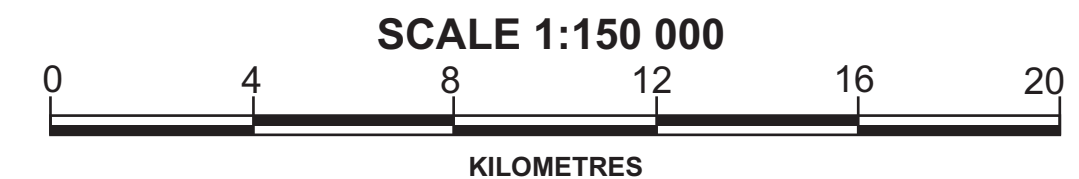


GEOLOGY of the **PENTICTON MAP SHEET** (east half)

NTS 082E/01/02/07/08/09/10/15/16



Geology and Compilation by Trygve Höy
Cartography by Wayne Jackaman

LEGEND

CENOZOIC

QUATERNARY

Qa unconsolidated sediments

NEOGENE

Pliocene/Miocene

Mpk Kallis Formation: plateau basalt; locally olivine pyric

PALEOGENE

Eocene

mEc Coryell intrusions: alkalic intrusive rocks; syenite, monzonite (bx - breccia)
Tenderloin complex: alkalic intrusive rocks; syenite, monzonite, diorite, pyroxenite
Alkalic intrusions: syenite, diorite, rhomb porphyry, quartz monzonite (in part, equivalent to mEc)

Penticton Group

Ep Undifferentiated alkalic volcanic rocks, sandstone, grit
Em Maron Formation: trachyte, alkali basalt, tuff; minor shale or slate
Ekr Kettle River Formation: sandstone, conglomerate; feldspathic grit, minor shale, tuff

Paleocene

Pigd Massive, leucocratic granodiorite, "white" granite; locally porphyritic
Pigp Porphyritic granite, magacystic K-spar granite

MESOZOIC

cretaceous

Kwh Whatash Lake Batholith: quartz monzonite, granite; leucocratic, K-feldspar magacystic; Kip: Lightning Peak granite

Early? - Middle Jurassic

Jgd Nelson intrusions: granodiorite, granite, minor diorite; locally porphyritic
Jogn Orthogneiss: granodiorite, diorite; may include Pgn
mJa Averil Complex: granodiorite, diorite, monzonite, monzonite, pyroxenite
Jur Rossland Group: andesite, phonolite, minor shale, siltstone

Late Triassic

Tnc Josh Creek diorite: diorite, granodiorite; actinolite-feldspar schist
Trbr Brooklyn Formation: massive greenstone, mafic volcanics; chert and limestone; related intrusions

PALEOZOIC

Late Devonian to Early Permian

Pkh Knob Hill Complex: mafic volcanic rocks, chert, argillite, greenstone
Pgb Greenwood gabbro: gabbro, diabase dykes, minor pegmatite
Sp Serpentinite
Patt Attwood Formation: siltstone, argillite, minor volcanic rocks
Pa Anarhist schist, complex: argillaceous quartzite, schists, metavolcanics; white dolomite (Pav - mafic lava)
Pmr Mount Roberts Formation: mafic metavolcanics, siltstone, slate, marble; minor ultramafic rocks

