Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

YUKON GEOLOGY PROGRAM

NATMAP CARTNAT
Canada's National Geoscience Mapping Program
Le Programme national de cartographie geoscientifique du Canada

CANADA-YUKON MINERAL AND NORTHERN ENERGY COOPERATION

Natural Resources Canada / Ressources naturelles Canada

LEGEND

INTRUSIVE ROCKS

TERTIARY

E_{dj} Quartz porphyry.

E_{dg} Dark green, black and brown, medium-grained equigranular gabbro and pyroxenite.

CRETACEOUS

K_g Biotite-muscovite fine- to medium-grained equigranular granite.

JURASSIC

J_g Medium-grained equigranular hornblende-biotite granite.

LAYERED ROCKS

CRETACEOUS

K_{vl} Grey- to orange-weathering hornblende and hornblende-feldspar crystal lithic tuff.

EOCENE

E_b Massive dark green to black, fine-grained basalt.

NORTH AMERICAN MIOGEOCLINE

UPPER TRIASSIC

T_{lJ} Massive light grey sandy bioclastic limestone.

T_{sS} Dark grey phyllite with laminations and beds of brown weakly calcareous quartz siltstone and sandstone and sandy limestone.

PERMIAN

MOUNT CHRISTIE FORMATION

P_{MC} Dark to light grey, black, green, and white chert.

DEVONIAN - MISSISSIPPIAN

EARN GROUP

DM_{Ec} Dark grey pinstriped carbonaceous phyllite, slate, quartz sandstone, chert-pebble conglomerate and chert; lesser quartzofeldspathic greywacke and grit.

UNCONFORMITY

CASSIAR PLATFORM

MIDDLE DEVONIAN

D_l Thin- to medium-bedded dark grey to black locally fetid limestone; two-hole crinoids.

SILURIAN - DEVONIAN

SD_Q Massive grey orthoquartzite.

SdS_Q Sandy, cream-weathering dolostone and grey quartzite; the amount of quartzite increases upwards.

S_S Thinly laminated tan platey siltstone and silty limestone; locally sandy.

HANGING WALL OF 'INCONNU' THRUST

YUKON-TANANA TERRANE

INTRUSIVE ROCKS

PERMIAN

P_{lg} Leucogabbro, gabbro, diabase.

P_{um} Brown-weathering, dark green to black, variably serpentinized ultramafic rock. Intrusive contacts locally preserved.

LAYERED ROCKS

MID-PERMIAN (TO TRIASSIC?)

P_{cg} Red-brown to pale green matrix- and framework-supported polymictic conglomerate, pale green sandstone, dark grey siltstone and shale, and basalt. Conglomerate clasts include porphyritic basalt, aphyric massive basalt, chloritic phyllite, muscovite-quartz phyllite, siliceous carbonaceous phyllite, carbonate, white bull quartz and meta-chert. Clasts of dacite, serpentinite, blueschist and eclogite have been reported from this unit elsewhere (Mortensen et al., 1999). Mid-Permian conodonts and U-Pb age dates have been reported from this unit in Watson Lake map area (J. Mortensen, pers. comm. 2000).

UNCONFORMITY

EARLY PERMIAN

CAMPBELL RANGE SUCCESSION

P_{Cb} Medium to dark green basalt; generally massive, locally pillowed or fragmental; locally hematized and interbedded with reddish jasperoidal silica.

P_{Cc} Thin- to medium-bedded pink, green and white chert and lesser interbedded siliceous phyllite of the same colour.

UNCONFORMITY ON ALL THRUST SHEETS

FOOTWALL OF JULES CREEK THRUST

CARBONIFEROUS?

$C?_{lv}$ Green, pink and brown muscovite-quartz phyllite, locally with quartz and feldspar augen (felsic meta-volcanic rocks).

$C?_{cs}$ Variably foliated dark grey and rarely pink phyllite; grey, white and rare pink ribbon chert; dark quartz sandstone, quartzofeldspathic sandstone, grit and conglomerate, and chert-pebble conglomerate.

$C?_{lv}$ Dark green, chlorite-feldspar-quartz phyllite (intermediate meta-volcanic rocks).

$C?_l$ Massive grey crinoidal limestone.

