GEOLOGICAL LEGEND

CARIBOO AND MONASHEE MOUNTAINS

QUATERNARY

HOLOCENE

Qs — *Undifferentiated unconsolidated sand, silt, clay or gravel*

Qhv — *Basalt: Q, cone; f, flow*

PLEISTOCENE

Qpv — *Basalt:* **Qpv1**, CLEARWATER UNIT; **Qpv2**, WELLS GRAY UNIT; *fl, hyalociastic; f, flow*

TERTIARY

MIOCENE

Tm — *Lacustrine silt and clay*

CAMBRIAN(?)

C(?)m — *Foliated white and grey, micaceous, locally graphitic talc- and tremolite-bearing marble and minor pelitic schist found in southern Rocky Mountain Trench. Age unknown but presumed to be equivalent to Cambrian limestones of Rocky Mountains*

UPPER PROTEROZOIC

WINDERMERE SUPERGROUP

CARIBOO GROUP:

Py — **YANKEE BELLE FORMATION:** *green and grey shale and siltstone, minor quartzite and limestone*

Pc — **CUNNINGHAM FORMATION:** *grey limestone, minor shale and siltstone*

Pi — **ISAAC FORMATION:** *dark phyllite, slate, limy phyllite; locally important limestone and limestone pebble conglomerate; quartz-pebble conglomerate and grit at base*

KAZA GROUP

Pk — *undifferentiated upper, middle, or lower Kaza group*

Pku — **UPPER KAZA GROUP:** *commonly graded and locally cross-bedded quartzofeldspathic metasandstone, grit, and conglomerate; minor green-grey silty phyllite and slate; calcareous grit at basal contact with* **Po**

Po — **OLD FORT POINT FORMATION:** *triad of upper carbonaceous and pyritic phyllite or slate, middle light to dark grey limy phyllite and thin-bedded marble, and basal green quartz metasiltstone and fine-grained metasandstone with thin (up to 10 cm) contorted cross-laminated calcareous intervals*

Pkm — **MIDDLE KAZA GROUP:** *commonly graded and locally cross-bedded quartzofeldspathic metasandstone, grit, conglomerate; green-grey silty slate, phyllite, or schist*

Pklc — **LOWER KAZA GROUP CARBONATE UNIT:** *cycles of quartzofeldspathic grit or metasandstone, phyllite or schist, culminating in clastic grey to brown marble up to 5 m in thickness*

Pkl — **LOWER KAZA GROUP:** *pelitic schist (kyanite-, staurolite-, garnet-, biotite- and muscovite-bearing schists), minor psammite, orthoamphibolite, marble, and calcsilicate rock; diamictite, conglomerate and quartzite at base; cross-bedded quartzite and marble locally found beneath basal conglomerate; probably equivalent to* **Pmtg** *and* **Pmtq**

Pwb — *undifferentiated* **BASAL WINDERMERE SUPERGROUP** *(structurally interleaved with orthogneiss of* **MALTON GNEISS COMPLEX***): grit and locally conglomeratic or diamictite, locally mylonitic quartzite at base; kyanite-, garnet-, staurolite-, biotite-, and/or muscovite-bearing pelitic or schist; psammite, and more rarely marble and calc-silicate rocks above coarse clastic section at base*

EARLY PROTEROZOIC BASEMENT

Pg — **Pgg: GOLD CREEK GNEISS** *(ca. 2 Ga): quartz diorite, granodiorite, tonalite gneiss;* **Pgm: MALTON GNEISS COMPLEX:** *undifferentiated foliated granitic augen orthogneiss (ca. 2 Ga), mafic orthogneiss, and paragneiss in northern Monashee Mountains*

KOOTENAY TERRANE

PPzu — *Undifferentiated metamorphic rocks of unknown but probably Proterozoic and possibly Paleozoic age in the footwall of the Pinsent Valley Thrust*

PPzuc — **UPPER CLASTIC UNIT:** *quartzofeldspathic psammite and grit, pelitic schist (locally kyanite-, sillimanite-, staurolite-, garnet-, biotite-, and/or muscovite-bearing); minor amphibolite and locally significant graphitic phyllite (in valley of North Thompson River in Cariboo Mountains)*