AGE UNKNOWN

Pgn Paragneiss; hornblende granodiorite; syenitic, granitic
Pmg Monashee gneiss

PRECAMBRIAN

PROTEROZOIC

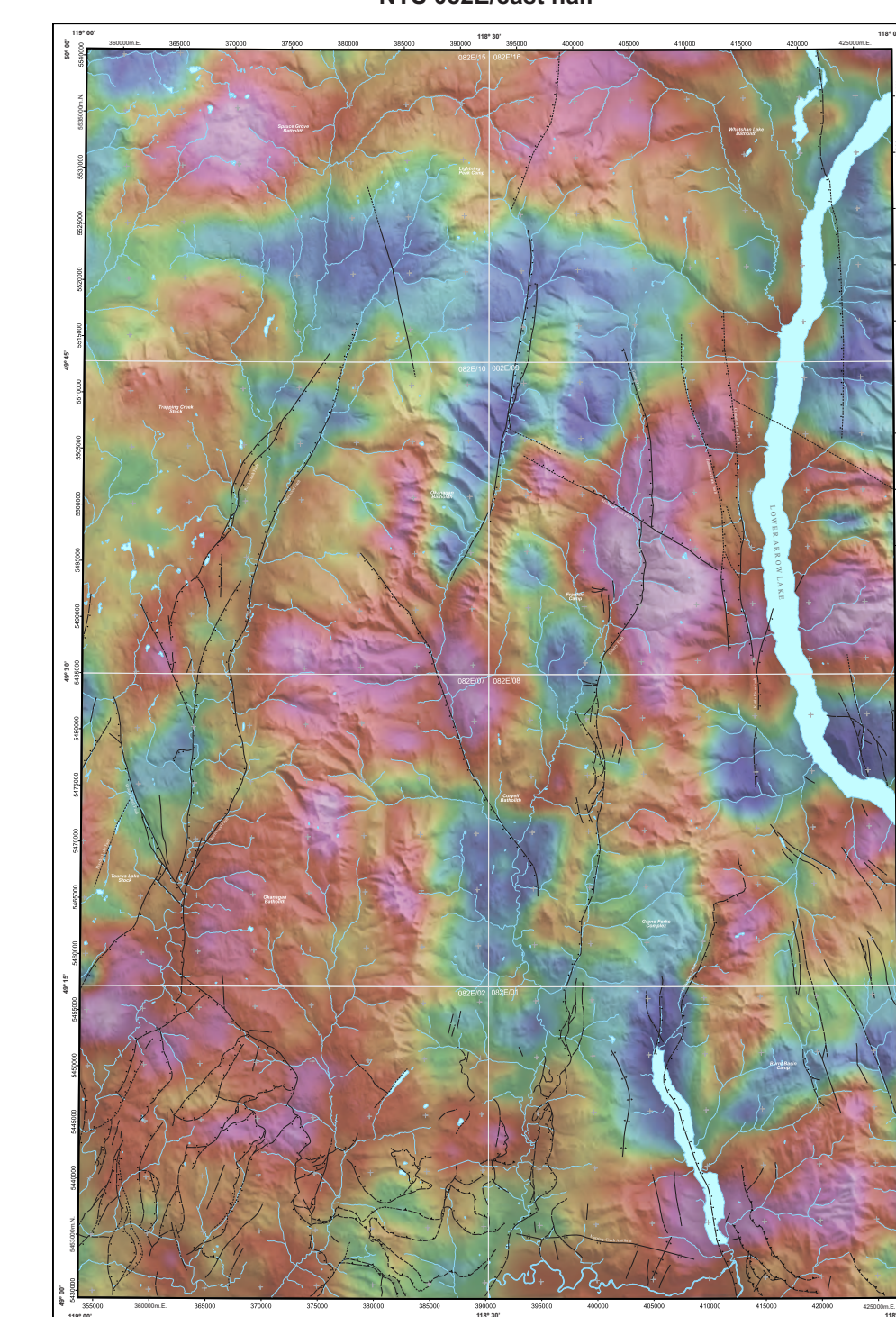
Mesoproterozoic

Progn Orthogneiss; hornblende granodiorite, syenitic, granitic
Pr5 Hornblende schist, amphibolite
Pr4 Amphibolite, calcareous schist, minor marble, calcisilicate gneiss
Pr3 Paragneiss, sillimanite schist, calcisilicate gneiss, minor marble
Pr2 Quartzite, marble, calcisilicate gneiss, minor pegmatite, amphibolite

Paleoproterozoic

Pr1 Core gneiss; paragneiss and schist, marble, calcisilicate gneiss and amphibolite

