

GEOLOGY
of the
PENTICTON MAP SHEET (east half)

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

SCALE 1:150 000
0 4 8 12 16 20
KILOMETRES

Geology and Compilation by Trygve Høy
Cartography by Wayne Jackaman

LEGEND

CENOZOIC

QUATERNARY

Qa unconsolidated sediments

NEOGENE

Pliocene/Miocene

MPK

Kallis Formation: plateau basalt; locally olivine phryic

PALEOGENE

Eocene

Penticton Group

Ep

Undifferentiated alkalic volcanic rocks, sandstone, grit

Em

Marron Formation: trachyte, alkali basalt, tuff; minor shale or slate

Ekr

Kettle River Formation: sandstone, conglomerate; feldspathic grit, minor shale, tuff

mEc

Coryell intrusions: alkalic intrusive rocks; syenite, monzonite (b-x breccia)

mEt

Tenderloin complex: alkalic intrusive rocks; syenite, monzonite, diorite; pyroxenite

Ei

Alkalic intrusions: syenite, diorite, rhomb porphyry, quartz monzonite (in part, equivalent to mEc)

Paleocene - Eocene

Eob

Okanagan Batholith: granodiorite, granite; locally porphyritic

Eobg

Porphyritic granite, magacystic K-spar granite

MESOZOIC

Cretaceous

Kwh

Whatsan 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

Averill complex: granodiorite, diorite, monzonite, monzonite, pyroxenite

Ur

Rossland Group: andesite, phonolite, minor shale, siltstone

Late Triassic

Trjc

Josh Creek diorite: diorite, granodiorite; actinolite-feldspar schist

Trbv

Brooklyn Formation: massive gneiss, mafic volcanics; chert and limestone; related intrusions; Trn - undifferentiated Nicola Group

PALEOZOIC

Late Devonian to Early Permian

Pkh

Knob Hill Complex: mafic volcanic rocks, chert, argillite, gneiss

Pgb

Greenwood gabbro: gabbro, diabase dykes, minor pegmatite

sp

Serpentine

Patt

Attwood Formation: siltstone, argillite, minor volcanic rocks

Pa

Anarhist schist: 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, schist, may include gneissic granodiorite; Pmg - Monashee complex: paragneiss, schist, amphibolite, calcisilicate schist

