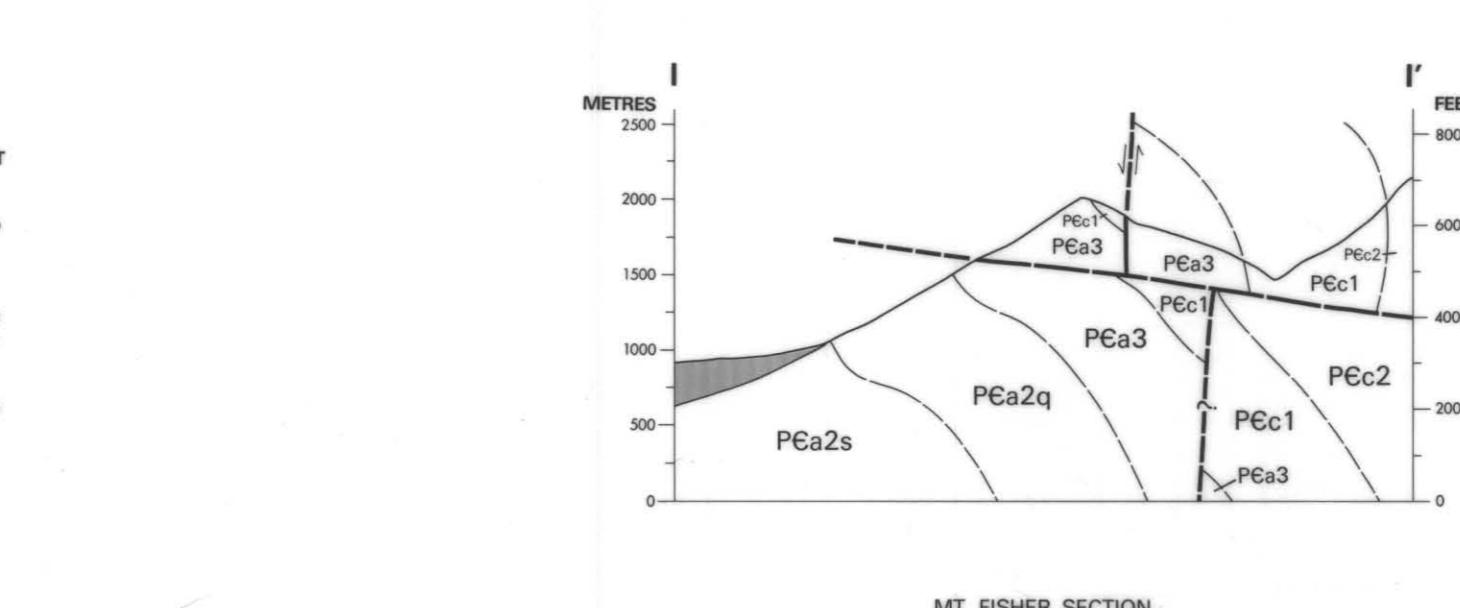
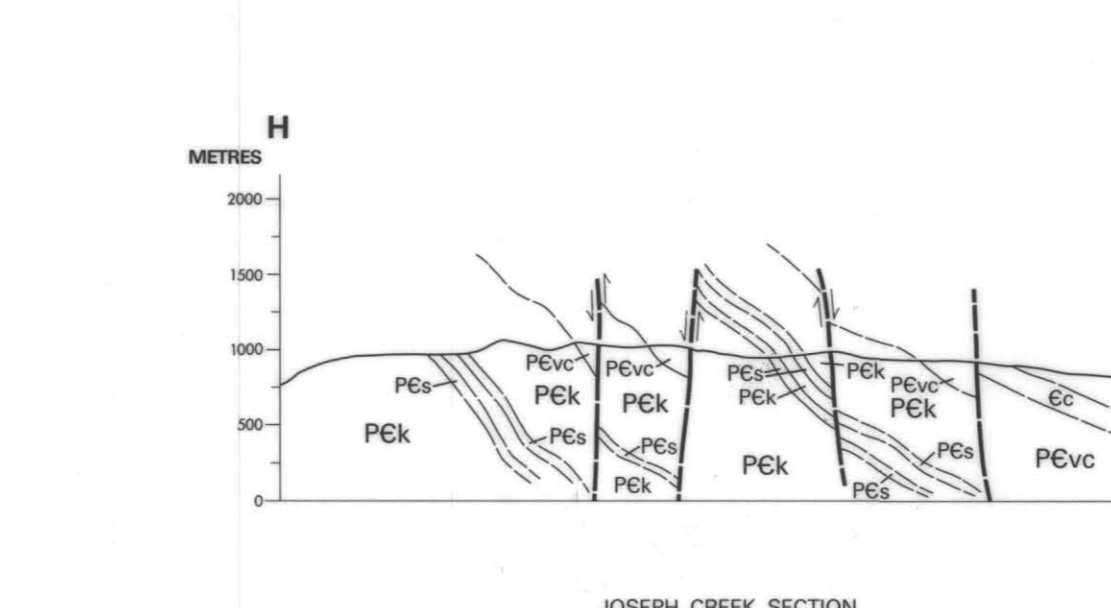
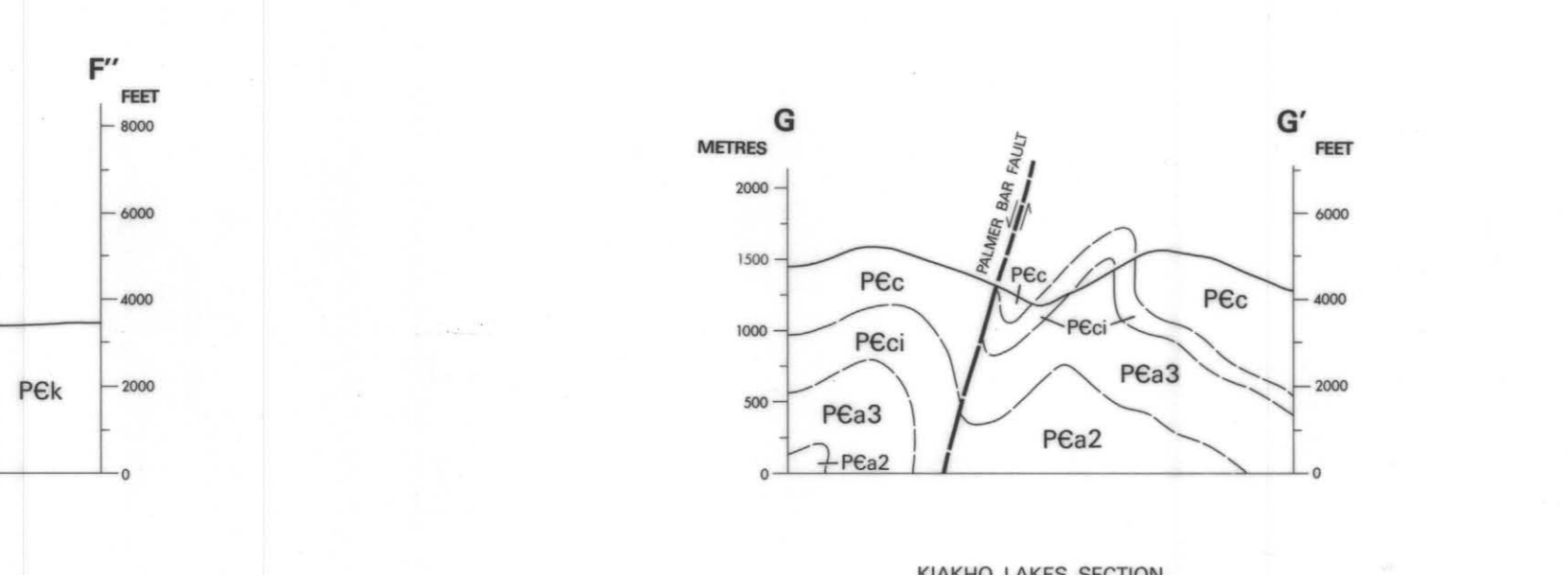
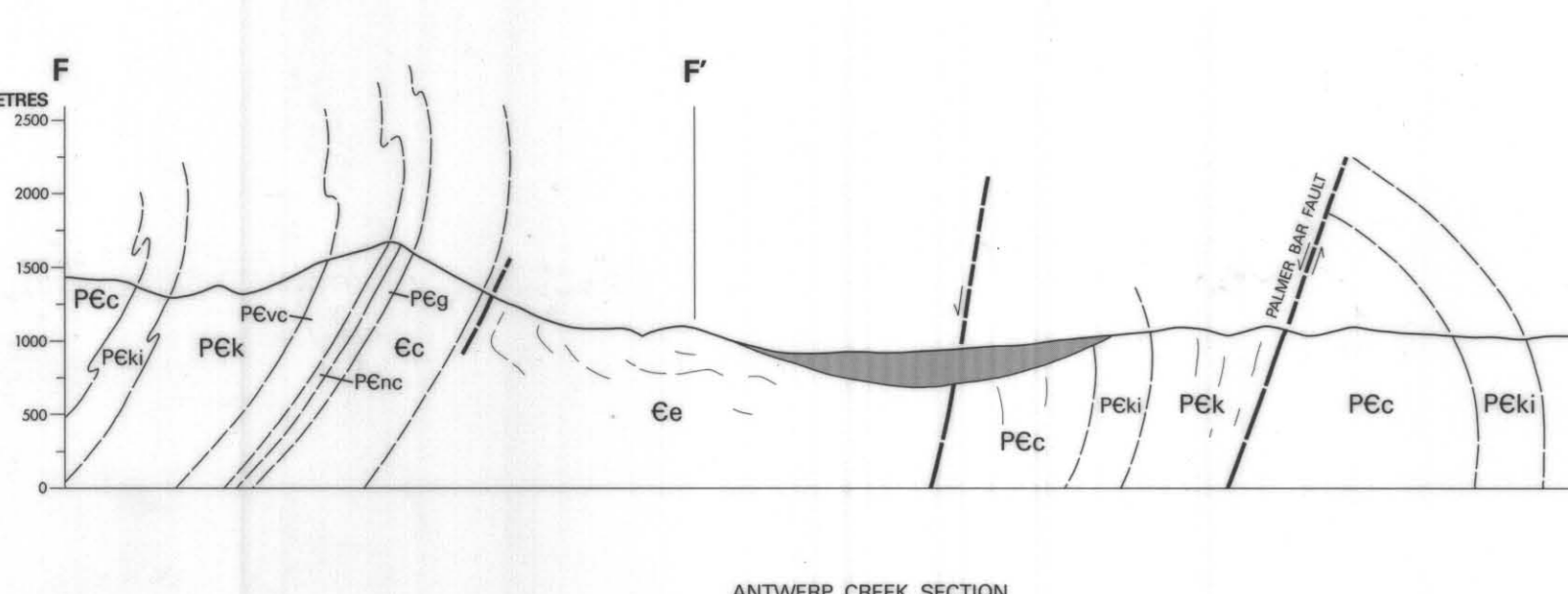


Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources
PRELIMINARY MAP NO. 54
GEOLOGY OF THE CRANBROOK SHEET AND SULLIVAN MINE AREA
(N.T.S. 82G/12, 82F/9)
GEOLOGY BY TROVE (1982, 1983) AND IN THE KOOTENAY RANGES FROM MURPHY (1974) AND HENY (1978) (SEE BELOW FOR ADDITIONAL SOURCES OF DATA).
