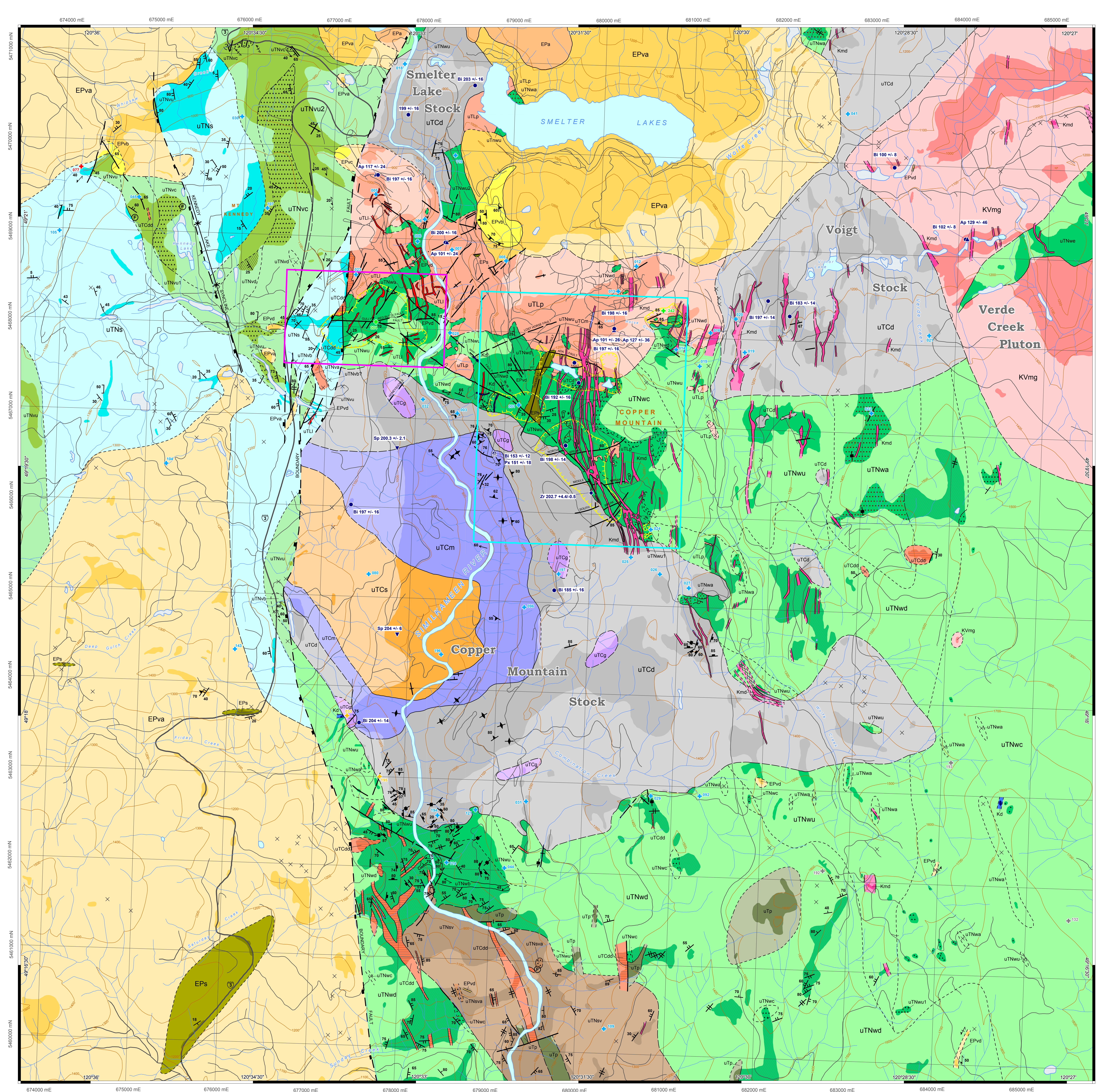




Alkaline Cu-Au Porphyry Systems in British Columbia: Copper Mountain

NTS 92H/7, 8
TRIM 92H.027, 028, 037, 038
Geology by V.A. Preto
Compiled by G.T. Nixon
GIS Cartography by E.A.M. Macdonald