PPzm — *Mainly limber between* **PPzspa** *and* **PPzspa**. **PPzm** *refers to* **MAIN MARBLE** *of Simony et al. (1980) and Raeside and Simony (1983);* **and MIDDLE MARBLE** *of Brown, et al. (1978), Pell and Simony (1984), and Sevigny and Simony (1989), when between* **Pp** *and* **PPzspa**. **PPzmm** *refers to* **LOWER MARBLE** *of Simony et al. (1980), Orgel et al. (1985), and Sevigny and Simony (1989); in Cariboo Mountains south of North Thompson River,* **PPzm** *is likely to be* **MAIN/MIDDLE MARBLE**

PPzspa — **SEMIPELITE–AMPHIBOLITE UNIT:** *quartzose psammite, quartzofeldspathic psammite and grit; pelitic schist (locally kyanite-, sillimanite-, garnet-, staurolite-, biotite- and/or muscovite-bearing); amphibolite and discordant amphibolite, and calcsilicate and marble*

Pp — **LOWER PELITE UNIT:** *pelitic schist; minor quartzofeldspathic psammite, conglomerate* **(Ppc)** *with clasts of marble, calcsilicate rock, quartzite, and granite (ca. 1200 Ma), and concordant and discordant amphibolite sheets. Probably equivalent to upper part of* **PMJ** *and* **Pwb**

Ppg — **LOWER GRIT UNIT:** *quartzofeldspathic psammite and grit; minor pelitic schist and amphibolite. Prominent diamictite-bearing conglomeratic horizon locally present at base. Probably equivalent to lower part of* **PMJ** *and* **Pwb**

INTRUSIVE ROCKS

CRETACEOUS–TERTIARY(?)

KT(g) — **MURTLE PLUTON:** *muscovite-biotite granite and quartz monzonite*

LATE CRETACEOUS

LKg — **BLUE RIVER PLUTON** *(88 ± 6 Ma): weakly foliated muscovite (rarely biotite) granite*

MIDDLE JURASSIC

MJg — **HOBSON PLUTON** *(174 ± 1 Ma): biotite granodiorite, minor hornblende-biotite granodiorite, quartz-diorite, and diorite*

TRIASSIC

Trg — *Small foliated stocks, sills, and dykes of granite in northeastern Wells Gray Park; age about 235 Ma*

DEVONO–MISSISSIPPIAN

DMg — *Small foliated bodies of granitic to dioritic rocks; age about 350 Ma*

ROCKY MOUNTAINS

QUATERNARY

HOLOCENE

Qs — *Undifferentiated unconsolidated sand, silt, clay or gravel*

TRIASSIC

SPRAY RIVER GROUP

Trs — **SULPHUR MOUNTAIN FORMATION:** *dark brown silty shale, siltstone, sandstone, minor calcareous sandstone*

DEVONIAN TO PERMIAN

PMDu — *undifferentiated* **FAIRHOLME GROUP; ALEXO, PALLISER, EDGEMI AND BANFF FORMATIONS; RUNDLE, and ROCKY MOUNTAIN GROUPS**

PERMIAN AND PENNSYLVANIAN

PPrm — **ROCKY MOUNTAIN GROUP:** *light grey cherty sandstone, massive chert, dolomitic sandstone, silty dolomite*

MISSISSIPPIAN

Mu — *undifferentiated* **RUNDLE GROUP** *and* **BANFF FORMATION**

Mr — **RUNDLE GROUP:** *grey dolostone, colourful limestone, cherty dolostone*

Mb — **BANFF FORMATION:** *argillaceous limestone, calcareous shale; at base, black, fissile, cherty shale and brown sandstone*

DEVONIAN

Du — *undifferentiated* **PALLISER** *and* **SASSENACH FORMATIONS: PALLISER** *(upper unit): massive dolostone; limestone;* **SASSENACH** *(lower unit): sandstone, siltstone, silty limestone*

FAIRHOLME GROUP *(basinal facies)*

Df — *undifferentiated* **MOUNT HAWK, PERDRIX** *and* **FLUME FORMATIONS:** *calcareous mudstone, argillaceous limestone, black shale, cherty limestone*