Ogn

Orthogneiss, foliated to gneissic granodiorite

PRECAMBRIAN

PROTEROZOIC

Grand Forks Complex

Mesoproterozoic

Progn

Orthogneiss; hornblende granodiorite, syenitic, granitic

P4

Hornblende schist, amphibolite

P5

Amphibolite, calcareous schist, minor marble, calcisilicate gneiss

P6

Paragneiss, sillimanite schist, calcisilicate gneiss, minor marble

P7

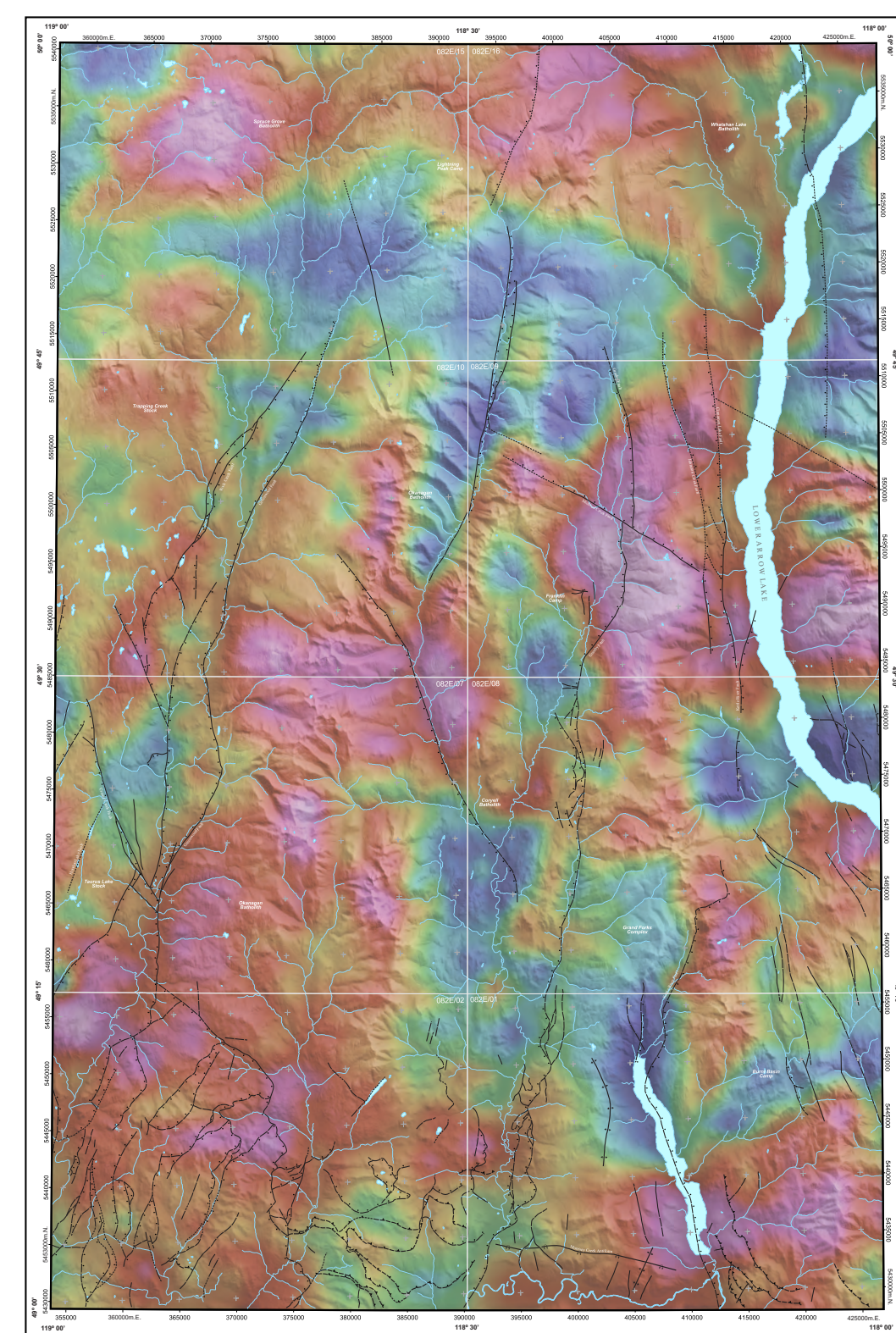
Quartzite, marble, calcisilicate gneiss, minor pegmatite, amphibolite

Paleoproterozoic

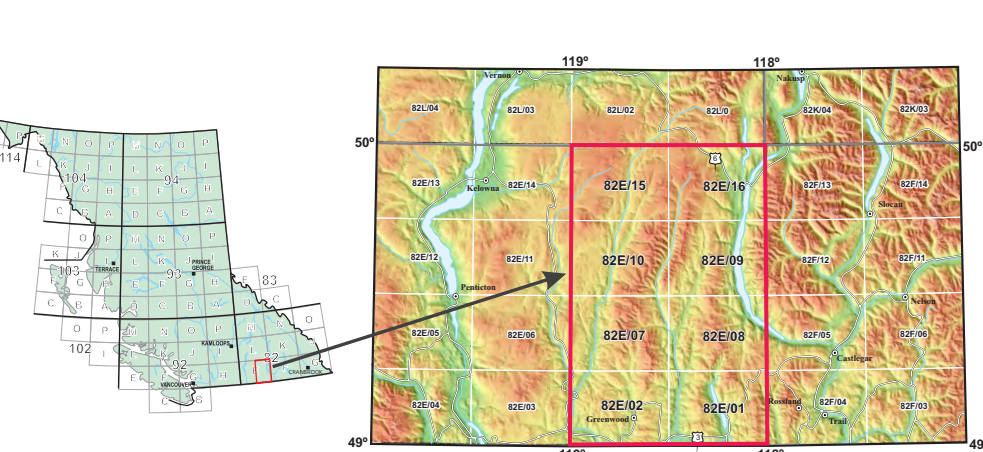
P1

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

AEROMAGNETIC DATA
NTS 082E/east half



LOCATION MAP



SOURCES OF DATA

BC Geological Survey (2017): MINFILE BC mineral deposits database; BC Ministry of Energy and Mines, BC Geological Survey. URL: <http://minfile.ca/> (September 2011), (update December 2017 with date of data download).

