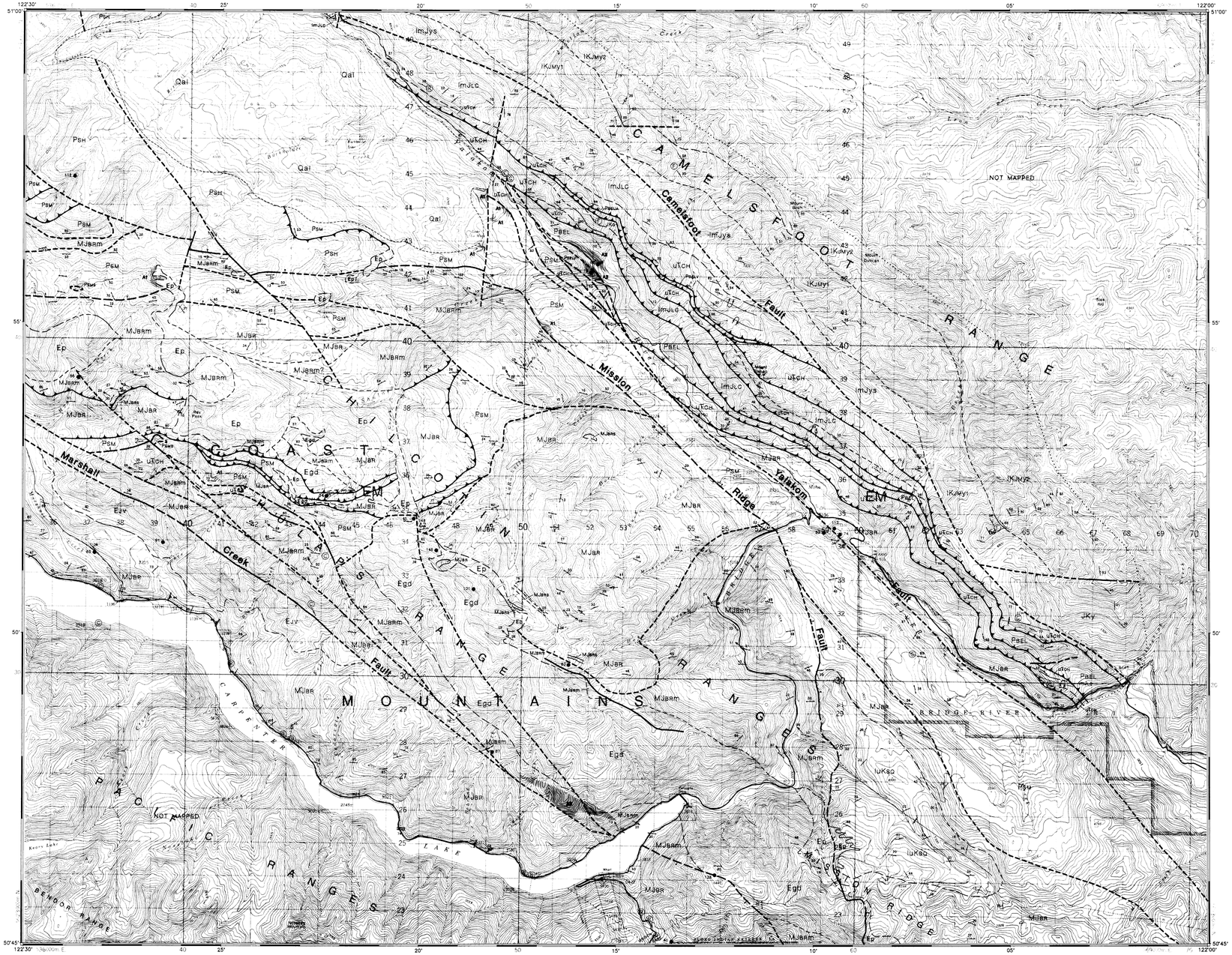

BC Ministry of Energy, Mines and Petroleum Resources

Geological Survey Branch

GEOSCIENCE MAP 1993-8

GEOLOGY OF THE BRIDGE RIVER MAP AREA

NTS 92J/16

Geology compiled by P. Schiarizza and R.G. Gaba

Based on geological mapping by P.Schiarizza, R.G. Gaba, M.E. Coleman, J.K. Glover, R.W.J. Macdonald, J.I. Garver, D.A. Archibald, T. Lynch and K.E. Satton (1988 and 1989)

Scale 1:50 000

0 1 2 3 4 5 KILOMETRES

LEGEND

QUATERNARY

Qal — Unconsolidated glacial, fluvial and alluvial deposits; volcanic ash; locally may include small bedrock exposures not examined during the present study

TERTIARY

Eocene(?)

