

## AGE DETERMINATION SUBMISSION FORM

## GEOCHRONOLOGY

## GEOLOGICAL SURVEY OF CANADA

DATE: May 11/89 PROJECT OFFICER: R.V. KirkhamDIVISION: MD FIELD PROJECT NUMBER: 611-7059GEOCHRONOLOGY STAFF MEMBER THIS PROJECT DISCUSSED WITH: J.C. Roddick

## ISOTOPE SYSTEM REQUESTED:

Rb-Sr \_\_\_\_\_ K-Ar \_\_\_\_\_ U-Pb  <sup>whole rock (4 possibly Ar<sup>39/40</sup>??)</sup> Pb-Pb \_\_\_\_\_ Sm-Nd \_\_\_\_\_ Other \_\_\_\_\_MINERAL (S) (ie. zircon, w.r. etc.): muscoviteFIELD OR SAMPLE NUMBER: KQ-89-1AMOUNT OF SAMPLE SUBMITTED: ~50g??LOCATION: PROVINCE B.C. DISTRICT Istkut Sheet NTS 104B/BLAT \_\_\_\_\_ N LONG \_\_\_\_\_ W or UTM 426 568mE 268 568mNTOPOGRAPHIC LOCATION: Underground West Zone, Brucejack Lake area (1350m level?)

GEOLOGICAL INFORMATION: (Please include geological setting, rock name, type, grain size, texture, mineral composition, etc.)

This is massive, very fine-grained, pale apple green muscovite (identified by D.C. Harris) with minor disseminated pyrite and cut by pyrite veins. This is possibly a fault rock consisting of somewhat deformed, essentially "pure", fine-grained hydrothermal muscovite. It is related to a significant Au-Ag deposit (Brucejack West Zone).

AGE PROBLEM: (Please be specific in the objective of this study and specify accuracy required.)

This date is partly experimental to see what sort of <sup>number</sup> ~~date~~ such a rock yields. Other K/Ar dates of about 100 Ma have been obtained on rocks from the area and J. Mortensen has a preliminary U/Pb zircon date of 197 Ma on alkalic intrusive rocks in the area that have associated porphyry Cu (Au, Mo) mineralization.

Geochronology Section Comments: \_\_\_\_\_

GSC 90-

Muscovite  
110 +/- 3 Ma

K-Ar 4087

Wt % K= 8.449  
Rad. Ar= 3.741 x 10<sup>-5</sup> cc/gm  
% Atmos. Ar= 2.2

NTS=(104B/8) rock type: From a completely altered "sericitic" rock with minor pyrite  
Location: Underground at the West Zone, Brucejack area, British Columbia  
Lat/Long: 56° 28' 04" N / 130° 11' 31" W  
Sample KQ-89-1

Collected and interpreted by R.V. KIRKHAM

#### Interpretation and References:

This ~~is a~~ massive, very fine-grained, pale apple green muscovitic rock with minor pyrite occurs as part of a shear zone within the ~~confines~~ of the West Brucejack Au-Ag deposit. The date of 110 ± 3 Ma is probably a cooling age related a tectonic event. This age is similar to <sup>several</sup> other ~~other~~ unpublished K/Ar dates obtained previously by corporate geologists.

As some of the extensive alteration and sulphide mineralization in the Mitchell-Sulphurets area can be demonstrated, on geological grounds, to be Lower Jurassic, ~~from the~~ <sup>at this time</sup> we are uncertain if this cooling age on muscovite dates is a minimum age for a major period of Au-Ag deposition or is related a period of deformation of a pre-existing deposit.