Scale 1:15 000
0 0.5 1
kilometre

Legend

Stratified Rocks

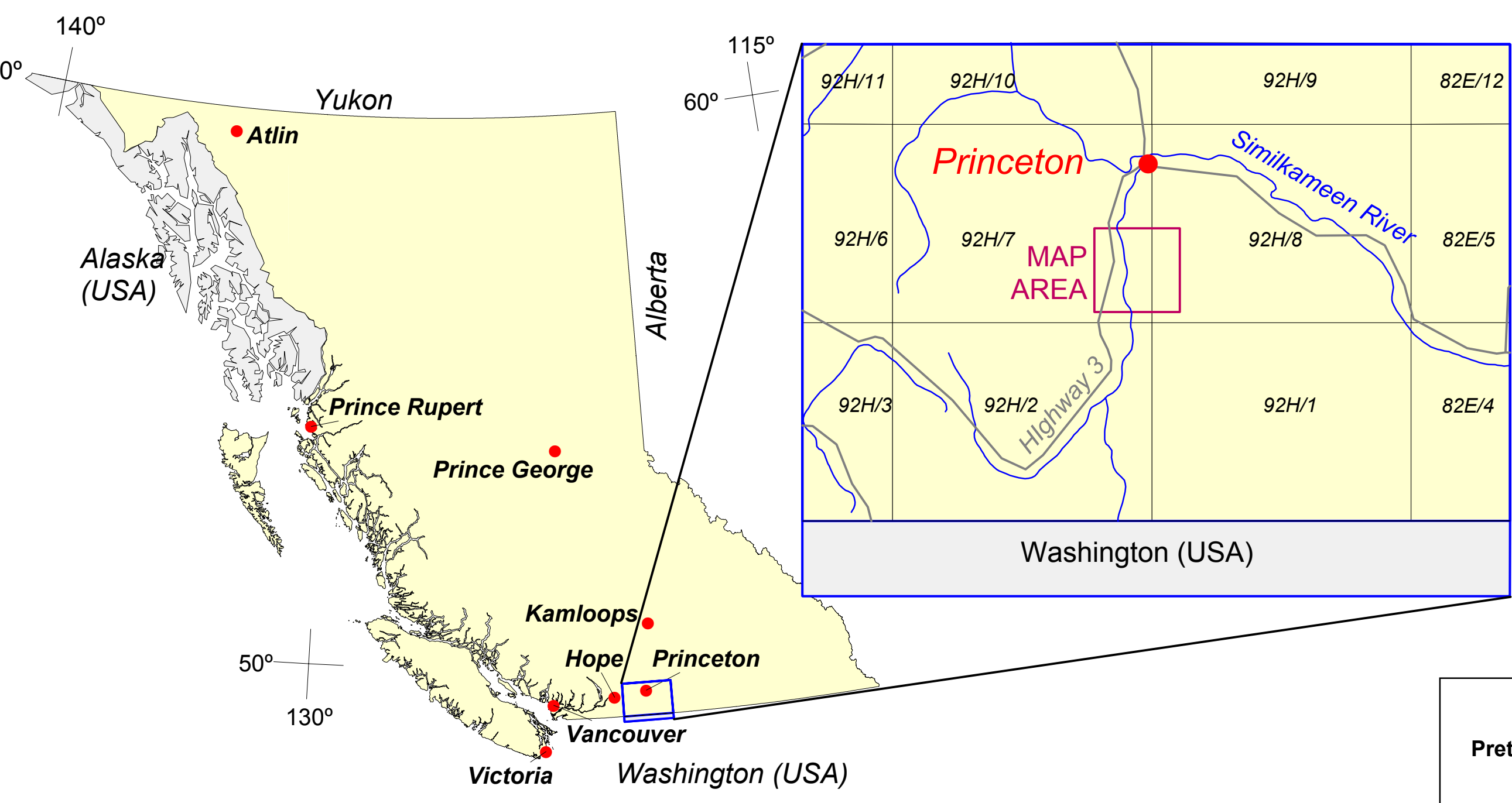
- Tertiary (Middle Eocene)**
PRINCETON GROUP
Allenby Formation
EPa Dacite tuff, breccia, and flows
EPVa Varicoloured andesite and basalt flows, breccia and tuff
EPVb Massive grey and buff hornblende andesite porphyry
EPVc Dark grey to black augite basalt porphyry
EPVd Grey andesite and dark mafic dikes
Sedimentary Rocks
EPs Conglomerate, minor sandstone
Late Triassic
NICOLA GROUP
Volcanic and Volcaniclastic Rocks
uTNw Massive andesite, minor basalt and dacite
uTNb Pillow lava and/or pillowed andesite
uTNc Volcaniclastic breccia
uTNd Tuff
uTNu Undifferentiated volcanic rocks
uTNu1 Undifferentiated uTNva and uTNvd
uTNu2 Undifferentiated uTNva, uTNvb, uTNvc, and uTNvd
Sedimentary rocks
uTNS Grey and dark grey, graded bedding, calcareous siltstone and sandstone, polymictic conglomerate, minor bioclastic limestone
uTNw Massive andesite, minor basalt and dacite
uTNw1 Pillow lava
uTNw2 Volcaniclastic breccia
uTNw3 Grey, green, buff and brownish, commonly graded bedding, andesitic tuff, minor volcanic siltstone and sandstone
uTNw4 Undifferentiated volcanic and volcaniclastic rocks
uTNw5 Undifferentiated uTNwc and uTNwd
uTNw6 Undifferentiated uTNwa and uTNwu
Volcanic and Sedimentary Rocks
uTNv Grey and dark grey, graded and/or crossbedded, volcanic siltstone and sandstone, polymictic conglomerate, minor bioclastic limestone
uTNv1 Volcanic breccia, tuff and massive andesite