AEROMAGNETIC DATA NTS 082E/east half



SOURCES OF DATA

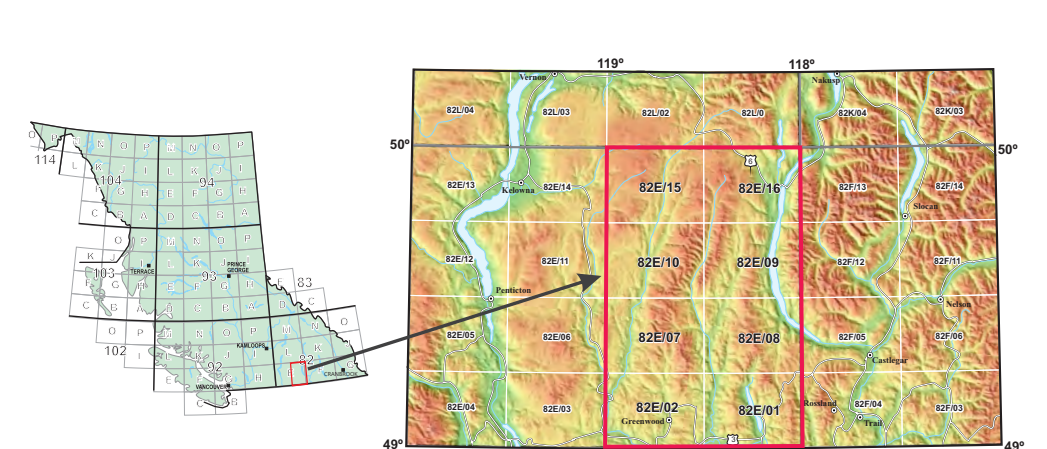
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BASE MAP INFORMATION

NAD 1983 UTM ZONE 11
TRANSVERSE MERCATOR
PROJECTION
APPROXIMATE MEAN DECLINATION 2017
FOR CENTRE OF MAP (082E/EAST HALF)
ANNUAL CHANGE 8.9/YEAR WEST
National Topographic Data Base (NTDB)
URL: <http://www.geobase.ca>
Natural Resources Canada, Centre for Topographic Information
Canadian Digital Elevation Data (CDED)
URL: <http://www.geobase.ca>
Base Mapping and Geomatics Services - B.C. Government

