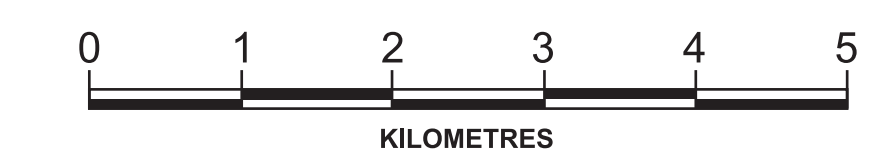


GEOSCIENCE BC MAP 2013-07-1  
**GEOLOGY**  
of the  
**BURRELL CREEK MAP SHEET**

NTS 82E/09

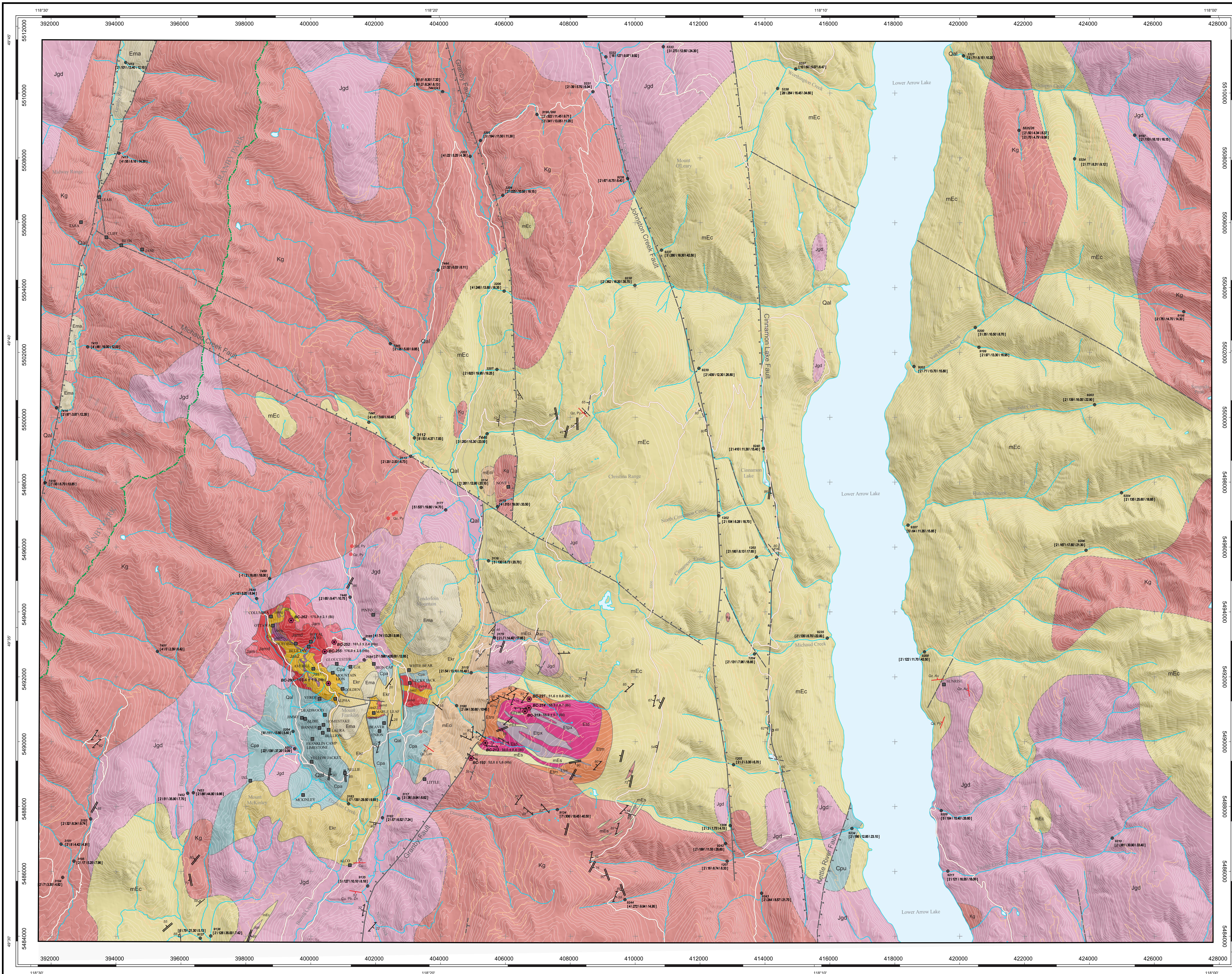
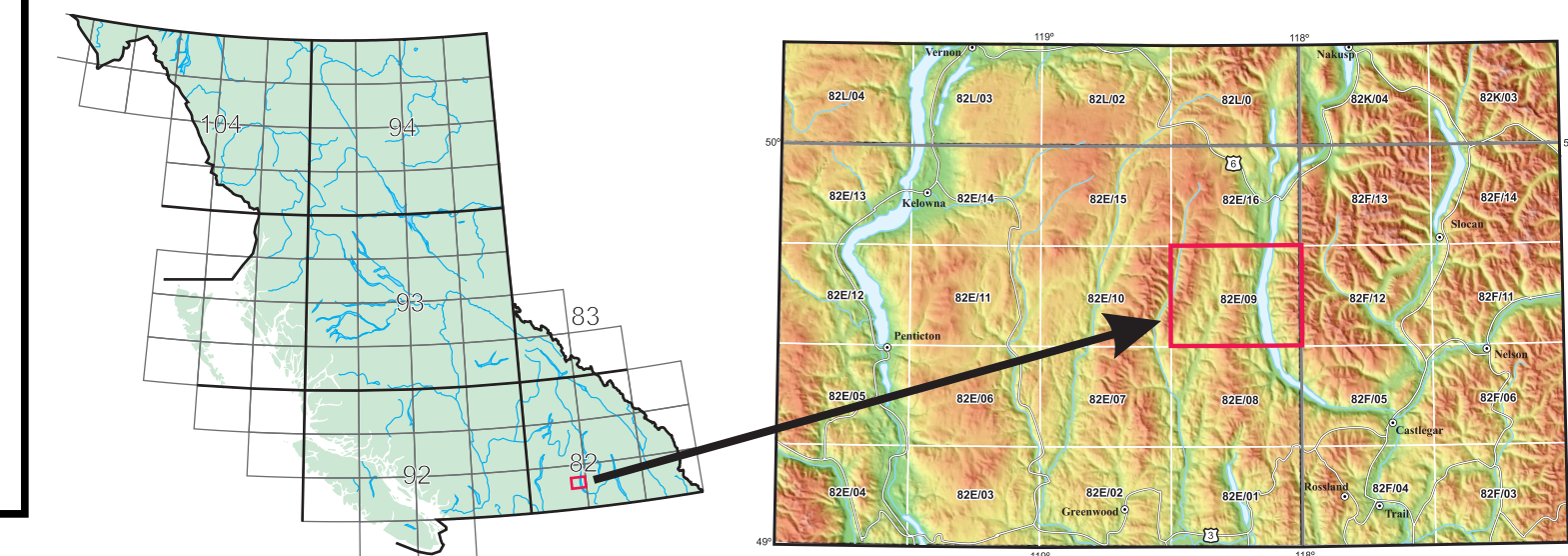
SCALE 1:50 000



