



Province of British Columbia
 Ministry of Energy, Mines and Petroleum Resources
PRELIMINARY MAP NO. 53
GEOLOGY OF THE
BARRIÈRE RIVER - CLEARWATER AREA
 N.T.S. 82M/4, 5, 12; 92P/1, 8, 9

GEOLOGY BY PAUL SCHWARZ, 1978-1981, WITH ADDITIONAL DATA FROM
 R. L. BRIDGES OF BRITISH BUREAU OF MINES AND PETROLEUM RESOURCES FROM
 BY V. A. FROST, S. J. MALDEN, AND L. J. DAVENPORT, 1978-1979
 STRUCTURAL INTERPRETATION BY S. J. MALDEN, GEOLOGICAL SURVEY OF CANADA, VANCOUVER
 RADIOMETRIC DATING BY R. L. ARMITAGE AND S. B. BROWN, UNIVERSITY OF BRITISH COLUMBIA
 CARTOGRAPHY BY J. ARMITAGE AND P. CHICHELLI

LEGEND

- MIOCENE AND/OR YOUNGER**
- uFb OLIVINE BASALT
- Eocene**
- KAMLOOPS GROUP**
- stS SKULL HILL FORMATION: VESICULAR AND AMYGDALOIDAL ANDSITTE
 - stC CHU CHUA FORMATION: SANDSTONE, SHALE, CONGLOMERATE, MINOR AMOUNTS OF COAL
- CRETACEOUS**
- Kg BALDY BATHOLITH, RAFT BATHOLITH, AND RELATED ROCKS
 (1) HORNBLÉNDE-(1) BIOTITE GRANITE AND GRANODIORITE
- DEVONIAN TO PERMIAN**
 ALLOCHTHONOUS, INTERNALLY IMBRICATED OCEANIC TERRANE
- FENNEL FORMATION**
 UPPER STRUCTURAL DIVISION
- uFb GREY AND GREEN PILLOWED AND MASSIVE METABASALT, MINOR AMOUNTS OF BASALTIC BRECCIA AND TUFF, DIABASE, GABBRO, AND PHYLLITE
 - uFc GREY AND GREEN BEDDED CHERT
- LOWER STRUCTURAL DIVISION**
- FD GREY AND GREEN MASSIVE AND PILLOWED METABASALT, MINOR AMOUNTS OF BASALTIC BRECCIA AND TUFF
 - FG GREY AND GREEN BEDDED CHERT, CHERY ANGILLITE, SLATE, AND PHYLLITE
 - FG GABBRO, DIORITE, DIABASE
 - FD LIGHT TO MEDIUM GREY QUARTZ-FELDSPAR PORPHYRY
 - FD LIGHT TO DARK GREY SANDSTONE, SILTSTONE, SLATE, PHYLLITE, AND QUARTZITE, SOME CHERT; IN PLACES INCLUDES GREY TO GREEN QUARTZOSE AND/OR FELDSPATHIC PHYLLITE (METATUFF)
 - FI LIMESTONE, MARBLE
 - FI INTRAFORMATIONAL CONGLOMERATE - CLASTS DERIVED EXCLUSIVELY FROM FENNEL FORMATION LITHOLOGIES
 - IF UNWIDDED, MAINLY IF₁, IF₂ AND IF₃, BUT MAY INCLUDE ANY OR ALL OF ABOVE ROCK TYPES
- MISSISSIPPIAN AND OLDER (?)**
 PARAUTOCHTHONOUS TERRANE
- EAGLE BAY FORMATION**
- EB4 DARK GREY SLATE AND PHYLLITE WITH INTERBEDDED SILTSTONE, SANDSTONE, AND GRIT; LESSER CONGLOMERATE, LIMESTONE, METATUFF, AND METAVOLCANIC BRECCIA; EB4 LIMESTONE; EB4 METAVOLCANIC BRECCIA AND TUFF
 - EB3 LIGHT GREY, RUSTY WEATHERING FELDSPATHIC PHYLLITE (LARGELY METATUFF) AND PHYLLITE VOLCANIC BRECCIA; EB3 LIGHT GREY MASSIVE "DRETTY QUARTZITE" (SILICEOUS EXHALITE)
 - EB2 LIGHT SILVER GREY QUARTZ PHYLLITE AND MUSCOVITE-QUARTZ SCHIST (DERIVED LARGELY FROM ACID VOLCANIC ROCKS); SOME DARK GREY PHYLLITE, GREEN OLIGORITIC PHYLLITE, AND SCHISTOSE VOLCANIC BRECCIA; EB2 FELDSPAR PORPHYRY, FELDSPATHIC SCHIST, PYRITIC SERICITE-QUARTZ SCHIST, METAVOLCANIC BRECCIA; EQUIVALENT (?) ROCKS ADJACENT TO BALDY BATHOLITH - BIOTITE-PLAGIOCLASE-QUARTZ SCHIST AND GABBRO, BIOTITE-QUARTZ HORNFELS, AMPHIBOLITE
