BC Ministry of Energy, Mines and Petroleum Resources

BRITISH COLUMBIA GEOLOGICAL SURVEY

Geological Survey Branch

GEOSCIENCE MAP 1993-2

GEOLOGY AND MINERAL OCCURRENCES OF THE GALORE CREEK AREA

NTS 104G/04

Geology by James M. Logan, Victor M. Koyanagi and David Rhys

Scale 1:50 000

0 1 2 3 4 5 KILOMETRES

LEGEND

INTRUSIVE ROCKS

EOCENE

- Eg — Pink, medium to coarse-grained and potassium feldspar megacrystic biotite granite and eguigranular biotite quartz monzonite
- Egd — Grey, medium-grained hornblende biotite granodiorite

EARLY JURASSIC

- eJm — Medium-grained, potassium feldspar megacrystic hornblende granite to biotite quartz monzonite
- eJgd — Medium-grained quartz diorite, biotite hornblende granodiorite

LATE TRIASSIC-EARLY JURASSIC
GALORE CREEK INTRUSIONS

- TJs — Syenite, biotite orthoclase porphyritic monzonite

MIDDLE-LATE TRIASSIC
HICKMAN BATHOLITH

- lTkgd — Coarse to medium-grained, biotite hornblende granodiorite, augite monzonite (lTkm), coarse-grained plagioclase megacrystic diorite (lTkd)

LAYERED ROCKS

QUATERNARY

- Qal — Unconsolidated glacial till and poorly sorted alluvium

VOLCANIC FACIES

UPPER TRIASSIC-LOWER JURASSIC

- TJv — Potassium-feldspar and pseudoleucite-bearing fragmentals and alkaline basalt flows

UPPER TRIASSIC
STUHINI GROUP

- uTS — Undivided volcanics and sediments
- uTSp — Maroon pyroxene porphyry breccia flows and fragmentals
- uTSs — Fine-grained black clastics, bedded tuffs and volcanic conglomerate
- uTSt — Aphyric andesite lapilli tuffs
- uTSb — Breccia flows, lahar and intermediate fragmentals
- uTSv — Massive basaltic-andesite, plagioclase and hornblende porphyry flows and tuffs

SEDIMENTARY FACIES

- TJt — Well-bedded maroon potassium-feldspar crystal tuffs, epiclastics and volcanic conglomerates
- uTSs — Well-bedded siltstone, sandstone and pyroxene crystal tuffs, flows and minor limestone contains *Monotis*
- uTSp — Green pyroxene-porphyry breccia flows
- uTSw — Well-bedded silicic clastics and volcanic wackes, minor andesite flows and basal polymictic conglomerate contains *Halobia*

STIKINE ASSEMBLAGE

- PSu — Undivided Paleozoic metavolcanics and metasediments

LOWER PERMIAN

- lPSc — Upper: light grey or buff massive to thickly bedded, bioclastic grainstone, foliated maroon and green epiclastics and tuff (PSmv) Lower: dark grey to buff thinly bedded, bioclastic limestone, chert interbeds, argillaceous near base

UPPER CARBONIFEROUS TO LOWER PERMIAN

- uCSt — Green and buff siliceous siltstones and felsic dust tuffs

SYMBOLS

- Geological boundaries: defined, approximate, assumed
- Unconformity: defined, assumed
- Bedding (tops unknown): inclined, vertical
- Bedding (tops known): inclined, vertical, overturned
- Bedding (tops unknown, estimated dip): gentle, moderate, steep
- Foliation (ages indicated by number of ticks): inclined, vertical
- Joint: inclined, vertical
- Dike: inclined, vertical
- Vein: inclined, vertical
- Antiform, synform (arrow indicates plunge)
- Overturned antiform and synform (arrow indicates plunge)
- Anticline, syncline (arrow indicates plunge)
- Fold axis of minor fold with M, S, and Z symmetry: double arrow = second phase; arrow indicates plunge; numbers for phase greater than 2
- Crenulation lineation (inclined): S_0/S_1, S_1/S_2
- Fault or shear zone attitude: inclined, vertical
- High angle fault (solid circle indicates downthrow side; arrows indicate relative movement): defined, approximate, assumed
- Thrust fault (teeth in direction of upper plate): Defined, approximate, assumed
- Cross section line (A–A′)
- Fossil location: conodont, macrofossil, foram (f) (F) (f)
- Fossil location age indeterminate/barren (P)
- Isotopic age locality (potassium-argon) (K)
- Geochemical sample locality: assay, geochem ▲
- MINFILE: developed prospect, prospect, showing ■ ⊞ ●
- Adit
- Zone of alteration

REFERENCES

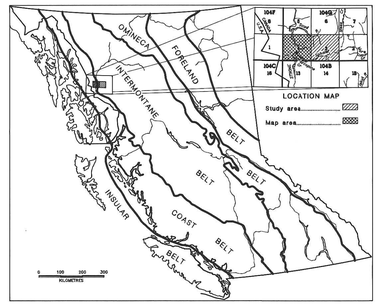
Allen, D.G., Panteleyev, A. and Armstrong, A.T. (1976): Galore Creek in Porphyry Deposits of the Canadian Cordillera, Canadian Institute of Mining and Metallurgy. Special Volume 15, pages 402-414.

Kerr, F.A. (1948): Lower Stikine and Western Iskut River Areas, British Columbia, Geological Survey of Canada, Memoir 246, 95 pages.

Souther, J.G. (1972): Telegraph Creek Map Area, British Columbia, Geological Survey of Canada, Paper 71-44, 38 pages.

Plus unpublished material from A. Panteleyev.

Macro and microfossil identifications provided by E.W. Bamber, M.J. Orchard, Lin Rui and E.T. Tozer of the Geological Survey of Canada and B.L. Mamet of the University of Montreal.



SCHEMATIC CROSS SECTIONS