Geology and Compilation by Trygve Höy  
Cartography by Wayne Jackaman

**LEGEND**

- CENOZOIC**
- QUATERNARY**
- Qal alluvium, sand, gravel, till
- Eocene**
- Emm MARRON FORMATION: alkalic basalt, trachyte; well banded mafic tuff, blocky tephra
  - Ekr KETTLE RIVER FORMATION: conglomerate, feldspathic grit, water tain tuff; minor rhyolite flows; includes overlying "McKinley rhyolite"
  - mEc CORVELL PLUTONIC SUITE – undifferentiated syenite and monzonite
    - mEci contact zone; mixed Coryell dikes, fine grained granular syenite, syenite porphyry and host granitic rocks
    - mEs syenite, commonly porphyritic, forming dykes in massive Coryell, the Tenderloin Complex and country rock
- TENDERLOIN PLUTONIC COMPLEX: zoned, ultramafic to intermediate alkalic plutonic complex
- Etpx pyroxenite, gabbro: dark grey to black, medium to coarse grained comprising mainly augite, hornblende, biotite and minor plagioclase, typically massive
  - Erd monzogabbro and diorite; medium to coarse grained, gradational with Etpx, with up to 50% plagioclase
  - Etm monzonite, quartz monzonite, monzodiorite; medium grained, commonly foliated; contains 10 to 25% mafic minerals (augite, hornblende, biotite)
- MESOZOIC**
- CRETACEOUS**
- Kg undifferentiated granite; medium to coarse grained, massive to porphyritic, white to pink granite with variable but generally minor mafic content; local pegmatite phases; includes, in part, mEc and Jgd
- JURASSIC**
- Jgd NELSON PLUTONIC SUITE - undifferentiated granodiorite, granite; includes in part, Kg
- AVERRILL PLUTONIC COMPLEX: zoned, ultramafic to intermediate alkalic plutonic complex
- Jas syenite, coarse grained (Jas1) with a marginal fine to medium grained phase (Jas2); may, in part, correlate with mEc
  - Jam monzonite; K-feldspar and plagioclase with up to 50% mafic minerals
  - Jamd intermediate monzodiorite; grey, granular, with variable (30-60%) mafic minerals, mainly augite, with K-feldspar and plagioclase
  - Jamg mafic monzogabbro, dark grey to black, typically 60-90% augite, hornblende and biotite with interstitial K-feldspar and minor plagioclase
  - Japx ultramafic pyroxenite, medium to coarse grained, black, comprising mainly augite and biotite with minor interstitial K-feldspar
- PALEOZOIC**
- Cpa FRANKLIN GROUP: Mafic volcanics, argillite, siltstone and minor limestone and skarn; typically fractured, altered and deformed
  - Cpu UNDIFFERENTIATED: metasediments and metavolcanics
- SYMBOLS**
- CONTACT: DEFINED, APPROXIMATE, ASSUMED
  - FAULT: DEFINED, APPROXIMATE OR ASSUMED
  - NORMAL FAULT: DEFINED, APPROXIMATE OR ASSUMED
  - FOLIATION, CLEAVAGE
  - JOINT
  - VEIN
  - DYKE
  - MINERALIZATION
  - MINERAL OCCURRENCE (MINFILE NAME)
  - AR-AR DATE
  - RGS STREAM SITE (ID NUMBER & AQUIFUC/PB)
  - CONTOUR LINES (100 METRE INTERVALS)
  - FOREST SERVICE ROAD: ACTIVE, OTHER
  - PARK BOUNDARY
- BASE MAP INFORMATION**
- NORTH AMERICAN DATUM 1983
  - UTM ZONE 11
  - TRANSVERSE MERCATOR PROJECTION
  - APPROXIMATE MEAN DECLINATION 1978 FOR CENTRE OF MAP 82E/09. ANNUAL CHANGE DECREASING 4.9".
  - National Topographic Data Base (NTDB) URL: <http://www.geogebra.org>
  - Natural Resources Canada, Centre for Topographic Information Canadian Digital Elevation Data (CDED) URL: <http://www.geobase.ca>
  - Base Mapping and Geomatic Services - B.C. Government



**AEROMAGNETIC DATA - NTS 082E/09**

Canadian Aeromagnetic Data Base (2011) Airborne Geophysics Section, GSC - Central Canada Division, Geological Survey of Canada, Earth Sciences Sector, Natural Resources Canada.  
URL: <http://www.nrcan.gc.ca/earth-sciences/products-services/geoscience-data-repository>

**SOURCES OF DATA**

**Geology**

BC Geological Survey (2012a): MapPlace GIS internet mapping system; BC Ministry of Energy, Mines and Natural Gas, MapPlace website.

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Little, H.W. (1957): Kettle River, east half, Similkameen, Kootenay and Osoyoos Districts, British Columbia; Geological Survey of Canada, Map 6-1957, scale 1:253 440.

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**Other**

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Jackaman, W. (2010): QUEST-South Project Sample Reanalysis; Geoscience BC, Report 2010-4, 4 p.

Ar-AR analyses: J.E. Gibbels, 2013, Pacific Centre for Isotope and Geochemical Research, UBC.

