GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES

Bedrock geology of ASHCROFT (92 I) map area

Scale 1:125,000

KILOMETRES 0 5 10 15 20

MILE 0 5 10

OF980 sht 1

LEGEND

QUATERNARY

PLEISTOCENE AND RECENT

- Qd — Drift: clay, silt, sand, gravel, till, and bedrock
- Qa — Alluvium: clay, silt, sand, gravel, and boulders
- Qb — Landslide: rock debris
- PBv — "BASALT BRECCIA": pyroclastic breccia, tuff breccia, and flows of basalt to andesite composition

TERTIARY

PLIOCENE AND PLEISTOCENE

- MPv — "PLATEAU BASALTS": basalt, olivine basalt, and basaltic andesite
- MPs — Poorly consolidated tuff, breccia, diatomite, sandstone, conglomerate

MIOCENE(?) AND OLDER

- Tv — Olivine basalt to andesite correlative with Miocene Chilcotin Group volcanic rocks; restricted to eastern part of area
- Ta — Small intrusions of mainly intermediate composition
- Tgd — Granodiorite, felsites; in part of Eocene age

EOCENE

- Ek — KAMLOOPS GROUP: basalt, andesite, dacite, rhyolite, breccia, tuff and local interbedded sandstone, conglomerate, shale
- Kc — "COLDWATER BEDS": arkosic sandstone, conglomerate, shale, local coal
- Kn — "KAMLOOPS LAKE BEDS": sandstone, conglomerate, shale and coal; Quilchena Creek coal formation and Coalmont sedimentary rocks(?)
- Kv — Basalt, andesite, dacite, rhyolite and volcaniclastic rocks; Allenby Formation
- Ks — Arkosic sandstone, coarse conglomerate and shale; Allenby Formation

CRETACEOUS AND/OR TERTIARY

- KTgd(m) — Granodiorite with locally abundant mafic and hornblende-rich phases; Mount Martley stock and satellite stocks of Mount Martley Plutonic Complex

CRETACEOUS

- Kgd, gm — Granodiorite, quartz monzonite, few or no foliated metamorphic rocks
- Ks — Shale, sandstone, coal
- Kb — BIRKENHEAD GROUP: basalt, local interbedded sedimentary rocks

EARLY AND/OR COMMON

- IKSB — Sandstone, greywacke and conglomerate, derived in large part from plutonic rocks between, mainly Spuzzum Batholith and Mount Lytton Plutonic Complex

EARLY AND ALBIAN OR YOUNGER

- Kk — SPENCES BRIDGE GROUP: andesitic, dacitic, rhyolitic, basaltic and local sedimentary rocks
- Kn — KINGSVALE GROUP: sandstone and conglomerate, derived in large part from granitic and volcanic source terranes, shale and coal horizons

JURASSIC AND CRETACEOUS

NICOLA BELT

- JKNS — NICOLA GROUP: argillite, siltstone, sandstone and local conglomerate
- JKNG — NICOLA GROUP: basalt to andesite, mainly volcaniclastic rocks and intermediate to felsic intrusions; metamorphic equivalents of JKNS
- JKgd — MOUNT MARTLEY STOCK AND CIRCULAR GRANITIC ROCKS: granodiorite, quartz monzonite
- JKd — Diorite, quartz diorite
- JKsg — Chert-pebble conglomerate; distinguished from Eocene conglomerate by lack of volcanic clasts
- JKgd — SPENCES BRIDGE(?), DOUGLAS LAKE STOCK AND CIRCULAR GRANITIC ROCKS: granodiorite, quartz monzonite

DISTINCTION TO CRETACEOUS

- JKNS — KINGSVALE FORMATION: argillite, siltstone, sandstone, conglomerate; local basalt
- JKNG — LOWER GROUP: argillite, siltstone, sandstone and foliated to gneissic metamorphic equivalents

EARLIEST JURASSIC (?)

- TrJgd — NICOLA BATHOLITH, NICOLA BATHOLITH-RELATED AND CIRCULAR GRANITIC ROCKS: granodiorite, quartz monzonite; in part older than basal Kinglet Volcanic Group

TRIASSIC AND (?) JURASSIC

- TrJgd, qm — BOSTON CREEK BATHOLITH AND CIRCULAR GRANITIC ROCKS: granodiorite, quartz monzonite (TrJgd); quartz monzonite, quartz diorite (gd) and subordinate diorite (d)
- TrJ, d — COOK PEAK BATHOLITH AND CIRCULAR PLUTONS: granodiorite, quartz monzonite (TrJgd); quartz diorite (gd), gabbro (gb)
- TrJgd — Distinction/comparison of uncertain age but in part probably equal with Cook Peak Batholith: granite (gr), syenite (Sy), quartz monzonite (qm), granodiorite (gd), diorite (d), gabbro (gb); some phases may be younger than Jurassic
- TrJgd — BOSTON CREEK PLUTONIC COMPLEX: foliated granodiorite and quartz monzonite; Pavilion Mountain Intrusions
- TrJgd, qm — MOUNT LYTTON PLUTONIC COMPLEX: banded ophiolitic and equigranular ultramafic rocks, local gabbroic, locally metamorphosed basalt and Cold Creek Intrusions
- TrJgd — Plagioclase, augite-porphyritic andesite and/or basalt; metamorphosed to hornblende schist and hornblende gneiss, but lithologically closest to Nicola Group 3 volcanics