CAMBRO–ORDOVICIAN

Cc — *undifferentiated Cambrian or Cambro-Ordovician limestone or marble*

COsp — **SURVEY PEAK FORMATION:** *calcareous shale, micritic limestone, limestone pebble-conglomerate*

UPPER CAMBRIAN

Clx — **LYNX GROUP:** *dolostone, siltstone, limestone*

MIDDLE CAMBRIAN

Cu — *undifferentiated* **ARCTOMYS, PIKA, ELDON** *and* **SNAKE INDIAN FORMATIONS**

Car — **ARCTOMYS FORMATION:** *red and green shale; calcareous siltstone, silty limestone*

Cp — **PIKA FORMATION:** *limestone, limestone-pebble conglomerate, shale, minor chert, dolostone*

Cel — **ELDON FORMATION:** *limestone, locally dolomitized*

Csi — **SNAKE INDIAN FORMATION** *(includes* **Tatel, Chetang,** *and* **Hota formations** *mapped in north-central part of area): alternating units of limestone and calcareous shale, massive limestone at base locally (Hota Formation)*

LOWER CAMBRIAN

GOG GROUP

Cg — *undifferentiated* **McNaughton, Mural,** *and* **Mahto**

Cma — **MAHTO FORMATION:** *fine-grained quartz sandstone and siltstone*

Cmu — **MURAL FORMATION:** *limestone and dolostone with interbeds of shale and siltstone*

Cmn — **MCNAUGHTON FORMATION:** *massive quartz sandstone, siltstone, minor pebble-conglomerate and phyllite*

UPPER PROTEROZOIC

WINDERMERE SUPERGROUP

Pm — *undifferentiated* **MIETTE GROUP**

Pmu — **UPPER MIETTE GROUP:** *silty, locally calcareous argillite and mudstone; sandstone; locally includes carbonate accumulations* **(BYNG FORMATION)**

Pmm — **MIDDLE MIETTE GROUP (UNDIFFERENTIATED):** *as for* **Pmmu** *and* **Pmml**

Pmmu — **UPPER MIDDLE MIETTE GROUP:** *commonly graded and locally cross-bedded quartzofeldspathic metasandstone, granule- and pebble-conglomerate (grit); siltstone; grey-green silty phyllite, phyllite predominant in thrust sheets near Blackman Creek; base on* **Po** *locally calcareous sandstone or limestone-clast conglomerate*

Po — **OLD FORT POINT FORMATION:** *triad of upper dark grey to black carbonaceous phyllite, middle dolomitic and calcareous siltstone and phyllite, and basal green phyllite, slate, and locally calcareous quartz siltstone*

Pmml — **LOWER MIDDLE MIETTE GROUP:** *commonly graded and locally cross-bedded quartzofeldspathic metasandstone, granule- and pebble-conglomerate (grit), siltstone, grey-green silty phyllite and schist*

Pmlp — **LOWER MIETTE GROUP PHYLLITE:** *dark silty phyllite, minor quartz-pebble conglomerate*

Pmlg — **LOWER MIETTE GROUP GRIT:** *quartzofeldspathic sandstone and minor phyllite*

Pwb — *undifferentiated* **BASAL WINDERMERE SUPERGROUP** *(overlying basement in hanging wall of Bear Foot thrust): grit and locally conglomeratic or diamictite, locally mylonitic quartzite at base; kyanite-, garnet-, staurolite-, biotite-, and/or muscovite-bearing pelitic schist or gneiss; psammite, and more rarely marble and calc-silicate rocks above coarse clastic section at base (***PwMc***); may in part be equivalent to* **Pmtg** *and* **Pmtp**

