



LEGEND

INTRUSIVE ROCKS

Eocene

quartz-feldspar porphyry
white-weathering, aphanitic to fine-grained, locally flow-banded quartz-feldspar porphyry; commonly contains phenocrysts of smoky grey quartz, biotite and white feldspar

Cretaceous

granite to granodiorite undifferentiated

grey, resistant, generally medium- to coarse-grained, locally megacrystic, undifferentiated Tay River plutonic suite or Anvil plutonic suite granite to granodiorite

Tay River plutonic suite

Orchard phase - biotite ± hornblende granite to granodiorite

Anvil plutonic suite

Mount Mye phase - biotite-muscovite granite; locally foliated

Permian?

gabbro, harzburgite, serpentinite

mafic and ultramafic intrusive rocks; locally extensively sheared and serpentinitized
Ps - serpentinite; Phz - harzburgite; Pg - gabbro

ORDOVICIAN-SILURIAN

gabbro

dark green, locally magnetic, coarse- to fine-grained, massive to foliated gabbro; subvolcanic dykes and sills to Menzies Creek basalt (OSMcB); enclosing phyllites locally display thin contact metamorphic aureoles

pyroxenite

dark green, locally magnetic, coarse-grained, massive to foliated, variably serpentinitized pyroxenite; subvolcanic dykes and sills to Menzies Creek basalt (OSMcB); enclosing phyllites locally display thin contact metamorphic aureoles

LAYERED ROCKS

YUKON-TANANA TERRANE

TRIASSIC

Faro Peak formation

resistant, massive, polymorphic conglomerate; clasts include quartzite, chert, limestone and serpentinite; matrix contains detrital muscovite

dark grey carbonaceous, locally calcareous shale or siltstone interbedded with medium to dark grey, fine-grained limestone

interbedded cherty argillite, chert, sandstone and mafic greywacke or conglomerate

massive, dark green, fine-grained to aphanitic basalt; may be equivalent to Anvil Range Group basalt

PALEOZOIC

metasedimentary and metavolcanic rocks

medium to dark grey, locally gritty, muscovitic meta-quartzite to quartzose schist; contains bands of greywacke, gabbro, phyllite; rarely contains eclogite lenses

grey to tan, massive limestone or dolomite

medium to dark olive green, chloritic phyllite to amphibolite; locally displays relict equigranular igneous texture; locally includes ultramafic rocks and/or eclogite (Pg-1)

felsic orthogneiss or paragneiss

SLIDE MOUNTAIN TERRANE

PERMIAN

Campbell Range formation

Epitaxial, locally hematitic, dark green, resistant, massive, poorly foliated basalt or brecciated basalt; contains lesser grey, green, red and black bedded chert, and pale green epidioritic sandstone or conglomerate

EARLY CARBONIFEROUS-PERMIAN

Rose Mountain formation

pale green, tan-weathering, bedded phyllitic chert interbedded with lesser siltstone, sandstone, chert-pebble conglomerate and limestone

dark grey to black, pale green and maroon noncalcareous argillite and bedded chert with lesser siltstone, sandstone, chert-pebble conglomerate and limestone

DEVONIAN-PERMIAN

undivided Rose Mountain formation and Mount Aho formation

dark grey to black, pale green and maroon noncalcareous argillite and bedded chert with lesser siltstone, sandstone, chert-pebble conglomerate and limestone

DEVONIAN-EARLY CARBONIFEROUS

Mount Aho formation

silvery cream, tan-weathering, bedded phyllitic chert with light grey barite beds

dark grey to black, noncalcareous, siliceous argillite and bedded chert with lesser siltstone, sandstone, chert-pebble conglomerate and limestone

pale green, noncalcareous argillite and bedded chert with lesser shale chip and siltstone breccia, grey sandstone and chert-pebble conglomerate; locally contains maroon argillite and bedded chert

ANCIENT NORTH AMERICA

DEVONIAN-EARLY CARBONIFEROUS

Earn Group

dark grey to black, noncalcareous, siliceous argillite with lesser siltstone, sandstone, chert-pebble conglomerate and limestone

SILURIAN

siltstone

dark grey to black, platy, tan-weathering, thinly laminated, dolomitic siltstone

Road River Group

Steel Formation

tan- to orange-weathering, dolomitic, bluish-banded, silty mudstone

ORDOVICIAN-DEVONIAN

quartz sandstone and dolomite

Massive, medium-grained, quartz sandstone interbedded with pale tan-weathering limestone or dolomite

