GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

Diagrammatic cross-sections along lines A-B, C-D, E-F, G-H, J-K and L-M

LEGEND

CENOZOIC

QUATERNARY
RECENT

29 — *Blocky basalt flows*

PLEISTOCENE AND RECENT

28 — *Till, gravel, clay, silt, alluvium, (few if any bedrock exposures)*

PLEISTOCENE OR RECENT

27 — *Basaltic cinder cone (incorporates cobbles of older rocks)*

TERTIARY OR QUATERNARY
PLIOCENE OR PLEISTOCENE

26 — *26a, basaltic arenite, conglomerate breccia, rubble, basaltic flows, locally pillowed; 26b, extinct basaltic volcanoes, basaltic flows and cinder deposits*

TERTIARY
MIOCENE AND/OR PLIOCENE

25 — *Plateau lava; olivine basalt, basalt andesite, related ash and breccia beds; basaltic arenite; 25a, olivine gabbro plugs*

MIOCENE

24 — *DEADMAN RIVER FORMATION: shale, sandstone, tuff, diatomite, conglomerate, breccia*

OLIGOCENE

23 — *Andesite, dacite, felsite, related tuff and breccia; greywacke, shale; minor lignite and conglomerate*

EOCENE AND (?) OLIGOCENE
KAMLOOPS GROUP (21, 22)

22 — *SKULL HILL FORMATION: dacite, trachyte, basalt, andesite, rhyolite, related breccias*

EOCENE

21 — *CHU CHUA FORMATION: conglomerate, sandy shale, arkose, coal*

MESOZOIC

CRETACEOUS

20 — *RAFT AND BALDY BATHOLITHS AND SIMILAR GRANITIC ROCKS: biotite quartz monzonite and granodiorite; minor pegmatite, aplite, biotite-hornblende, quartz monzonite; 20a, quartz diorite, diorite, granodiorite (may include some older rocks); 20b, aplite, leuco-quartz monzonite and granite*

APTIAN AND/OR ALBIAN
JACKASS MOUNTAIN GROUP

19 — *Greywacke, shale, siltstone; minor arkose and lenses of pebble conglomerate*

JURASSIC (?)

18 — *Shale, grit*

17 — *Chert-pebble conglomerate, greywacke*

JURASSIC
SINEMURIAN TO (?) MIDDLE JURASSIC

16 — *Porphyritic augite andesite breccia and conglomerate; minor andesite, arenite, tuff, argillite, and flows (may include some 11; 16a, isolated areas of hornblende andesite (may be all or partly intrusive)*

15 — *Andesitic arenite, siltstone, grit, breccia and tuff; local granite bearing conglomerate, greywacke; minor argillite and flows (may include some 11)*

TRIASSIC OR JURASSIC
RHAETIAN OR HETTANGIAN

14 — *THUYA AND TAKOMKANE BATHOLITHS AND SIMILAR GRANITIC ROCKS: hornblende-biotite quartz diorite and granodiorite, minor hornblende diorite, monzonite, gabbro, hornblendite; 14a, diorite and syenodiorite; 14b, leuco-quartz monzonite and granodiorite*

13 — *13a, fine- to medium-grained, pink to brown and grey syenite and monzonite; 13b, medium-grained, creamy-buff, locally coarsely porphyritic (K-feldspar) syenite and monzonite*

TRIASSIC
KARNIAN AND NORIAN
NICOLA GROUP

11 — *Augite andesite flows and breccia, tuff, argillite, greywacke, grey limestone; 11a, includes minor 3 and 10*

10 — *Black shale, argillite, phyllite, siltstone, black limestone*

PERMIAN AND/OR TRIASSIC

9 — *Serpentinite and serpentinized peridotite*

LATE PERMIAN (?) EARLY AND/OR MIDDLE TRIASSIC
PAVILION GROUP (7, 8)

8 — *Tuff, chert, argillite, limestone, greywacke, andesitic and basaltic flows*

7 — *Chert, argillite, siltstone; minor tuff and limestone*

PALEOZOIC

PERMIAN
GUADALUPIAN
CACHE CREEK GROUP (4 to 6)

6 — *MARBLE CANYON FORMATION: massive limestone, limestone breccia and chert; minor argillite, tuff, andesitic and basaltic flows*

WOLFCAMPIAN TO GUADALUPIAN

5 — *Argillite, basaltic flows, tuff, chert, limestone*

4 — *Basic volcanic flows, tuff, ribbon chert, limestone, argillite*

12 — *12a, quartzite, quartz-phyllite, quartz-granule conglomerate, argillite, phyllite, calcareous phyllite, marble, greenschist, greenstone; 12b, dark grey and black argillite, siltstone, phyllite, minor limestone (Metamorphic equivalents 1, 2, 3, 10)*

PENNSYLVANIAN AND PERMIAN
MORROWAN TO GUADALUPIAN

3 — *Volcanic arenite, greenstone, argillite, phyllite; minor quartz-mica schist, limestone, basaltic and andesitic flows, amphibolite, conglomerate and breccia; includes small bodies of 16a*

MISSISSIPPIAN AND/OR LATER
SLIDE MOUNTAIN GROUP

2 — *FENNELL FORMATION: pillow lava flows, greenstone, foliated greenstone, greenschist, argillite, chert, minor amphibolite, limestone, breccia*

PROTEROZOIC (?)

WINDERMERE OR CAMBRIAN AND LATER
KAZA OR CARIBOO GROUP

1 — *Feldspathic quartz-mica schist, locally garnetiferous, micaceous quartzite, black siliceous phyllite, quartz-hornblende-mica schist, marble, chlorite schist, greenstone, amphibolite*

SHUSWAP METAMORPHIC COMPLEX

A — *Micaceous quartzo-feldspathic gneiss, quartz-mica schist, amphibolite, micaceous quartzite, pegmatite*

Rock outcrop ..... ×
Geological boundary (approximate) .....
Bedding, tops unknown (inclined, vertical) .....
Bedding (as shown on cross-sections) .....
Schistosity, cleavage (horizontal, inclined, vertical) .....
Foliation (as shown on cross-sections) .....
Lineation (horizontal, inclined) .....
Fault (approximate, assumed) .....
Thrust fault (approximate, assumed) .....
Anticline (defined, approximate) .....
Syncline (defined, approximate) .....
Fossil locality ..... (F)
Mineral occurrence ..... Zn ×

MINERALS

Coal	Coal	*Molybdenite*	mo
Copper	Cu	*Silver*	Ag
Diatomite	diat	*Volcanic ash*	ash
Gold	Au	*Zinc*	Zn
Lead	Pb		

Geology by R.B. Campbell and H.W. Tipper 1964, 1965

To accompany Memoir 363 by R.B. Campbell and H.W. Tipper

Geological cartography by the Geological Survey of Canada

Base-map compiled by the Department of Lands, Forests and Water Resources, British Columbia, 1966. Produced by the Surveys and Mapping Branch, 1969

Magnetic declination 1970 varies from 23°23' easterly at centre of east edge to 23°36' easterly at centre of west edge. Mean annual change decreasing 3.3'

Copies of the topographical edition of this map may be obtained from the Map Distribution Office, Department of Energy, Mines and Resources, Ottawa

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MAP 1278A

GEOLOGY

BONAPARTE LAKE

BRITISH COLUMBIA

Scale 1:250,000

Miles 4 0 4 8 12 Miles
Kilometres 6 0 6 12 18 Kilometres

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BONAPARTE LAKE
BRITISH COLUMBIA

1278A

6 12 cag 1900 C

1278A

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