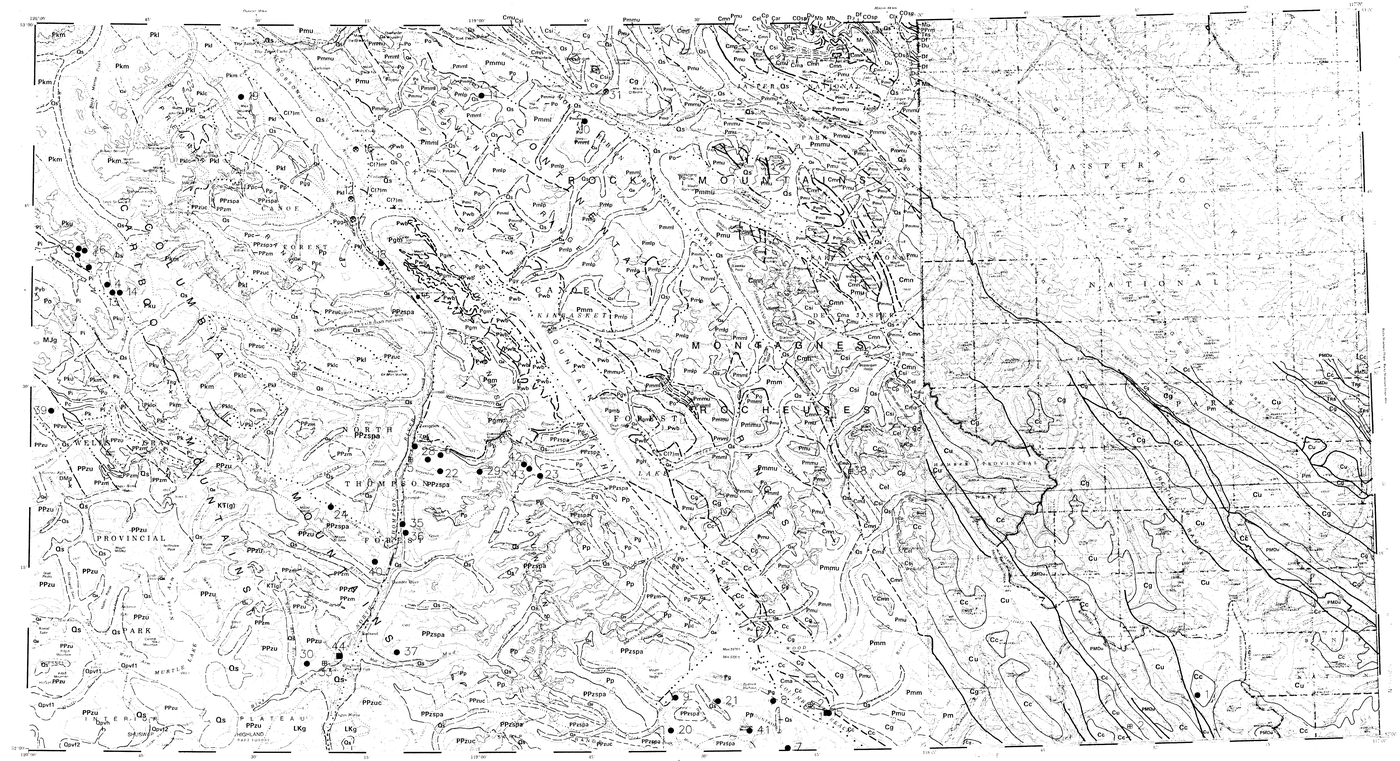
EARLY PROTEROZOIC BASEMENT

Pg — **Pgy: YELLOWJACKET GNEISS** *(ca. 1.87 Ga): foliated and locally convoluted granitic and granodioritic orthogneiss, locally with augen;* **Pgb: BULLDOG GNEISS:** *quartzose paragneiss and amphibolitic mafic gneiss intruded by ca. 1.87 Ga granitic augen gneiss, minor amphibolite;* **Pgmb: MOUNT BLACKMAN GNEISS:** *amphibolitic mafic gneiss, granitic gneiss;* **Pgh: HUGH ALLAN GNEISS** *(ca. 750 Ma): granitic gneiss*

Geological Legend and Base is derived from:

D.C. Murphy, Geological Survey of Canada, Open File 2024, 1989; Scale 1:250,000, 1 sheet.

E.W. Mountjoy and R.A. Price, Geological Association of Canada Special Paper No. 6 with Map; Scale 1:633,333, 1 sheet.