HANGING WALL OF JULES CREEK THRUST

PENNSYLVANIAN

P_d Dark grey phyllite, chert, chert-pebble conglomerate, quartzofeldspathic and volcanolithic greywacke and conglomerate, diamictite and minor limestone; possibly correlates with unit C?cs.

UNCONFORMITY ON BOTH HANGING WALL AND FOOTWALL OF MONEY CREEK THRUST

HANGING WALL OF MONEY CREEK THRUST

INTRUSIVE ROCKS

EARLY MISSISSIPPIAN

SIMPSON RANGE PLUTONIC SUITE

MS_g MS_{gs} Generally unfoliated biotite-hornblende granite and quartz monzonite, locally faulted, chloritized and hematized, MS_{gc} strongly foliated and lineated mylonitic MS_g.

LATE DEVONIAN - EARLY MISSISSIPPIAN

D_{qp} Mafic-poor, quartz-porphyritic granite. Cross-cutting relationships between granite and subvolcanic feeder dykes to D_f basalt flows suggests that granite and basalt are coeval and that granite is likely coeval with unit D_{Fc}.

D_{um} Brown-weathering, dark green to black variably serpentinized ultramafic rock, Gabbro and/or pyroxenite locally present, The unit is generally spatially associated, and inferred to be in intrusive contact, with D_{Fc}. The unit locally occurs as isolated killpe of the Money Creek Thrust sheet and along the Money Creek Thrust as light-coloured fish-scale talc-serpentinite.

LAYERED ROCKS

CM_{Cu} Undifferentiated layered rocks of the hanging wall of the Money Creek Thrust and unit Pcl, includes intermediate to felsic metavolcanic rocks, carbonate, and dark chert, greywacke and phyllite.

PENNSYLVANIAN

P_q Massive brown to grey quartz sandstone/quartzite.

UPPER MISSISSIPPIAN TO MID-PENNSYLVANIAN

C_c Massive grey bioclastic crinoidal limestone.

LOWER MISSISSIPPIAN

M_{lv} Green to white chlorite-muscovite-quartz phyllite of intermediate and lesser felsic compositions; locally quartz and feldspar augen present.

UPPER DEVONIAN

D_F **DF_{cp}** **DF_f** Foliated and lineated chloritic phyllite; lesser carbonaceous phyllite, grey quartzite and marble. In roof pendant of MS_g (105G/8), unit D_F comprises tilted yet undeformed massive to pillowed basalt, maroon and green fragmental basalt, pink and green shale and cherty shale, tan greywacke and a middle member of pink to brown, locally quartz-porphyritic rhyolite (D_{Fr}). Contradictory cross-cutting relationships between dykes feeding unit D_F basalt and dykes of D_{qp} feeding unit D_{Fr} rhyolite indicate that they are approximately coeval. Outside of the pendant, the unit is foliated and lineated, and contains mappable bands of carbonaceous phyllite and quartzite, and grey marble (DF_{cp}).

FOOTWALL OF MONEY CREEK THRUST

EARLY MISSISSIPPIAN

WOLVERINE SUCCESSION

MW_b Chloritic phyllite occurring discontinuously beneath unit Pcl.

MW_t Thinly interbedded (cm-scale) massive to granular siliceous rock and light coloured phyllite (metatuff and exhalite). Siliceous rock is pale-coloured, locally massive and bedded on metre-scale at base where associated with baritic iron formation; darker near top where intercalated phyllite is dark grey. One band of platy brown limestone in upper part of unit.

MW_f Tan, grey and brown, variably altered muscovite-quartz phyllite (MW_f) and quartz-feldspar augen phyllite (meta-porphyry).

MW_{cp} Carbonaceous phyllite and quartz sandstone.

MW_{sd} Salt and pepper, grey to dark grey, coarse-grained feldspathic meta-sandstone, grit and carbonaceous phyllite.

UNCONFORMITY

INTRUSIVE ROCKS

EARLY MISSISSIPPIAN

GRASS LAKES PLUTONIC SUITE

MG_g MG_{ag} Foliated and lineated, medium- to coarse-grained granitic to monzonitic metaplutonic rock. Generally equigranular, although augen texture (MG_{ag}) locally present, Locally discordant with earliest foliation.

LATE DEVONIAN

NORTH LAKES META-DIORITE

DN_d Foliated hornblende-biotite meta-diorite.