LOCATION MAP



AGE DATES

SAMPLE ID	UTME	UTMN	ROCK TYPE	UNIT	COLLECTOR(S)	DATED BY	METHOD	MINERAL	AGE
Grand Forks (082E/01)									
13147	365481	543441	metavolcanic		Stevens et al. (1984)	GSC	KAr/Ar		64.20
14056	410901	543410	diorite		Adair et al. (2002)	U of Alberta	U-Pb		188.00
14055	413870	544470	diorite	Josh Creek	Adair et al. (2002)	U of Alberta	U-Pb		218.00
14053	421550	543330	syenite		Bennett et al. (1993)	U of Alberta	KAr/Ar		168.00
Greenwood (082E/02)									
13024	362030	543030	volcanic ash	Marion Fm	Mahoney (1964)	U of Alberta	KAr/Ar		50.00
14046	361710	543410	volcanic ash		Mahoney et al. (2003)	U of Alberta	KAr/Ar		49.00
15023	373230	542030	pyroxenite	Saquo	Mahoney et al. (2003)	Queen's U	KAr/Ar		150.00
14037	362230	542030	alkali-pyroxenite	Lundegren	Daniel et al. (2005)	U-Pb			150.00
14045	360770	544330	metavolcanic		Chen (1986)	UBC	KAr/Ar		266.00
14073	361830	543030	metavolcanic	Pg	Chen (1986)	UBC	KAr/Ar		230.00
08NAN-GR1	377230	543030	granodiorite	Greenwood	Mahoney et al. (2010)	J. Geol. Soc. UBC	U-Pb		179.00 ± 3.0
gr-107	373030	542330	granite		Adair et al. (2002)	U of Alberta	U-Pb		182.00 ± 1.2
gr-200	377030	542330	granodiorite		T. Hoy (2010)	R. Friedman, UBC	U-Pb		168.00 ± 1.2
14049	361530	542030	granite		Mahoney et al. (2010)	J. Geol. Soc. UBC	U-Pb		171.00 ± 2.3
Almond Mountain (082E/07)									
13847	368930	548030	syenite	Coryell	Hoy et al. (1981)	GSC	KAr/Ar		51.80
13853	368930	547930	syenite	Coryell	Hoy et al. (1981)	GSC	KAr/Ar		50.80
07NANAN-510	368930	547130	diabase	Jgd	Mahoney et al. (2010)	J. Geol. Soc. UBC	KAr/Ar		17.00 ± 1.3
AAK-470	361400	547070	basalt	Marion Fm	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		27.80 ± 2.1
AAK-391	367270	546830	gneiss	Pg	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		20.00 ± 1.3
AAK-563	361830	545630	granite	Pg	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		27.70 ± 0.9
AAK-579	364230	547130	granodiorite	Jgd	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		58.40 ± 1.8
AAK-434	368930	545070	granodiorite	Jgd	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		177.70 ± 2.0
AAK-529	361570	547070	diabase	Jgd	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		170.30 ± 0.5
Deer Park (82E/08)									
14048	368930	546730	syenite	Coryell	Hoy and Ross (1981)	GSC	KAr/Ar		53.40
14058	368930	546930	syenite	Coryell	Hoy and Ross (1981)	GSC	U-Pb		51.10
14051	400230	548030	granite	Lundegren	Perrin (1983)	GSC	U-Pb		56.00
Burrell Creek (082E/09)									
BC-105	400630	548030	diabase	Lundegren	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		52.00 ± 1.0
BC-173	400230	548030	pyroxenite	Tenderloin Cr.	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		50.00 ± 0.6
BC-227	400630	548130	metavolcanic	Tenderloin Cr.	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		51.00 ± 0.4
BC-232	400630	548130	metavolcanic	Averil Cr.	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		51.00 ± 0.4
BC-255	400330	548070	metavolcanic	Averil Cr.	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		176.00 ± 2.0
BC-240	400630	548130	syenite	Averil Cr.	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		164.00 ± 1.8
BC-262	399330	548030	metavolcanic	Averil Cr.	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		175.00 ± 2.1
BC-213	400630	548030	diorite	Tenderloin Cr.	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		58.00 ± 0.7
BC-214	400630	548130	metavolcanic	Tenderloin Cr.	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		59.50 ± 0.7
Christian Valley (082E/10)									
14045	361030	546130	basalt	Kalla Fm	Boyer et al. (1981)	J. Geol. Soc. UBC	KAr/Ar		6.00 ± 0.4
14040	360930	546030	basalt	Kalla Fm	Boyer (1982)	GSC, Ottawa?	KAr/Ar		4.00 ± 0.5
14106	361400	546730	basalt	Kalla Fm	Mahoney (1980)	J. Geol. Soc. UBC	KAr/Ar		5.10 ± 1.0
15024	360770	546730	basalt	Kalla Fm	Stevens et al. (1983)	GSC, Ottawa	KAr/Ar		5.00 ± 0.9
12757	361730	546030	granite	Pg	Hoy and Ross (1980)	GSC, Ottawa	KAr/Ar		52.00 ± 0.3
14184	361300	546830	basalt	Kalla Fm	Mahoney (1980)	J. Geol. Soc. UBC	KAr/Ar		5.00 ± 0.9
CV-105	360430	548030	alkali-pyroxenite	Marion Fm	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		20.70 ± 0.99
CV-104	360770	548130	alkali-pyroxenite	Marion Fm	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		21.00 ± 1.8
CV-103	360430	548030	granite	Pg	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		47.10 ± 0.36
CV-104	360930	548130	diabase	Pg	T. Hoy (2010)	R. Friedman, UBC	U-Pb		27.00 ± 0.96
CV-110	361400	548030	alkali-pyroxenite	Marion Fm	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		50.30 ± 0.70
CV-108	360930	548130	alkali-pyroxenite	Marion Fm	T. Hoy (2010)	J. Geol. Soc. UBC	Ar-Ar		52.70 ± 0.96
CV-208	360430	548030	alkali-pyroxenite	Pg	T. Hoy (2010)	R. Friedman, UBC	U-Pb		21.47 ± 0.45
CV-204	360770	548030	alkali-pyroxenite	Marion Fm	T. Hoy (2010)	J. Geol. Soc. UBC	U-Pb		48.40 ± 0.77