CARBONIFEROUS AND PERMIAN

- PMNS — NICOLA GROUP: basic to acidic, mainly volcaniclastic rocks and intermediate to felsic intrusions; metamorphosed to Mt. Ma, associated with Nicola, Wild Horse and Pennask Batholiths
- PMNG — NICOLA GROUP: carbonate
- PMNS, G — NICOLA GROUP: argillite, plagioclase-augite intermediate tuff, breccia, and flows, local limestone, tuff, sandstone, local shale; metamorphosed to Mt. Ma, associated with Nicola, Wild Horse and Pennask Batholiths
- PMNA — NICOLA GROUP: augite porphyry, augitic plagioclase porphyry volcaniclastic breccia and flows; metamorphosed to Mt. Ma, associated with Nicola, Wild Horse and Pennask Batholiths
- PMNS, G — NICOLA GROUP: argillite, siltstone, volcanic sandstone, local intermediate tuff, local limestone; metamorphosed to Mt. Ma, associated with Nicola, Wild Horse and Pennask Batholiths
- PMNL — NICOLA GROUP: limestone, local chert, argillite, tuff, sandstone, and volcaniclastic rocks; metamorphosed to Mt. Ma, associated with Nicola, Wild Horse and Pennask Batholiths
- PMNA — NICOLA GROUP: variously foliated diorite, gabbro, augite porphyry, and basalt; metamorphosed to Mt. Ma, associated with Nicola, Wild Horse and Pennask Batholiths
- PMSS, G — TRIBUNE BAY: mainly tuff, siltstone, sandstone, local limestone, chert, and conglomerate; Nicola(?) correlative with Mt. Ma; metamorphosed to Mt. Ma, Nicola(?) correlative with Nicola Batholiths probably more equivalent to the Nicola Group

PERMIAN TO JURASSIC

- PJBRS — BRIGADE RIVER COMPLEX: radiolarian chert, argillite, basalt, pillow basalt, local limestone; gabbro, typically dismembered, "Ashcroft Formation"
- PJBRU — BRIGADE RIVER COMPLEX: ultramafic rocks, mainly serpentinite
- PJBRS, G — BRIGADE RIVER COMPLEX: phyllite, quartzose phyllite, fine-grained quartzite, local quartz-sericite schist; local marble; upper greenschist to amphibolite facies metamorphic equivalents of PJBRS + commonly well-developed foliation
- PJBRS — BRIGADE RIVER COMPLEX: siliceous schist, anthophyllite schist, local marble; upper greenschist to amphibolite facies metamorphic equivalents of PJBRS + commonly abundant concordant and cross cutting, quartz-feldspathic sills and dykes of late Eocene age

PENNSYLVANIAN TO TRIASSIC

- PT gb — CACHE CREEK COMPLEX: basalt, pillow basalt; gabbro, gabbro
- PT ult — CACHE CREEK COMPLEX: ultramafic rock, mainly serpentinite, local gabbro
- PT cc — CACHE CREEK COMPLEX: melange, broken formation; mainly argillite matrix with blocks and lenses of sedimentary, volcanic and plutonic rocks; limestone, chert, greenstone and ultramafic blocks and lenses; local volcanic blocks similar to Nicola Group
- PT cc(s) — CACHE CREEK COMPLEX: in large part MIDDLE TRIASSIC to PERMIAN Fennell Formation: limestone, argillite, chert, greenstone, basalt and tuff
- PT cc(l) — CACHE CREEK COMPLEX: radiolarian chert, argillite, phyllite, minor greenstone, limestone, subordinate volcanics, and rare local melange

PALEOZOIC AND MESOZOIC

- P lm — Mainly amphibole, biotite feldspar porphyry, subordinate quartz porphyry; many basalts; lithologically similar to Mt. Ma volcanics, but higher metamorphic grade; Pennask Batholith and roof pendants
- P lm — Argillite, phyllite, siltstone, volcanic sandstone, sandstone, local carbonate; lithologically similar to Mt. Ma sediments, but higher metamorphic grade; Pennask Batholith and roof pendants
- PMm — Quartz-sericite schist, phyllite, quartzite, quartz-feldspar porphyry, quartz-augite porphyry; higher metamorphic grade than Mt. Ma volcanics; gneiss phases; Pennask Batholith and roof pendants
- ? — Undifferentiated basalt, quartzite, siltstone; possibly age unknown

DEVONIAN TO PERMIAN

- DP ms — "HARPER RANCH GROUP": argillite, chert, argillite, siltstone, sandstone, conglomerate, limestone; basic to acid composition, volcaniclastic rocks
- DP vcc — Carbonate where age of volcanic rocks is known as Carboniferous; Permian (Fig. 2, C-P2)

- Limit of outcrop
- Limit of geological mapping
- Geological boundary (defined, approximate, assumed)
- Fault (defined, approximate, assumed, extension beneath drift)
- Fault: bar indicates down thrown side; arrow indicates relative movement
- Thrust fault; "lower parallel fault"; teeth on upper plate
- Diagnostic fossil locality. Refer to Table 1, sheet 2
- Isotopic age (Ma). Refer to Table 2, sheet 2
- K-Ar system
- U-Pb system

Base map made from a mosaic of enlarged 1:50,000 topographic maps by Surveys and Mapping Branch, Department of Energy, Mines and Resources

Contour interval 100 feet

Geology by J.A.J. Monger, Geological Survey of Canada, 1970-82
Base map compiled by Surveys and Mapping Branch, Department of Energy, Mines and Resources, 1982
Supplemented by studies shown on Data Control Map, sheet 1

122°00'
51°00'
120°00'
50°00'

FRASER RIVER FAULT SYSTEM

O.F. 980
Geological Survey of Canada

Sheet 1 of 2
$6.00 per set

This map has been produced from a scanned version of the original map
Reproduction par numérisation d'une carte sur papier