DM_f Leuco-amphibolite (meta-gabbro) and amphibolite (meta-pyroxenite).

D_{um} Brown-weathering, dark green to black variably serpentinized ultramafic rock. The unit is generally spatially associated and inferred to be in intrusive contact with D_F. The unit is also locally surrounded by unit D_q, also presumably with intrusive contacts.

LAYERED ROCKS

UPPER DEVONIAN (TO LOWER MISSISSIPPIAN?)

GRASS LAKES SUCCESSION

DM_q Massive, white to mauve quartzite.

DM_{fl} Chloritic phyllite, locally with round mm-scale calcite blebs inferred to be amygdules.

DM_{cp} Carbonaceous phyllite and grey quartzite.

DM_{cg} Quartzofeldspathic-pebble metaconglomerate.

Kudz Ze Kayah felsic metavolcanic unit

D_K Undifferentiated foliated feldspar-muscovite-quartz schist or phyllite, massive pale siliceous muscovite-quartz schist or phyllite, locally with quartz amygdules; feldspar- and rarely quartz-augen schist or phyllite (meta-porphyry), and thin calcite-plagioclase-biotite schist. Interbeds of carbonaceous phyllite are common. Magnetite iron formation occurs locally near the top of the unit in carbonaceous phyllite and thin felsic schist.

D_{Kcp} Carbonaceous phyllite and grey quartzite.

D_{Kcs} Discontinuous (traceable for over a kilometre but not throughout the map area) bodies of calcareous muscovite-quartz metasandstone and grit locally with graded bedding and shale chips.

Fire Lake metavolcanic unit

D_F Massive to subtly layered, plagioclase-chlorite phyllite or schist, locally with biotite and actinolite porphyroblasts; lesser carbonaceous phyllite, tan muscovite-quartz phyllite (felsic metavolcanic rock), grey quartzite and marble. Rare orange-brown-weathering carbonate-clast pebble to cobble conglomerate.

UPPER DEVONIAN AND OLDER?

D_q Interbedded tan- to brown-weathering biotite-muscovite-feldspar quartz psammitic schist and quartz-biotite-muscovite metapelitic schist. Thin intervals of marble and calc-schist not mappable at 1:50 000-scale occur locally.

D_{qm} Grey to orange-brown micaceous marble, calcareous schist and lesser carbonaceous phyllite.

D_m Biotite-plagioclase-actinolite-chlorite schist similar to D_F found locally near top of unit D_q.

D_{lv} Feldspar muscovite-quartz schist (felsic metavolcanic rock).

MINERAL OCCURRENCES
Yukon MINFILE (2001)