Ejv — JONES CREEK VOLCANICS: light grey porphyritic dacite and volcanic breccia; minor amounts of conglomerate, sandstone, shale and lignite

LOWER AND/OR UPPER CRETACEOUS

luKsq — SILVERQUICK FORMATION: conglomerate, sandstone and siltstone

BRIDGE RIVER TERRANE

MISSISSIPPIAN TO MIDDLE JURASSIC

BRIDGE RIVER COMPLEX (MJBR to MJBRM)

MJBR — Undivided ribbon chert, argillite, phyllite, quartz phyllite and pillowed to massive greenstone, with lesser amounts of limestone, gabbro, diabase, sandstone, pebble conglomerate and serpentinite

MJBRS — Serpentinite, locally with fault slivers of other Bridge River rock types

MJBRM — Biotite-quartz schist, biotite-chlorite-actinolite schist, calcareous actinolite schist, talc schist, metachert and marble; commonly includes small bodies of variably deformed granodiorite and orthogneiss

CADWALLADER TERRANE

UPPER JURASSIC(?) TO LOWER CRETACEOUS

JKg — Grey siltstone and shale; local *Buchia* coquina

LOWER TO MIDDLE JURASSIC

lmJLc — LAST CREEK FORMATION: dark grey to black shale, siltstone and siliceous argillite; lesser amounts of calcareous siltstone, sandstone and silty limestone

UPPER TRIASSIC

CADWALLADER GROUP (uTCH and uTCV)

uTCH — HURLEY FORMATION: thin to thick-bedded sandstone, calcarenite and siltstone; lesser amounts of polymict conglomerate with clasts of limestone, mafic to felsic volcanic rocks and granitoid rocks; locally includes pebbly mudstone and micritic limestone

uTCV — VOLCANIC UNIT: greenstone, mafic volcanic breccia and mafic tuff

OPHIOLITIC ASSEMBLAGES

PERMIAN

BRALORNE-EAST LIZA COMPLEX

PBEL — Pillowed and massive greenstone, greenstone breccia, diabase, gabbro and serpentinite; PBELv - mainly greenstone, pillowed greenstone and greenstone breccia

PERMIAN (AND YOUNGER AND? OLDER)

SHULAPS ULTRAMAFIC COMPLEX (PSM and PSH)

PSM — SERPENTINITE MÉLANGE UNIT: serpentinite derived from olivine-clinopyroxene ultramafite (locally metamorphosed to olivine-talc-serpentine and olivine-talc-magnesite schists, or altered to listwanite), with knockers of ultramafic rock, gabbro, diorite, diabase, amphibolite, greenstone, rodingite, chert, phyllite, sandstone, conglomerate and limestone; PSMs - conglomerate, sandstone, phyllite and chert

PSH — HARZBURGITE UNIT: harzburgite, with lesser amounts of dunite and orthopyroxenite (variably serpentinized); locally with a penetrative foliation and lineation inferred to be a mantle tectonite fabric

METHOW TERRANE - YALAKOM MOUNTAIN FACIES

LOWER CRETACEOUS

JACKASS MOUNTAIN GROUP (IKJMYZ and IKJMYT)

Albian

IKJMYZ — Arkosic sandstone, conglomeratic sandstone, siltstone, shale and conglomerate

Bazremian-Aptian

IKJMYT — Green to grey lithic sandstone, granule conglomerate and conglomeratic sandstone; lesser amounts of siltstone and shale; very minor amounts of laminated silty limestone

LOWER(?) AND MIDDLE JURASSIC

Toarcian(?) to Bajocian

lmJYS — Lithic-arkosic sandstone intercalated with lesser amounts of granule to small pebble conglomerate, siltstone and shale

METHOW TERRANE - YALAKOM MOUNTAIN FACIES *(continued)*

JURASSIC AND/OR LOWER CRETACEOUS

JKY — Undivided IKJMYZ- and lmJYS- lithic arkosic sandstone, granule to small pebble conglomerate, siltstone and shale

INTRUSIVE ROCKS

TERTIARY

Eocene

Ep — Hornblende-biotite-quartz-feldspar porphyry

Egd — Hornblende-biotite granodiorite

SYMBOLS

- Geological contact (defined, approximate, assumed)
- Bedding, tops observed (inclined, vertical, overturned)
- Bedding, tops not observed (inclined, vertical)
- Bedding estimated from pillows (inclined, overturned)
- Strike and dip of sheeted dikes
- Cleavage, schistosity (inclined, vertical)
- Mineral or stretch lineation
- Crenulation lineation
- Mesoscopic fold axis
- Anticline (overturned)
- Syncline (upright, overturned)
- Thrust or reverse fault; teeth on upthrust block (defined, approximate, assumed)
- Fault; solid dot indicates downthrown block, arrows indicate relative sense of strike-slip movement (defined, approximate, assumed)
- Alteration zone (A1 - quartz-carbonate-mariposite; A2 - carbonate; A3 - sericite, quartz, clay) — A1
- Mineral occurrence (number refers to 92J/NE MINFILE number) — 31
- Macrofossil locality — F
- Radiolarian fossil locality — R
- Conodont fossil locality — C
- Limit of quaternary cover
- Limit of geological mapping

ADDITIONAL SOURCES OF INFORMATION

Coleman, M.E. (1990): Eocene Dextral Strike-slip and Extensional Faulting in the Bridge River Terrane, Southwest British Columbia; unpublished M.Sc. thesis, *Ottawa-Carleton Geoscience Center and Carelton University*, 87 pages.

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Potter, C.J. (1983): Geology of the Bridge River Complex, Southern Shulaps Range, British Columbia: A Record of Mesozoic Convergent Tectonics; unpublished Ph.D. thesis, *University of Washington*, 192 pages.

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B.N. Church; B.C. Ministry of Energy, Mines and Petroleum Resources, unpublished data.

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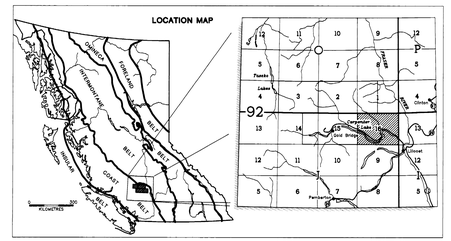
LOCATION MAP



Cartography by P. Chicorelli