

Granduc, B.C.

by RV KIRKHAM

Discussion with Paul

McQuigan Feb. 19/92

- could be a reserve remaining in the order of 15-20 mill. tonnes of 1.5% Cu (too low grade) - poss. originally 50-8 mill. t. ~ 1.5% Cu?
- zone under icefield could contain in the order of > 4 mill. tonnes ~ 1.5% Cu - ~ 15-20% tourmaline some massive sulphide in mine series at sed. - vol. contact - sulphide-rich iron formation - some limy siltst. & waxes above
- intersected subvolcanic ~~sill~~ diorite sill some actinolitic alteration with W & Mo (scheelite & molybdenite)
- N. Leduc Glacier some carbonate alt. in pillow lavas
- Cu-Co occurrences in vol. - minor pods to apartment size - malachite stains on cliffs
- worked there last summer for Hecla
- some chemistry was done on volcanics

**SUMMARY OF U-Pb AGE AND ISOTOPIC INFORMATION,
KUTCHO CREEK, GRANDUC AND ANYOX DEPOSITS**

KUTCHO CREEK:

UNIT: Quartz-eye schist, host to mineralization (Kutcho Formation)
AGE: Permo-Triassic, 249 \pm 7 Ma (preliminary)
SAMPLE NUMBER: KC-GC-01

UNIT: rhyolite intrusive, near the base of the Kutcho Formation
AGE: Permo-Triassic, 249 \pm 13 Ma (preliminary)
SAMPLE NUMBER: KC-GC-03

Pb ISOTOPES: $^{206}\text{Pb}/^{204}\text{Pb} = 18.43-18.51$
 $^{207}\text{Pb}/^{204}\text{Pb} = 15.51-15.61$
 $^{208}\text{Pb}/^{204}\text{Pb} = 37.87-38.04$

These values are more primitive than Mississippian to Jurassic VMS mineralization within the Stikine terrane (Childe, unpublished data) and Devonian mineralization of the Eagle Bay Formation of the Kooteney Terrane (Goutier, 1986), indicating that the Kutcho Formation formed in a more primitive tectonic setting than these island and continental arc terranes.

GRANDUC:

UNIT: basaltic-andesite flow, footwall series
AGE: Upper Triassic, 223 \pm 5 Ma (final)
SAMPLE NUMBER: GD-GC-04

UNIT: Diorite sill, intrusive into the basaltic-andesite flows, footwall series
AGE: Upper Triassic, 223 \pm 3 Ma (final)
SAMPLE NUMBER: GD-GC-01

UNIT: deformed andesite, mine series
AGE: 223 \pm 1 Ma (final)
SAMPLE NUMBER: GD-GC-08

Pb ISOTOPES: $^{206}\text{Pb}/^{204}\text{Pb} = 18.62-18.65$
 $^{207}\text{Pb}/^{204}\text{Pb} = 15.56-15.58$
 $^{208}\text{Pb}/^{204}\text{Pb} = 38.19-38.27$

On the basis of these ages the deposit is inferred to be hosted by the Upper Triassic Stuhini Group. Pb isotopic compositions are markedly less radiogenic than for mineralization associated with the Jurassic Hazelton Group. Therefore it may be possible to distinguish between Jurassic and Triassic mineralization in Stikinia with the use of Pb isotopes.

ANYOX PENDANT:

UNIT: Granby Peninsula Turbidites
AGE: Lower Jurassic, 200 to 206 Ma (detrital zircon - final)
SAMPLE NUMBER: AX-GC-04a

UNIT: Mount Clashmore Trondhjemite(?)
AGE: Devono-Mississippian, 364 \pm 4 Ma (preliminary)
SAMPLE NUMBER: AX-GC-12

These two ages yield more information of the ages of rocks within the Anyox pendant but do not date the deposit itself.