Canadian Aeromagnetic Data Base (2010): Geoscience Data Repository, Geological Survey of Canada, Earth Sciences Sector, Natural Resources Canada, Government of Canada.

Christopher, P.A. (1978): East Okanagan Uranium area, south-central B.C.; B.C. MEMPR, Preliminary map 29.

Church, B.N. (1989): Geological setting and mineralization in the Mount Attwood-Phoenix area of the Greenwood camp, MEMPR, Paper 1986-2.

Drysdale, C.W. (1915): Geology of the Franklin mining camp, southern British Columbia; GSC, Memoir 15.

Fyles, J.T. (1980): Geology of the Greenwood-Grand Forks area, British Columbia; MEMPR, Open File 1980-25.

Hoy, T., Friedman, R. and Gables, J. (2019): Summary report on U-Pb and Ar-Ar age dating, Penticton map sheet, southern British Columbia; in Geology of the Penticton map sheet, Geoscience BC map 2019-04 (revised 2022).

Hoy, T., Friedman, R. and Gables, J. (2020): Porphyry, base-metal and gold potential, Boundary-East Okanagan area, southern British Columbia; in Geoscience BC Summary of Activities 2019; Report 2020-1, p.23-33.

Hoy, T., Friedman, R. and Gables, J. (2021): Paleogene Penticton Group, Boundary area, southern British Columbia; in Geoscience BC Summary of Activities 2021; Report 2020-1, p.55-66.

Hoy, T. and Jackaman, W. (2005): Geology of the Grand Forks map sheet, British Columbia (NTS 082E/01); MEMPR, Geoscience Map 2005-2, scale 1:50 000.

Hoy, T. and Jackaman, W. (2010): Geology of the Deer Park map sheet (NTS 82E/08); Geoscience BC, Map 2010-7-1, scale 1:50 000.

Hoy, T. and Jackaman, W. (2013): Geology of the Burnell Creek map sheet (NTS 82E/09); Geoscience BC, Map 2013-07-1, scale 1:50 000.

Hoy, T. and Jackaman, W. (2016): Geology of the Almond Mountain map sheet (NTS 82E/07); Geoscience BC, Map 2016-07-1, scale 1:50 000.

Hoy, T. and Jackaman, W. (2017): Geology of the Christian Valley map sheet (NTS 82E/10); Geoscience BC, Map 2017-10, scale 1:50 000.

Hoy, T. and Jackaman, W. (2018): Geology of the Greenwood map sheet (NTS 82E/02); Geoscience BC, Map 2018-11, scale 1:50 000.

Jackaman, W. (2010): QUEST-South Project Sample Reanalysis, Geoscience BC, Report 2010-4, 4 p., URL: <http://www.geosciencebc.com/2010-004.asp> (November 2016).

Little, H.W. (1957): Kettle River (East half), Geological Survey of Canada, Map 6-1957, scale 1:253,440.

Little, H.W. (1979): Geology of the Greenwood map area, British Columbia; GSC, Paper 79-29.

Massey, N. (2007a): Geology and mineral deposits of the Rock Creek area, British Columbia; BC MEMPR, BC Geological Survey, Open File 2007-7.

Massey, N. and Duffy, A. (2008): Geology and mineral deposits of the area east of Beaverdell, British Columbia; MEMPR, Open File 2008-9.

Preto, V.A. (1970): Structure and petrology of the Grand Forks Group, BC; GSC, Paper 69-22.

Renwick, L. (1915): Ore deposits of the Beaverdell map area, GSC, Memoir 79, 172 p.

Templeman-Kluit, D.J. (1989): Geology, Penticton, British Columbia; GSC, Map 1736A, scale 1:250 000.

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://ntdb.geosciencebc.ca/>

Natural Resources Canada, Centre for Topographic Information
Canadian Digital Elevation Data (CDED)
URL: <http://www.geosciencebc.ca/>

Base Mapping and Geomatics Services - B.C. Government