SCALE 1:50,000

- LEGEND**
- PURCELL MOUNTAINS**
CENOZOIC
QUATERNARY
- Pleistocene and recent: till, gravel, sand, and alluvial deposits
- MESOZOIC**
CRETACEOUS
Kq QUARTZ MONZONITE, GRANDIORITE
- PALEOZOIC**
- CAMBRIAN**
Ca EAGER FORMATION: SHALE, SILTSTONE, LIMESTONE, QUARTZITE
Cc CRANBROOK FORMATION: QUARTZITE, CONGLOMERATE, LIMESTONE
Cg MAGNESITE
- PROTEROZOIC**
HELINIAN - PURCELL SUPERGROUP
Pe1 BILL, GABBRO OR DIORITE
Pe2 SATWAVEY FORMATION: GREEN AND MAUIVE SILTSTONE, ARGILLITE, QUARTZITE, STROMATOLITIC DOLOMITE, SILTY DOLOMITE
Pe3 NICOL CREEK FORMATION: AMYGDALOIDAL AND VESICULAR BASALT
Pe4 VOLCANIC SILTSTONE AND SANDSTONE
Pe5 VAN CREEK FORMATION: GREEN AND MAUIVE SILTSTONE, ARGILLITE, SILTY QUARTZITE
Pe6 KITCHENER FORMATION: ARGILLACEOUS AND SILTY ARGILLITE, SILTITE
Pe7 DOLOMITIC SILTSTONE AND ARGILLITE, INTER-LAYERED WITH GREY SILTSTONE AND ARGILLITE
Pe8 CRESTON FORMATION: GREEN, GREY, AND MAUIVE SILTSTONE AND QUARTZITE; WHITE QUARTZITE; MINOR DOLOMITIC SILTSTONE AT TOP
Pe9 RUSTY WEATHERING GREY SILTSTONE AND ARGILLITE, QUARTZITE, AND GREEN LENTICULAR-BEDED SILTSTONE
- MIOCENE**
Pm MOYIE SILLS, MINOR DYKES, GABBRO, DIORITE
- ALDRIDGE FORMATION**
Al1 ALDRIDGE FORMATION: QUARTZITE, QUARTZ WACKE, SILTSTONE, ARGILLITE
Al2 UPPER ALDRIDGE: RUSTY WEATHERING ARGILLITE AND SILTSTONE
Al3 MIDDLE ALDRIDGE: THIN TO THICK-BEDED GREY QUARTZITE, QUARTZ WACKE, SILTSTONE AND ARGILLITE, LAYERED WITH GREY SILTSTONE AND ARGILLITE
Al4 LOWER ALDRIDGE: RUSTY WEATHERING SILTSTONE AND ARGILLITE, SILTY ARGILLITE, QUARTZITE, QUARTZ WACKE
Al5 GREY WEATHERING QUARTZITE, QUARTZ WACKE
Al6 GREY QUARTZITE, QUARTZ WACKE
Al7 SILTSTONE AND ARGILLITE
Al8 MEDIUM TO DARK GREY SILTSTONE, ARGILLITE
Al9 THICK-BEDED QUARTZITE, MINOR CONGLOMERATE
Al10 BUFF-COLOURED DOLOMITIC SILTSTONE, ARGILLITE
Al11 GREY TO TAN SILTSTONE, GREY OR BLACK ARGILLITE
Al12 SILTY DOLOMITE, DOLOMITIC SILTSTONE, MINOR LIMESTONE
Al13 GREY TO BLACK SILTSTONE, ARGILLITE
- KOOTENAY RANGES**
CENOZOIC
QUATERNARY
- Pleistocene and recent
- PALEOZOIC**
- DEVONIAN**
Dd BURMAIS AND HARBROGATE FORMATIONS: SHALY LIMESTONE, DOLOMITIC GYPSUM
- CAMBRIAN**
Ca EAGER FORMATION
Cc CRANBROOK FORMATION
- PROTEROZOIC**
HELINIAN - PURCELL SUPERGROUP
Peg GATEWAY FORMATION
Pec NICOL CREEK FORMATION
Pcv VAN CREEK FORMATION
Pek KITCHENER FORMATION
Pcc CRESTON FORMATION
- MIOCENE**
Pm MOYIE SILLS, MINOR DYKES
Pea ALDRIDGE FORMATION
Pe3 UPPER ALDRIDGE
Pe2 MIDDLE ALDRIDGE
Pe4 GREY QUARTZITE, QUARTZ WACKE
Pe5 SILTSTONE AND ARGILLITE
Pe6 MEDIUM TO DARK GREY SILTSTONE, ARGILLITE
Pe7 THICK-BEDED QUARTZITE, MINOR CONGLOMERATE
Pe8 BUFF-COLOURED DOLOMITIC SILTSTONE, ARGILLITE
Pe9 GREY TO TAN SILTSTONE, GREY OR BLACK ARGILLITE
Pe10 SILTY DOLOMITE, DOLOMITIC SILTSTONE, MINOR LIMESTONE
Pe11 GREY TO BLACK SILTSTONE, ARGILLITE
Pe12 FORT STEELE FORMATION: WHITE CROSS-BEDED QUARTZITE-MIC-CLASTIC SILTSTONE AND ARGILLITE



- SYMBOLS**
- ... FOLIATION, CLEAVAGE
... JOINTING
... IMPURE QUARTZ VEIN IN ALDRIDGE Fm.