MINFILE No.	Symbol	Name(s)	Deposit Type	Status	Map Unit
105G 013		HOO	Skarn (Pb-Zn)	Drilled Prospect	
105G 014	★	CHER	Exploration Target	Anomaly	Dq
105G 015		NAN	Volcanogenic	Anomaly	Dr
105G 016		EL	Volcanogenic	Prospect	Dlv
105G 017		PICK	Vein (Ag-Pb)	Showing	
105G 018		GRASS	Vein (W-Mo)	Showing	
105G 019		BOOT	Skarn (W)	Drilled Prospect	
105G 020	★	RILEY	Exploration Target	Anomaly	
105G 021		ZIELINSKI	Vein (Zn-Pb-Cu)	Showing	
105G 022	★	OUR	Exploration Target	Unknown	
105G 023	★	GIL	Exploration Target	Unknown	
105G 024		GOD	Volcanogenic	Anomaly	Dr
105G 025	★	CHISOLM	Exploration Target	Anomaly	
105G 026		RIVIERA	Volcanogenic	Drilled Prospect	Dr
105G 027		LEO	Vein (Cu-Au)	Prospect	Dr
105G 028		GYP	Volcanogenic	Prospect	Dr/Dlv
105G 029		GEE	Vein (Pb)	Showing	
105G 030	★	PIT	Exploration Target	Showing	Kg
105G 031		ROB, FIRST BASE	Volcanogenic	Drilled Prospect	Dr/Dlv
105G 032		PACK	Volcanogenic	Drilled Prospect	Dk
105G 033	★	TAK	Exploration Target	Anomaly	
105G 039		VINCENT	Vein (Zn-Ag-Pb-Cu)	Showing	
105G 040		JAY, FISHER	Volcanogenic	Drilled Prospect	MWq
105G 041	★	FINLAYSON	Exploration Target	Anomaly	
105G 042	★	MCEVOY	Exploration Target	Anomaly	
105G 043		BOT	Ultramafic (Asb)	Showing	Pum
105G 044	★	MINK	Exploration Target	Unknown	
105G 045	★	STARR	Exploration Target	Anomaly	
105G 046	★	TAG	Exploration Target	Unknown	
105G 047	★	HORTON	Exploration Target	Unknown	
105G 048		ELDORADO, PUP	Volcanogenic	Drilled Prospect	Dr
105G 049	★	COW	Exploration Target	Anomaly	
105G 050	★	ELK	Exploration Target	Unknown	
105G 051		CHOW	Volcanogenic	Prospect	CMCu
105G 052		DOL	Volcanogenic	Prospect	Dr
105G 053		CAMPBELL	Coal	Anomaly	
105G 054	★	SUN	Exploration Target	Anomaly	
105G 055		PHIL	Vein (Zn)	Drilled Prospect	
105G 056		PAY	SEDEX (Zn-Pb)	Drilled Prospect	DMe
105G 061		HOOLE	Volcanogenic	Showing	Dlv
105G 066	★	CW	Exploration Target	Anomaly	
105G 067	★	GEE, LAWN	Exploration Target	Unknown	
105G 069		FISH, IRENE, HARMAN	Skarn (Zn-Cu)	Prospect	
105G 070		ELECTRIC MINE, RENO	Volcanogenic	Prospect	CMCu
105G 071		MYDA	Skarn (W)	Prospect	
105G 072		WOLVERINE, FETISH	Volcanogenic	Deposit	Mwf
105G 073		QUANDARY	Ultramafic (Ni-Cu ± Asb)	Anomaly	Pum
105G 074		BEV	Ultramafic (Ni-Cu ± Asb)	Anomaly	Dum
105G 075	★	MCINTOSH	Exploration Target	Anomaly	
