this map after Ridgway (1992).

3. Geology from north of Burwash Creek from Israel and van Zeyl (2004).

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Deklerk, R. and Traynor, S., 2005. Yukon MINFILE - A database of mineral occurrences. Yukon Geological Survey, CD-Rom.

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Israel, S. and van Zeyl, D., 2004. Preliminary bedrock geology of the Quill Creek area (parts of NTS 115G/5, 6, 12), southwest Yukon (1:50 000 scale). Yukon Geological Survey, Open File 2004-20.

Read, P.B. and Monger, J.W.H., 1976. Pre-Cenozoic assemblages of the Kluane and Alsek Ranges, southwest Yukon Territory. Geological Survey of Canada, Open File 381, 96 p.

Ridgway, K.D., 1992. Cenozoic Tectonics of the Denali Fault System, Saint Elias Mountains, Yukon Territory: Synorogenic Sedimentation, Basin Development, and Deformation along a Transform fault system. Unpublished PhD thesis, University of Rochester, Rochester, NY, USA, 506 p.

RECOMMENDED CITATION
Israel, S., Tizzard, A. and Major, J., 2005. Geological map of the Duke River area (parts of NTS 115G/2, 3, 5, 6, 7), Yukon (1:50 000 scale). Yukon Geological Survey, Open File 2005-11.

Digital cartography and drafting by S. Israel, O. Bruce and A. Stuart, 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 the Geosciences Information and Sales, c/o Whitehorse Mining Recorder, Energy Mines and Resources, Yukon Government, Room 102-300 Main St., Whitehorse, Yukon, Y1A 2B5. Phone 867-5200, Fax 867-667-5150, Email geosales@gov.yk.ca.

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

Fossils

Map Number	GSC Number	Material	Map Unit	Age Range
1	O-20272	bivalve	uTM	Norian
2	O-20273	bivalve	uTM	Norian
3	O-91275	bivalve	uTM	Norian
4	C-37907	brachiopod	PHp	?Lower Permian
5	C-37908	echinoderm	PHp	Carboniferous or Permian
6	O-91276	bivalve	MTs	Ladinian
7	C-37909	brachiopod	PHp	?Lower Permian
8	O-28311	bivalve	uTM	Norian
9	O-91950	bivalve	uTM	Middle or Upper Norian
10	O-91951	bivalve	uTM	Upper Norian
11	O-91953	bivalve	uTM	Middle or Upper Triassic
12	O-20279	bivalve	PHp	Lower Permian
13	O-086483	conodont	uTc	Early Norian
14	O-91948	bivalve	uTc	Upper Norian
15	O-086477	conodont	MTs	Triassic
16	C-38080	bryozoan	PHp	Carboniferous or Permian
17	C-45973	echinoderm	PHp	Upper Carboniferous or Permian
*18	O-28690	bivalve	uTKp	upper Tithonian to Berriasian

* from float in scree below unit uTKp — fossil data from Dodds et al. (1993)

Yukon Geological Survey
Energy Mines and Resources
Government of Yukon

Open File 2005-11

Geological map of the Duke River area (parts of NTS 115G/2, 3, 5, 6, 7), Yukon (1:50 000 scale)

by

Steve Israel, Amy Tizzard and Jeremy Major

1:50 000-scale topographic base produced by CENTRE FOR TOPOGRAPHIC INFORMATION, NATURAL RESOURCES CANADA

ONE THOUSAND METRE
Universal Tranverse Mercator Projection
North American Datum NAD 83
Zone 7

CONTOUR INTERVAL 100 FEET
elevation in feet above mean sea level

BEDROCK GEOLOGY
DUKE RIVER
YUKON TERRITORY

SCALE 1:50 000

1 0 1 2 3 4 5
kilometres

Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 2005
FOR CENTRE OF MAP