BC Ministry of Energy, Mines and Petroleum Resources

Geological Survey Branch

MINFILE MAP
NTS 083D & PART OF 083C
CANOE RIVER AND BRAZEAU

This MINFILE release researched and compiled by:
Keith J. Mountjoy

Date Revised: March 1992
Date Updated: October 1993

Scale 1:250 000

0 5 10 15 20 25
kilometres

Total Number of Mineral Occurrences: 46

Status
- Producer
- Past Producer
- Developed Prospect
- Prospect
- Showing

083 E		ALBERTA
083 D	083 C	
082 M	082 N	082 O

MAP LEGEND 083D and Part of C

MINFILE NO	NAME	COMMODITIES
083C		
001	LARRY	Zn
002	FTC	PB ZN AG CU
083D		
001	BEND 1 CANYON ZONE	NZ PB AG CU
002	BEND NORTH ROAD ZONE	ZN PB AG
003	BLUE ICE (SE ZONE)	AG AU BE ZN CU PB
004	SUMMIT	AU AG PB ZN CU
005	VERITY	NB TA PF LR RS
006	PARADISE	NB TA PF
007	YELLOW CREEK	MI KY
008	BROOK CREEK	KY
009	SNOWY CREEK	AG PB CU
010	YELLOWHEAD	AG PB ZN
011	SPIDER	MI
012	CANOE NORTH MICA	AG AU CU PB ZN
013	WAH COLT 1	AG AU CU PB ZN
014	WAH COLT 2	AG AU CU PB ZN
015	BEND ZINC	AG PB AU
016	BEND MICA	SI
017	CANOE SOUTH MICA	MI
018	ALBREDA	MI KY
019	MICA MOUNTAIN	MI KY BE
020	HIGHWAY DEPOSIT LOWER SHOWING	MI KY
021	POTLATCH	MI
022	PARADISE SYENITE	NS SI NB TA UR RS
023	MOUNTAIN CREEK SYENITE	NS SI NB TA UR
024	MILKSEE RIVER	KY GN
025	BLUE ICE (W ZONE)	AU AG PB ZN CU
026	BLUE ICE (E ZONE)	AU AG PB ZN CU
027	GRIZZLEY	AG AU PB ZN
028	LEMPHRENE CARBONATITE	NB TA HF UR RS
029	SERPENTINE	MI
030	ROARING BEAR RIVER	MI
031	GIANT BROOK	DO DS
032	RAVERTY	MI
033	BLUE RIVER FELDSPAR	FD
034	MILL	NB TA PF
035	FIR	NB TA PF
036	BONE CREEK	NB SR TA PF CE LA SC NO
037	AEO	DO TH UR ZR
038	PUNCH BOWL	AU AG PB ZN CU
039	AZURE LAKE	XY SL
040	THUNDER RIVER	XY GN
041	WARGAM MOUNTAIN	XY
042	HOWARD CREEK GARNET	GN
043	HOWARD CREEK CARBONATITE	LS NB TA LA CE ND RS NB
044	BLUE RIVER LIMESTONE	LS MB
045	SAND	SL PA AS

COMMODITIES LEGEND

CODE	COMMODITY	COMMODITY	CODE
AG	Silver	Beryllium	BE
AU	Gold	Cobalt	CO
BE	Beryllium	Copper	CU
CE	Cerium	Diamond	DI
CU	Copper	Dimension Stone	DS
DI	Diamond	Dolomite	DO
DO	Dolomite	Feldspar	FD
DS	Dimension Stone	Garnet	GN
FD	Feldspar	Gold	AU
GN	Garnet	Kyanite	KY
KY	Kyanite	Lanthanum	LA
LA	Lanthanum	Lead	PB
LI	Lithium	Limestone	LS
MI	Mica	Mica	MI
NB	Niobium	Nepheline Syenite	NS
NS	Nepheline Syenite	Niobium	NB
PB	Lead	Phosphate	PH
PH	Phosphorus	Rare Earths	RE
PP	Phosphate	Rare Elements	RE
RE	Rare Earths	Scandium	SC
SC	Scandium	Silica	SI
SI	Silica	Sillimanite	SL
SL	Sillimanite	Silver	AG
SR	Strontium	Sodalite	SD
SX	Sodalite	Strontium	SR
TA	Tantalum	Tantalum	TA
TH	Thorium	Thorium	TH
UR	Uranium	Uranium	UR
ZN	Zinc	Zinc	ZN
ZR	Zirconium	Zirconium	ZR