 - EB1 MEDIUM TO DARK GREEN OLIGORITIC PHYLLITE, SCHIST, AND SCHISTOSE VOLCANIC BRECCIA; LESSER LIMESTONE, DOLOSTONE, QUARTZITE, PHYLLITE, AND MINOR AMOUNTS OF CONGLOMERATE; EB1 MASSIVE WHITE FINELY CRYSTALLINE LIMESTONE; EB1 LIGHT GREY TO WHITE QUARTZITE
- GEOLOGICAL CONTACT:**
- DEFINED, APPROXIMATE, ASSUMED
 - HORIZONTAL, INCLINED, VERTICAL
 - INCLUDED, VERTICAL
- BEDDING, TOP UNKNOWN:**
- HORIZONTAL, INCLINED, VERTICAL
 - INCLUDED, APPROXIMATE, ASSUMED
- BEDDING, TOP KNOWN:**
- INCLUDED, OVERTURNED
- FACING DIRECTION OF PILLOWED BASALT:**
- INCLUDED, OVERTURNED
- FIRST GENERATION CLEAVAGE OR SCHISTOSITY:**
- HORIZONTAL, INCLINED, VERTICAL
 - INCLUDED, APPROXIMATE, ASSUMED
- SECOND GENERATION CRENULATION CLEAVAGE:**
- INCLUDED, VERTICAL
- CRENULATION LINEATION:**
- SECOND GENERATION, THIRD GENERATION
- MESSENGER FOLD AXIS:**
- FIRST GENERATION, SECOND GENERATION
 - AGE UNCERTAIN
- AXIAL TRACE OF INFERRED PHASE 1 FOLD:**
- OVERTURNED ANTICLINE, OVERTURNED
 - SYNCLINE
- AXIAL TRACE OF PHASE 2 FOLD:**
- ANTIFORM, SYNFORM
- SYMBOLS**
- AXIAL TRACE OF LATE FOLD: ANTIFORM, SYNFORM
 - EARLY PHASE 1 FOLDING: EASTERLY DIRECTED THRUST FAULT, TEETH ON UPPER PLATE; DEFINED, APPROXIMATE, ASSUMED
 - LATER (BY) OR POST PHASE 1 FOLDING: WESTERLY DIRECTED THRUST FAULT, TEETH ON UPPER PLATE; DEFINED, APPROXIMATE, ASSUMED
 - FAULT: DOT ON DOWNTHROW SIDE, ARROWS INDICATE SENSE OF STRIKE SLIP MOVEMENT; DEFINED, APPROXIMATE, ASSUMED
 - CONCORDANT FOSIL LOCALITY: MISSISSIPPIAN, PENNSYLVANIAN, PERMIAN
 - LOCATION OF RADIOMETRICALLY DATED SAMPLE (IF) ON ZIRCON AND RUS' WHOLE ROCK; INDICATE PROBABLE MIDDLE TO LATE DEVONIAN AGE FOR UNIT IF₁
 - MINERAL OCCURRENCE
 - LIMIT OF GEOLOGICAL MAPPING OR OUTCROP
 - EXPOSURES OF TERTIARY STRATA NOT EXAMINED DURING PRESENT STUDY, BUT OUTLINED ACCORDING TO PUBLISHED SOURCES
 - LINE OF GEOLOGICAL CROSS SECTION
- MINERAL OCCURRENCES**
- | PROPERTY NAME | ELEMENT | MINREP ID |
|---------------|--------------------|-----------|
| BROKEN RIDGE | Ph, Zn, Cu | 36086 |
| C-C | Cu, Pb, Zn | 04719 |
| CC (CHU CHUA) | Cu, Zn | 04757 |
| COPPER CLIFF | Ph, Zn, Cu | 00319 |
| ENAKISTE | Ph, Zn | 00317 |
| FOGHORN | Ag, Pb, Zn, Cu | 00393 |
| FORTUNA 1 | Ph | 00323 |
| FORTUNA 2 | Ph | 00322 |
| GOLD HILL | Au, Pb, Cu, Zn, Ag | 04722 |
| JUDY | Ph, Ag, Cu | 04717 |
| LYDIA | Ph, Ag, Cu | 00274 |
| MAY | Cu, Zn | 30887 |
| QUEEN BESS | Ph, Zn, Ag | 04723 |
| RANSON | Cu, Pb, Zn | 00318 |
| REKIPAR | U, F | 00289 |
| SWEET HOME | Au, Cu, Bi | 04721 |
| WINDPASS | Au, Cu, Bi, Ag | 04720 |