**MINFILE**

NAME	NUMBER	STATUS	COMMODITIES	DEPOSIT TYPE
MCKINLEY	082ENE001	Past Producer	Cu, Ag, Pb, Zn, Au	Cu skarn
BANNER	082ENE002	Showing	Au, Ag, Pb, Zn, Cu	Polymetallic veins Ag-Pb-Zn+Au
UNION	082ENE003	Past Producer	Ag, Au, Zn, Pb, Cu, Pt	Polymetallic veins Ag-Pb-Zn+Au
LITTLE	082ENE004	Showing	Pb, Zn	Polymetallic veins Ag-Pb-Zn+Au
GLOUCESTER	082ENE005	Showing	Au, Ag, Cu, Mo, Zn, Pb	Polymetallic veins Ag-Pb-Zn+Au
G.H.	082ENE006	Showing	Cu	Cu skarn
AVERRILL	082ENE007	Showing	Cu, Ag, Pt, Pd	Alaska-type Pt
BUFFALO	082ENE008	Showing	Cu, Pt, Pd	Alaska-type Pt
MAPLE LEAF	082ENE009	Past Producer	Cu, Ag, Cu, Pt, Pd	Alaska-type Pt
ROYAL TINTO	082ENE010	Showing	Fe	Fe skarn (?)
BULLION	082ENE013	Showing	Ag, Au, Cu, Pb, Zn	Polymetallic veins Ag-Pb-Zn+Au
ALCO	082ENE014	Showing	Cu, Mo, Au	Porphyry Cu +/- Mo +/- Au
PINTO	082ENE019	Showing	Au, Ag, Cu	Porphyry-related Au
VERDE (L.1011S)	082ENE020	Showing	Au, Ag, Cu, Pb, Zn	Polymetallic veins Ag-Pb-Zn+Au
YELLOW JACKET	082ENE021	Showing	Cu, Pb, Zn	Cu skarn
IXL	082ENE033	Showing	Cu, Au, Pb, Zn	Porphyry Cu +/- Mo +/- Au
JIMMY	082ENE042	Showing	Ag, Zn, Pb, Cu	Polymetallic veins Ag-Pb-Zn+Au
NOVE 1	082ENE045	Showing	Ag, Cu, Pb, Au	Porphyry Cu +/- Mo +/- Au
ALDIE	082ENE050	Showing	Au, Ag, Pb, Cu	Polymetallic veins Ag-Pb-Zn+Au
HOMESTAKE	082ENE051	Past Producer	Au, Ag, Pb, Zn, Cu	Epithermal Au-Ag: low sulphidation

URL: <http://www.em.gov.bc.ca/Mining/Geosurv/Minfile/>

NAME	NUMBER	STATUS	COMMODITIES	DEPOSIT TYPE
ALPHA	082ENE052	Showing	Au, Ag, Cu	Intrusion-related Au pyrrhotite veins
GOLDEN	082ENE053	Showing	Pt, Cu	Alaska-type Pt
BLUE JAY	082ENE054	Showing	Cu, Ag	Alkalic porphyry Cu
MOUNTAIN LION	082ENE055	Showing	Pt	Alaska-type Pt
LUCKY JACK (L.1026S)	082ENE056	Showing	Cu, Pt, Au	Vein, breccia and stockwork
WHITE BEAR	082ENE057	Showing	Cu, Au, Ag	Vein, breccia and stockwork
IRON CAP	082ENE058	Showing	Fe, Cu	Fe skarn
NELLIE	082ENE059	Showing	Cu	Cu vein
COLUMBIA	082ENE060	Showing	Pt, Cu	Alaska-type Pt
OTTAWA	082ENE061	Showing	Pt, Cu	Alaska-type Pt
FRANKLIN CAMP LIMESTONE	082ENE062	Showing	LS	Limestone
DEADWOOD	082ENE063	Showing	Au, Ag, Pb, Zn, Cu	Polymetallic veins Ag-Pb-Zn+Au
LAURA	082ENE066	Showing	Ag, Au, Pb, Zn	Epithermal Au-Ag: low sulphidation
CLIFF	082ENE067	Prospect	Au, Ag	Epithermal Au-Ag: low sulphidation
BETH	082ENE068	Showing	Au, Ag	Polymetallic veins Ag-Pb-Zn+Au
LEAH	082ENE069	Showing	Au, Ag	Epithermal Au-Ag: low sulphidation
JANE	082ENE070	Showing	Au, Ag, Cu	Vein, breccia and stockwork
TARA	082ENE071	Prospect	Au, Ag	Epithermal Au-Ag: low sulphidation
BEAVER	082ENE080	Showing	Cu, Au	Unknown
SUNRISE	082ENE083	Showing	Au	Au-Quartz Vein