Road River Group

Duo Lake Formation

dark grey to black, graphitic argillite; contains lesser medium to pale grey siltstone and fine sandstone, medium grey limestone and basalt flows

Menzies Creek formation

undivided dark grey green, foliated basalt; includes massive and pillowed, locally amygdaloidal flows and heterolithic or monolithic breccias with lesser limestone, argillite and tuff

dark grey green, locally amygdaloidal, massive and pillowed basalt with minor monolithic basalt breccia, volcanoclastic sandstone, siltstone and tuff, and massive and pillowed flows

dark grey green, monolithic basalt breccia with lesser volcanoclastic sandstone, siltstone and tuff, and massive and pillowed flows

grey to off-white limestone locally interbedded with orange-weathering siltstone

CAMBRIAN-ORDOVICIAN

Vangorda formation

soft, silvery grey, calcareous phyllite with lesser medium crystalline, grey marble; dark grey to black phyllite and dark green gabbro sills and dykes (OSg)

pale green and dark purplish brown, thinly banded calc-silicate rock with lesser black schist, marble and dark green gabbro dykes and sills (OSg)

black, locally calcareous, carbonaceous phyllite or schist; commonly contains thin quartzose siltstone interbeds; interbedded with dark green gabbro dykes and sills (OSg)

pale to dark grey, foliated marble

UPPER PROTEROZOIC-CAMBRIAN

Mount Mye formation

brownish grey, noncalcareous, pervasively foliated phyllite; locally indistinctly bedded; contains minor siltstone, marble, calc-silicate rock, carbonaceous phyllite and dark green gabbro dykes and sills (OSg)

brownish grey, noncalcareous, pervasively foliated muscovite-biotite schist; may contain staurolite, garnet, andalusite, or kyanite; locally indistinctly bedded; contains minor siltstone, marble, calc-silicate rock, carbonaceous phyllite and dark green gabbro dykes and sills (OSg)

pale green and dark purplish brown, thinly banded calc-silicate rock; contains marble and silicified marble beds and dark green gabbro dykes and sills (OSg)

dark to pale grey, medium crystalline marble; typically contains abundant boudins of calc-silicate rock and/or quartz; locally contains coarsely crystalline garnet-pyroxene stam

black phyllite to schist; locally contains lenses and beds of black carbonaceous limestone and dark green gabbro dykes and sills (OSg)

SYMBOLS

geological contact (defined, approximate, assumed).....	
fault or vein-fault, displacement unknown (defined, approximate, assumed).....	
thrust fault (defined, approximate, assumed, teeth on hanging wall).....	
normal fault (defined, approximate, assumed, teeth on downthrown side).....	
strike-slip fault (defined, approximate, assumed).....	
fold surface axial trace (upright anticline, syncline, overturned anticline, syncline).....	
metamorphic boundary (symbol on higher grade side).....	
bedding (tops not known).....	
foliation (one tick indicates earliest phase of deformation, two or more ticks indicate subsequent phase(s) of deformation).....	
lineation (one arrow indicates earliest phase of deformation, two or more arrows indicate subsequent phase(s) of deformation).....	
joint.....	
igneous compositional banding.....	
igneous mineral lineation.....	
fault plane orientation, shear band (C-bands) orientation.....	
shear band plane of flattening (S bands).....	
mineral lineation/banding associated with shear bands.....	
apparent dip of measured bedding, foliation (in cross-section).....	
foliation form lines in cross-section.....	
limit of outcrop, subcrop.....	
projection to surface of mineralized volume.....	
limit of mapping.....	
isotopic age determination sample location and age includes radiometric age, 2 sigma error, and sample number.....	
fossil sample, includes sample reference number.....	
barren fossil sample, includes sample reference number.....	
geochemical sample-whole rock with major oxides, minor and trace elements, includes assay number and reference.....	
survey control station with station name and elevation (in metres).....	
diamond drill hole collar (overburden depth/total depth) in metres.....	
rotary drill hole collar (overburden depth/total depth) in metres.....	
field station.....	
trench.....	
line of cross-section.....	
primary road.....	
secondary road, trail, cut line.....	

MINERAL OCCURRENCES		
Yukon MINFILE		
105K/16	★	BRIDGE (MAG, TED)
105K/17	★	FAIR-TAN
105K/18	★	TAKU
105K/19	★	GLYN (WEDGE)
105K/20	★	KIM
105K/21	★	CESSNA

Doorkin, R. 2003. Yukon MINFILE: a database of mineral occurrences. Yukon Geological Survey, CD-ROM.