105G 076		FREBERG	Volcanogenic	Prospect	Dr
105G 077		FLIN	Volcanogenic	Drilled Prospect	Dlv
105G 078	★	FLON	Exploration Target	Anomaly	
105G 079	★	HUDSON	Exploration Target	Anomaly	
105G 080	★	BEV, AIRBORNE	Exploration Target	Drilled Prospect	
105G 081		MONEY, PNEUMONIA	Volcanogenic	Showing	Dk
105G 088	★	COOKIE	Exploration Target	Anomaly	
105G 089	★	HENNEL	Exploration Target	Anomaly	
105G 091	★	CARLOS, TUF	Exploration Target	Unknown	
105G 094		DWONK	SEDEX (Ba)	Drilled Prospect	DMe
105G 095	★	PEANUTS, SLATE	Exploration Target	Unknown	
105G 097		FOG	Skarn (W)	Showing	
105G 099		BRENDEX	Volcanogenic	Prospect	Dr
105G 100		EAGLE, HARRIS	Volcanogenic	Prospect	Dr
105G 101	★	ADDISON	Exploration Target	Drilled Prospect	
105G 102		HOWDEE	Skarn (Ag-Au)	Showing	
105G 104		SANDERS	Skarn (W)	Drilled Prospect	
105G 107	★	RIVIER	Exploration Target	Anomaly	
105G 108	★	WOLV	Exploration Target	Unknown	
105G 109	★	COPLAND	Exploration Target	Unknown	
105G 110	★	ETS	Exploration Target	Anomaly	
105G 111	★	TOR	Exploration Target	Unknown	
105G 112	★	DESOTO	Exploration Target	Drilled Prospect	
105G 113	★	AZZUS	Exploration Target	Anomaly	
105G 114	△	LADY LEE	Ultramafic (Jade)	Showing	Dum
105G 115		ANDY, JEFF	Vein (Ag-Pb-Zn)	Prospect	
105G 116	★	CHARLIE	Exploration Target	Anomaly	
105G 117		ABM, KUDZ ZE KAYAH, TAG	Volcanogenic	Deposit	Dk
105G 118		ICE	Volcanogenic	Deposit	PCb
105G 119		SHOT	Volcanogenic	Showing	Dlv
105G 120		BLUE LINE	Volcanogenic	Showing	Dlv
105G 121		NET	Volcanogenic	Showing	Dlv
105G 122		OVERTIME	Volcanogenic	Showing	Dk
105G 123		GOAL	Volcanogenic	Showing	Dlv
105G 124		RED LINE	Volcanogenic	Drilled Prospect	MGg
105G 125		GOON	Volcanogenic	Anomaly	Dlv
105G 126		RBI	Volcanogenic	Drilled Prospect	Dk
105G 127		COBB	Volcanogenic	Showing	Dk
105G 128	★	DOG	Exploration Target	Anomaly	
105G 129	★	MAJOR	Exploration Target	Anomaly	
105G 130	★	LEAGUE	Volcanogenic	Drilled Prospect	Dk
105G 131	★	DOT	Exploration Target	Anomaly	
105G 132	★	NECK	Exploration Target	Anomaly	
105G 133		AREA 18	Volcanogenic	Drilled Prospect	Dq
105G 134		PUCK	Volcanogenic	Drilled Prospect	Mwf
105G 139		ON	Volcanogenic	Drilled Prospect	Dk
105G 140		NAD	Volcanogenic	Drilled Prospect	MWq
105G 142		FIRST BASE	Volcanogenic	Anomaly	Dlv
105G 143		GP4F	Volcanogenic	Deposit	Dk