... LINEATION
... MINOR FOLD AXIS
... SMALL SHEAR (WITH DIP)
... MINERALIZED VEIN SHOWING TRENDS
... MINE PROSPECT OR OCCURRENCE
... TOPOGRAPHIC CONTOUR (100-FOOT INTERVALS)
... ROAD: HARD SURFACE
... LOOSE OR STABILIZED SURFACE
... LAKE

ADDITIONAL SOURCES OF DATA

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Heny, T. (1978). *Geology of the Kootenay Range, Kootenay District, British Columbia*, B.C. Ministry of Energy, Mines & Pet. Resources, Preliminary Map 54, 1:50,000, 15 p.

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McNab, M. E. (1978). *Geology of the Mount Fuband-Creek Area, B.C. Ministry of Energy, Mines & Pet. Resources, Preliminary Map 54, Geol. Surv. Canada, Map 15-887, 15 p.*

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MINERAL DEPOSITS (PRINCIPAL REFERENCES FOR 82G/12 - SCHOFIELD (1915), RICE (1937))

M.I. NO.	NAME	MINERALOGY*	PRINCIPAL COMMODITIES	M.I. NO.	NAME	MINERALOGY*	PRINCIPAL COMMODITIES
52	SULLIVAN	Si, Fe, Ni, Cr, Cu	Steariferric massive sulphide	20	LILLY MAY	Si, Fe, Ni, Cu	Quartz vein in mesomagmatic rocks
53	NORTH STAR	Si, Fe, Ni, Cu, Ag	Steariferric massive sulphide	21	ST. TRESA	Ag, Fe, Zn	Impure quartz veins in Aldridge Fm.
116	STEWINDER	Si, Fe, Ni, Cu	Transgressive massive sulphide	22	MELIE, BIG	Si, Fe, Ni, Cu, Ag	Quartz stringers in syncline dyke
1	MAGNET	Fe, Zn, Au	Quartz-filled fracture, shear zone in syncline dyke	23	CHEF	Si, Fe, Ni, Cu, Ag	Quartz-filled fracture in Aldridge Fm.
5	MARYSVILLE	Fe, Ni, Cu, Ag	Layer in Cambrian Cranbrook Fm.	24	DOUGHERTY	Si, Fe, Ni, Cu	Small quartz veins in Aldridge Fm.
9	KOOTENAY	Si, Fe, Ni, Cu, Ag	Steariferric massive sulphide	25	EAGLE FLUME	Si, Fe, Ni, Cu	Quartz vein in Aldridge Fm.
10	PALMAYRA	Si, Fe, Ni, Cu, Ag	Quartz-filled fracture, shear zone in syncline dyke	26	EAGLE'S NEST	Si, Fe, Ni, Cu, Ag	Quartz vein in Moyie all.
11	LILLY MAY EXTENSION	Si, Fe, Ni, Cu, Ag	Quartz veins in syncline dyke	27	COPPER BELT	Si, Fe, Ni, Cu, Ag	Quartz vein in Kitchener Fm.
12	SADZ	Si, Fe, Ni, Cu, Ag	Quartz-filled fracture in Moyie Shale	33	KING	Si, Fe, Ni, Cu	Narrow stringers in Moyie di.
15	YANKEE GIRL	Si, Fe, Ni, Cu, Ag	Quartz-calcite veins in dolomite	41	BLISS DRAGON	Si, Fe, Ni, Cu, Ag	Quartz-filled fracture in Moyie gabbro
16	KOOTENAY SEAM	Si, Fe, Ni, Cu, Ag	Quartz-calcite veins in fault zone	42	OMNICA	Si, Fe, Ni, Cu, Ag	Two-metre-thick quartz-calcite vein cutting Moyie gabbro
17	TRY AGAIN	Si, Fe, Ni, Cu, Ag	Quartz breccia in fault zone	43	BLACK HILLS	Si, Fe, Ni, Cu, Ag	Quartz-calcite vein in Moyie di.
19	GARDENELLE	Si, Fe, Ni, Cu, Ag	Quartz vein along syncline dyke contact	63	BLACK BEAR, MARBLE	Si, Fe, Ni, Cu, Ag	Quartz vein in Aldridge Fm.
				73	BC	Si, Fe, Ni, Cu, Ag	Small quartz calcite veins