

Jan. 12, 1990

To: R. Kirkham

I am now preparing the compilation of K-Ar ages for our 1990 Report. My records indicate that you are responsible for the attached data's interpretation. If this is not the case then could you please forward them to those that are responsible.

Attached are two sheets. One is the original requisition that you filled out prior to submitting your samples. This is for your reference. The second is a form that approximates the final published K-Ar data. Could you please fill out the missing sections that pertain to the NTS, rock type, location, and Lat/Long (please use Lat/Long not UTM). The final section is an interpretation of the results and accompanying references. The text should be typed and in a form suitable for publication with a minimum of editing. Please attach it to the data sheet. I will also accept the data on a computer disc.

We have a very strict deadline for our publication, therefore, could you please return this form by March 15, 1990. If you foresee a problem returning the data by the above deadline, please contact me as soon as possible to make alternate arrangements. If you have any questions please do not hesitate to call me at (613) 995-0973.

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Geological Survey of Canada
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AGE DETERMINATION SUBMISSION FORM

GEOCHRONOLOGY

GEOLOGICAL SURVEY OF CANADA

DATE: May 11/89 PROJECT OFFICER: R.V. Kirkham

DIVISION: M11 FIELD PROJECT NUMBER: 611-7059

GEOCHRONOLOGY STAFF MEMBER THIS PROJECT DISCUSSED WITH: J.C. Roddick

ISOTOPE SYSTEM REQUESTED:
Rb-Sr K-Ar whole rock (4 possibly Ar³⁹/Ar⁴⁰??) U-Pb Pb-Pb Sm-Nd Other

MINERAL (S) (ie. zircon, w.r. etc.): muscovite

FIELD OR SAMPLE NUMBER: KQ-89-1

AMOUNT OF SAMPLE SUBMITTED: ~50g??

LOCATION: PROVINCE B.C. DISTRICT Iskut Sheet NTS 104R/B

LAT 56° 28' 04" N LONG 130 11 31" W or UTM 426 568mE 268 568mN

TOPOGRAPHIC 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 DC 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 ^{number} 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

Wt % K= 8.449
Rad. Ar= 3.741 x 10⁻⁵ cc/gm
% Atmos. Ar= 2.2

K-Ar 4087

NTS=(104B/0) rock type: From a completely altered "sericitic" rock with minor ^{pyrite}

Location: Underground at the West Zone, Brucejack Lake 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 ^{several} ~~others~~ ~~others~~ 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 Keston~~, at this time 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.