● ISOTOPIC AGE DATES

	Sample	Date ± 2 sigma	Mineral	Comments	Reference
E_b					
1	LJ2206854	48.6 ± 3.4 Ma	whole rock	igneous crystallization age	(2)
2	LJ0906851	55.3 ± 4 Ma	whole rock	igneous crystallization age	(2)
3	LJ0906853	55.4 ± 4 Ma	whole rock	igneous crystallization age	(2)
4	LJ017853	46.4 ± 4.6 Ma	whole rock	igneous crystallization age	(2)
5	R5225	58.2 ± 4.6 Ma	whole rock	igneous crystallization age	(2)
K_g					
6	ARG-33	112.2 ± 0.5 Ma	monazite	igneous crystallization age	Mortensen, J.K., in (5)
7	KG-31	113.0 ± 1.7 Ma	monazite	igneous crystallization age	Mortensen, J.K., in (5)
8	KG-31	107.7 ± 5.5 Ma	zircon	igneous crystallization age	Mortensen, J.K., in (5)
9	KG-31	103.8 ± 2.2 Ma	muscovite	igneous cooling age	Mortensen, J.K., in (5)
10	KG-31	103.4 ± 1.8 Ma	biotite	igneous cooling age	Mortensen, J.K., in (5)
11	KM-07	109.9 ± 0.5 Ma	monazite	igneous crystallization age	Mortensen, J.K., in (5)
12	KP-09	113.8 ± 1.0 Ma	monazite	igneous crystallization age	Mortensen, J.K., in (5)
13	MP-18	112.4 ± ? Ma	monazite	igneous crystallization age	Mortensen, J.K., in (5)
14	MP-18	111.6 ± ? Ma	zircon	igneous crystallization age	Mortensen, J.K., in (5)
15	MLB-89-321	90.8 ± 1.4 Ma	muscovite	igneous cooling age	(1)
16	MLB-89-321	100 ± 2.9 Ma	biotite	excess Ar	(1)
J_g					
17	DM-04	185.5 ± 1.0 Ma	titanite	igneous cooling age	Mortensen, J.K., in (5)
18	DM-04	187.6 ± 2.0 Ma	zircon	igneous crystallization age	Mortensen, J.K., in (5)
19	MLB-89-322a	180.9 ± 2.6 Ma	hornblende	igneous cooling age	(1)
P_{lg}					
20	GL-10	274.3 ± 0.5 Ma	zircon	igneous crystallization age	(4)
21	98DM-GB	273.4 ± 2.1 Ma	zircon	igneous crystallization age	Mortensen and Murphy, unpub.
MG_g / MG_{ag}					
22	AG-06	343 ± ? Ma	zircon	analytically uncertain	Mortensen, J.K., in (5)
23	AG-48	342 +7.1/-8.0 Ma	zircon	igneous crystallization age	Mortensen, J.K., in (5)
24	GG-19	360.0 ± 1.0 Ma	zircon	igneous crystallization age	Mortensen, J.K., in (5)
25	GG-20	ca. 360 Ma	zircon	sample plots in unit MWcl; could be quartzofeldspathic metaconglomerate derived from unit MGg	Mortensen, J.K., in (5)
26	96DM-119	357.3 ± 2.8 Ma	zircon	igneous crystallization age; 4 point discordia; body cuts fabric	Mortensen and Murphy, unpub.
27	98DM-88	361.1 ± 3.3 Ma	zircon	igneous crystallization age	Mortensen and Murphy, unpub.
MW_f / MW_q					
28	AS-50	ca. 360 Ma	zircon	igneous crystallization age	Mortensen, J.K., in (5)
29	P98-69	346.6 ± 2.2 Ma	zircon	igneous crystallization age	Piercey and Mortensen, unpub.
30	FV-21	356 ± 1.0 Ma	zircon	igneous crystallization age	Mortensen, J.K., in (5)
D_K					
31	FV-16	359.8 ± 9.0 Ma	zircon	sequence intruded by MGg	Mortensen, J.K., in (5)
32	FV-49	351.4 ± 1.7 Ma	zircon	as old as 360 so age too young	Mortensen, J.K., in (5)
33	P98-KZK	356.9 ± 5.3 Ma	zircon	" "	Piercey and Mortensen, unpub.
D_{Nd}					
34	HD-35	364.5 ± 2.5 Ma	zircon		Mortensen, J.K., in (5)
35	96DM-65	366.3 ± 10.2 Ma	zircon	igneous crystallization age; igneous crystallization age	Mortensen and Murphy, unpub.
D_{qp}					
36	QP-30	360.5 ± 1.9 Ma	zircon	igneous crystallization age	(4)
MS_g					
37	98DM-GRD	347.3 ± 3.7 Ma	zircon	igneous crystallization age	Mortensen and Murphy, unpub.
D_{lv}					
38	GM-11	ca. 360 Ma	zircon		Mortensen, J.K., in (5)
39	GM-12	ca. 360 Ma	zircon	analytical problems; analytical problems	Mortensen, J.K., in (5)
Metamorphic Cooling Ages					
40	AG-06	112.2 ± 0.5 Ma	monazite		Mortensen, J.K., in (5)
41	AG-08	105 ± 2.0 Ma	wr-muscovite	unit MGag	Mortensen, J.K., in (5)
42	GG-20	ca. 112 Ma	monazite	unit MGag	Mortensen, J.K., in (5)
43	MLB-89-320	104.6 ± 1.8 Ma	muscovite	possibly unit MWcl	(1)
44	MLB-89-326a	104.6 ± 2.0 Ma	biotite	unit MGag	(1)
45	MLB-89-328	113.4 ± 1.8 Ma	muscovite	unit MGg	(1)
46	WB-64-207-2	101 ± 5 Ma	biotite	unit MGag	(7)
47	96JT22-2	109.9 ± 1.3 Ma	biotite	unit DF	Murphy and Villeneuve, unpub.
48	96DM-6	113.2 ± 1.1 Ma	biotite	unit MGg	Murphy and Villeneuve, unpub.
49	96DM-95	112.5 ± 1.09 Ma	biotite	unit DF	Murphy and Villeneuve, unpub.
50	97DM-160	110.9 ± 1.12 Ma	biotite	unit DK	Murphy and Villeneuve, unpub.
51	97DM-182	123.5 ± 1.32 Ma	hornblende	unit Dqm	Murphy and Villeneuve, unpub.
52	97DM-275	109.6 ± 1.08 Ma	biotite	unit DF	Murphy and Villeneuve, unpub.
53	97DM-330	110.0 ± 1.08 Ma	biotite	unit DF	Murphy and Villeneuve, unpub.
54	97DM-330	140.0 ± 1.49 Ma	hornblende	unit Dq	Murphy and Villeneuve, unpub.
55	98DM-201	107.5 ± 1.0 Ma	biotite	unit Dq	Murphy and Villeneuve, unpub.
56	P98-136	106.5 ± 1.04 Ma	biotite	unit DK; unit DK	Murphy and Villeneuve, unpub.