Intrusive Rocks

- Post-Lower Cretaceous**
Dikes
Kd Grey andesite feldspar porphyry dikes
'Mine Dikes'
Kmd Light grey and buff felsite, and quartz, quartz-feldspar and feldspar porphyry dikes
Late Lower Cretaceous
Verde Creek Quartz Monzonite
KVmg Porphyritic biotite-hornblende quartz monzonite and/or granite
Late Triassic
COPPER MOUNTAIN INTRUSIONS
Lost Horse Intrusions
uTLr Latite, microdiorite and microsyenite porphyry
uTLP Porphyritic augite and biotite-augite microdiorite, micromonzonite and microsyenite
Late Triassic
COPPER MOUNTAIN INTRUSIONS
Copper Mountain, Voigt, Smelter Lake Stocks
uTCds Microdiorite and latite porphyry dikes
uTCs Pegmatite, syenite, and perthitic alkali feldspar syenite ("perthosite")
uTCm Monzonite
uTCg Gabbro and/or pyroxenite
uTCd Diorite
Late Triassic?
uTlp Massive augite basalt porphyry (Older than unit uTCds and younger than uTNw units; Nicola Group equivalent?)
Outcrops shown as darker areas

Symbols

- Geological contact, defined
Geological contact, approximate
Bedding, horizontal
Bedding, vertical
Bedding, overturned
Bedding, facing unknown, inclined
Cleavage, inclined
Magmatic foliation, inclined
Joint, inclined
Joint, vertical
Lamination
Schistosity, inclined
Schistosity, vertical
Fossil locality
Isotopic Age Dates (Ma $\pm$ 2 sigma)
K/Ar isotopic date, Biotite
K/Ar isotopic date, Pyroxene
Fission track date, Apatite
U/Pb isotopic date, Zircon
U/Pb isotopic date, Sphene
MINFILE Occurrences (Deposit Type)
Cu $\pm$ Au $\pm$ Ag (alkalic porphyry)
Mo $\pm$ Zn (alkalic porphyry)
Pd $\pm$ Pt (alkalic porphyry)
Au $\pm$ Ag (transitional)
Cu (transitional? / massive sulphide?)



Base Map Information:
North American Datum 1983 (NAD 83)
Geographic (Latitude/Longitude) Projection
Universal Transverse Mercator (Zone 10) grid
Altitude in metres above mean sea level
Contour interval 100 metres
Digital base maps (1:20,000 TRIM) from
BC Ministry of Sustainable Resource Management
Approximate mean magnetic declination 2004
for centre of map area: 18 degrees 26 minutes East,
decreasing 9 minutes annually

Compilation Notes:
Outcrop geology, structural information, fossil and age date localities are taken from Preto (1972).
Geologic contacts not originally given by Preto (1972) have been added by the compiler in areas
with poor outcrop control in order to meet GIS requirements. All isotopic dates are taken from BCAGE
(Breitprecher and Mortensen, 2004) and references therein.
References:
Breitprecher, K. and Mortensen, J.K. (2004). BCAGE 2004 - a database of isotopic age determinations for
rock units from British Columbia. BC Ministry of Energy and Mines, Open File 2004-3.
Montgomery, J.H. (1987). Petrology, Structure and Origin of the Copper Mountain Intrusions near Princeton,
British Columbia, unpublished Ph.D. thesis, University of British Columbia, 172 pages.
Preto, V.A. (1972). Geology of Copper Mountain. BC Department of Mines and Petroleum Resources,
Bulletin 59, 87 pages.

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