ISOTOPIC AGE DATES					
Sample	Date	System	Mineral	Comments	Ref
GBCT-157	258±13 Ma	K-Ar	muscovite	metamorphic cooling age	(21)
GBCT-158	260±3 Ma	K-Ar	muscovite	metamorphic cooling age	(3)
GBCT-159	261±2 Ma	K-Ar	muscovite	metamorphic cooling age	(3)
GBCT-160	98±5 Ma	K-Ar	muscovite	intrusion cooling age	(20)
GBCT-161	97±5 Ma	K-Ar	biotite	intrusion cooling age	(20)
GBCT-162	103.9±1.5 Ma	Lu-Hf	monazite	intrusion age	(18)
Faro IIIa	252±7 Ma	Lu-Hf	zircon	metamorphic peak	(15)
Faro IIIb	252±7 Ma	Lu-Hf	zircon	metamorphic peak	(15)
Faro IIIc	252±7 Ma	Lu-Hf	zircon	metamorphic peak	(15)
Faro IIId	252±7 Ma	Lu-Hf	zircon	metamorphic peak	(15)
GBCT-163	251±13 Ma	Sm-Nd	zircon	metamorphic peak	(14)

Abbreviations: w-whole rock; m-mineral; g-granite; o-orthopyroxene

FOSSILS			
OSC Location No.	Material	Age Range	Ref
C-304121	condonot	Late Triassic, Early Norian	(12,14)
C-305665	condonot	Middle Devonian	(13)
C-157777	condonot	Late Triassic-Cambrian	(14)