REFERENCES - ISOTOPIC AGE DATES

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(2) Jackson, L.E., Gordey, S.P., Armstrong, R.L. and Harakal, J.E., 1986. Bimodal Paleogene volcanics near Tintina Fault, east-central Yukon, and their possible relationship to placer gold: *In* Yukon Geology, Volume 1, Exploration and Geological Services Division, Yukon, Yukon, Indian and Northern Affairs Canada, p. 139-147.

(3) Mortensen, J.K., 1992a. Pre-mid-Mesozoic tectonic evolution of the Yukon Tanana Terrane, Yukon and Alaska: Tectonics, vol. 11, p. 836-85.

(4) Mortensen, J.K., 1992b. New U-Pb ages for the Slide Mountain Terrane in southeastern Yukon Territory: *In* Radiogenic Age and Isotopic Studies: Report 5, Geological Survey of Canada, Paper 91-2, p. 167-173.

(5) Mortensen, J.K. (comp.), 1999c. Yukonage: An isotopic age database for the Yukon Territory: *In* Gordey, S.P. and Makepeace, A.J. (comps.), Yukon Digital Geology, Geological Survey of Canada, Open File D3806, and Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Open File 1999-1(D), 2 CD-ROMs.

(6) Wanless, R.K., Stevens, R.D., Lachance, G.R. and Edmonds, C.M., 1967. Age determinations and geological studies, K-Ar isotopic ages, report 7: Geological Survey of Canada, Paper 66-17.

FOSSILS

	Sample	Fossils	Period	Reference
T_{lJ} / T_{sS}				
1	83-MJO-CA6571	conodonts	Late Triassic, Early Norian	(2)
2	83-MJO-CA6583	conodonts	Late Triassic, Early Norian	(2)
3	83-MJO-CA6751	conodonts	Late Triassic, Early Norian	(2)
4	83-MJO-CA6759	conodonts	Late Triassic, Early Norian	(2)
5	TOM-76-23	conodonts	Late Triassic, Early Norian	(2)
	TOM-76-23	conodonts	Late Triassic, Early Norian	(2)
6	TOM-76-23-11B	conodonts	Late Triassic, Early Norian	(2)
	TOM-76-23-11C	conodonts	Late Triassic, Early Norian	(2)
7	TO-76-12-6	conodonts	Late Triassic, Early Carnian	(2)
P_{Cb}				
8	HP469	radiolaria	mid-Pennsylvanian to Early Permian; Atokan or possibly Missourian to Wolfcampian	(1)
C_c				
9	TOM-76-14	conodonts	Late Carboniferous	(2)
	TOM-76-14-1	conodonts	Late Carboniferous	(2)
	TOM-76-24-11B	conodonts	Pennsylvanian	(2)
10	96-OF-JH-STOP3	conodonts	Early Carboniferous, probably Serpukhovian	Orchard and Hunt, unpub.
D_l				
11	GGA-80-28A-246m	conodonts	Middle Devonian, probably Eifelian	Orchard and Gordey, unpub.
SD_Q / S_S				
12	TOA-73-81	graptolites	Early Silurian to Early Devonian	(2)

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SYMBOLS

Geological contact (approximate)

Fault or vein-fault, displacement unknown (approximate)

Thrust fault (approximate, teeth on hanging wall)

Normal fault (defined, dot on downthrown side)

Strike-slip fault (defined)

Limit of mapping

Isotopic age determination sample location (mineral codes; bi = biotite, hb = hornblende, mo = monazite, mu = muscovite, ti = titanite, wr = whole rock, zr = zircon) — *Age ± (2 sigma error) Ma system, mineral, (table entry no.)*

Fossil sample (number denotes entry number in legend fossil table) — *(table entry no.)*

Line of cross section — A B

Bedding measurement — 42

Foliation measurement — 33

New showing

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Digital cartography and drafting by Panya Lipovsky, Yukon Geology Program.

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

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Keep this map in a dark area to keep colours from fading.

Indian and Northern Affairs Canada
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Yukon Region

Open File 2001-33

PRELIMINARY BEDROCK GEOLOGICAL MAP OF NORTHERN FINLAYSON LAKE AREA (NTS 105 G) YUKON TERRITORY (1:100 000 scale)

by

D.C. Murphy[1], M. Colpron[1], S.P. Gordey[2], C.F. Roots[1, 2], G. Abbott[1], P.S. Lipovsky[1]

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