REFERENCES

- Beckwith, K., Morrison, J.K. and Wernicke, M. 2002. Yukon's 2002: a database of geologic age determinations for rock units from Yukon Territory. Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, CD-ROM.
- Creaser, R.A., Goodwin-Bell, J.S. and Edrington, P. 1999. Geochronological and Nd isotopic constraints for the origin of eclogite protomylonites, northern Cordillera: implications for the Paleozoic tectonic evolution of the Yukon-Tanana terrane. Geological Society of Earth Sciences, vol. 38, p. 1697-1709.
- Edrington, P., Chert, E.D., Amheide, D.A. and Stout, M.Z. 1998. Paleozoic and Mesozoic high-pressure metamorphism at the margin of accreted North America in central Yukon. Geological Society of America Bulletin, vol. 110, p. 615-629.
- Goodwin-Bell, J.S. 1998. A geochemical and Sm-Nd isotopic study of Cordilleran eclogites from the Yukon-Tanana terrane. Unpublished MSc thesis, University of Alberta, Edmonton, Alberta.
- Goodwin-Bell, J.S. 1999. Geology of Tenet Creek (105K/1), Swin Lakes (105K/2), and Faro (105K/3) map areas, Yukon Territory. Geological Survey of Canada, Open File 2049 (1:500 000 scale).
- Goodwin-Bell, J.S. 1999. Geology of Mt. Amheide (105K/4), Rose Mountain (105K/5), and Mount (105K/6) map areas, Yukon Territory. Geological Survey of Canada, Open File 2050 (1:500 000 scale).
- Goodwin-Bell, J.S. and Irwin, S.B. 1987. Geology, Shelton Lake and Tay River map areas, Yukon Territory. Geological Survey of Canada Map 105K/1, 105K/2, 105K/3, 105K/4, 105K/5, 105K/6, 105K/7, 105K/8, 105K/9, 105K/10, 105K/11, 105K/12, 105K/13, 105K/14, 105K/15, 105K/16, 105K/17, 105K/18, 105K/19, 105K/20, 105K/21, 105K/22, 105K/23, 105K/24, 105K/25, 105K/26, 105K/27, 105K/28, 105K/29, 105K/30, 105K/31, 105K/32, 105K/33, 105K/34, 105K/35, 105K/36, 105K/37, 105K/38, 105K/39, 105K/40, 105K/41, 105K/42, 105K/43, 105K/44, 105K/45, 105K/46, 105K/47, 105K/48, 105K/49, 105K/50, 105K/51, 105K/52, 105K/53, 105K/54, 105K/55, 105K/56, 105K/57, 105K/58, 105K/59, 105K/60, 105K/61, 105K/62, 105K/63, 105K/64, 105K/65, 105K/66, 105K/67, 105K/68, 105K/69, 105K/70, 105K/71, 105K/72, 105K/73, 105K/74, 105K/75, 105K/76, 105K/77, 105K/78, 105K/79, 105K/80, 105K/81, 105K/82, 105K/83, 105K/84, 105K/85, 105K/86, 105K/87, 105K/88, 105K/89, 105K/90, 105K/91, 105K/92, 105K/93, 105K/94, 105K/95, 105K/96, 105K/97, 105K/98, 105K/99, 105K/100, 105K/101, 105K/102, 105K/103, 105K/104, 105K/105, 105K/106, 105K/107, 105K/108, 105K/109, 105K/110, 105K/111, 105K/112, 105K/113, 105K/114, 105K/115, 105K/116, 105K/117, 105K/118, 105K/119, 105K/120, 105K/121, 105K/122, 105K/123, 105K/124, 105K/125, 105K/126, 105K/127, 105K/128, 105K/129, 105K/130, 105K/131, 105K/132, 105K/133, 105K/134, 105K/135, 105K/136, 105K/137, 105K/138, 105K/139, 105K/140, 105K/141, 105K/142, 105K/143, 105K/144, 105K/145, 105K/146, 105K/147, 105K/148, 105K/149, 105K/150, 105K/151, 105K/152, 105K/153, 105K/154, 105K/155, 105K/156, 105K/157, 105K/158, 105K/159, 105K/160, 105K/161, 105K/162, 105K/163, 105K/164, 105K/165, 105K/166, 105K/167, 105K/168, 105K/169, 105K/170, 105K/171, 105K/172, 105K/173, 105K/174, 105K/175, 105K/176, 105K/177, 105K/178, 105K/179, 105K/180, 105K/181, 105K/182, 105K/183, 105K/184, 105K/185, 105K/186, 105K/187, 105K/188, 105K/189, 105K/190, 105K/191, 105K/192, 105K/193, 105K/194, 105K/195, 105K/196, 105K/197, 105K/198, 105K/199, 105K/200, 105K/201, 105K/202, 105K/203, 105K/204, 105K/205, 105K/206, 105K/207, 105K/208, 105K/209, 105K/210, 105K/211, 105K/212, 105K/213, 105K/214, 105K/215, 105K/216, 105K/217, 105K/218, 105K/219, 105K/220, 105K/221, 105K/222, 105K/223, 105K/224, 105K/225, 105K/226, 105K/227, 105K/228, 105K/229, 105K/230, 105K/231, 105K/232, 105K/233, 105K/234, 105K/235, 105K/236, 105K/237, 105K/238, 105K/239, 105K/240, 105K/241, 105K/242, 105K/243, 105K/244, 105K/245, 105K/246, 105K/247, 105K/248, 105K/249, 105K/250, 105K/251, 105K/252, 105K/253, 105K/254, 105K/255, 105K/256, 105K/257, 105K/258, 105K/259, 105K/260, 105K/261, 105K/262, 105K/263, 105K/264, 105K/265, 105K/266, 105K/267, 105K/268, 105K/269, 105K/270, 105K/271, 105K/272, 105K/273, 105K/274, 105K/275, 105K/276, 105K/277, 105K/278, 105K/279, 105K/280, 105K/281, 105K/282, 105K/283, 105K/284, 105K/285, 105K/286, 105K/287, 105K/288, 105K/289, 105K/290, 105K/291, 105K/292, 105K/293, 105K/294, 105K/295, 105K/296, 105K/297, 105K/298, 105K/299, 105K/300, 105K/301, 105K/302, 105K/303, 105K/304, 105K/305, 105K/306, 105K/307, 105K/308, 105K/309, 105K/310, 105K/311, 105K/312, 105K/313, 105K/314, 105K/315, 105K/316, 105K/317, 105K/318, 105K/319, 105K/320, 105K/321, 105K/322, 105K/323, 105K/324, 105K/325, 105K/326, 105K/327, 105K/328, 105K/329, 105K/330, 105K/331, 105K/332, 105K/333, 105K/334, 105K/335, 105K/336, 105K/337, 105K/338, 105K/339, 105K/340, 105K/341, 105K/342, 105K/343, 105K/344, 105K/345, 105K/346, 105K/347, 105K/348, 105K/349, 105K/350, 105K/351, 105K/352, 105K/353, 105K/354, 105K/355, 105K/356, 105K/357, 105K/358, 105K/359, 105K/360, 105K/361, 105K/362, 105K/363, 105K/364, 105K/365, 105K/366, 105K/367, 105K/368, 105K/369, 105K/370, 105K/371, 105K/372, 105K/373, 105K/374, 105K/375, 105K/376, 105K/377, 105K/378, 105K/379, 105K/380, 105K/381, 105K/382, 105K/383, 105K/384