

DONALD F. SCHUTZ, President

78-7111  
ISOTOPIES

TELEDYNE ISOTOPES

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28 July 1976

Mr. A. R. Archer  
Archer, Cathro and Assoc. Ltd.  
1016 Standard Building  
510 West Hastings Street  
Vancouver, B.C. V6B.1LB

Dear Mr. Archer: Re: W. O. 3-4589-142

We have analyzed the six uranium bearing minerals submitted to us for U/Pb age determinations with the following results:

Sample	% U	% Pb	Isotopic Abundance (Atom %)				Isotopic Ratios		
			Pb <sup>204</sup>	Pb <sup>206</sup>	Pb <sup>207</sup>	Pb <sup>208</sup>	$\frac{Pb^{206}}{U^{238}}$	$\frac{Pb^{207}}{U^{235}}$	$\frac{Pb^{207}}{Pb^{206}}$
A	34.69	1.286	.012	90.634	5.764	3.590	.03930	.3374	.0636
B	34.84	0.442	.020	88.495	5.619	5.866	.01317	.1112	.0635
C	22.24	0.438	.010	87.899	5.286	6.805	.02022	.1645	.0601
D	25.97	0.641	.052	88.388	6.132	5.428	.02593	.2275	.0694
* E	4.986	0.886	.0090	91.937	7.469	.585	.1908	2.113	.0812
F	14.86	0.675	.035	92.590	5.840	1.535	.04965	.4068	.0631

The ages of the minerals were calculated as follows:

Sample	$Pb^{208}/U^{238}$ (m.y.)	$Pb^{207}/U^{235}$ (m.y.)	$Pb^{207}/Pb^{206}$
A	249	295	745
B	84	107	742
C	129	155	623
D	165	208	929
* E	1126	1153	1249
F	312	346	728

The pattern of these ages is in all cases typical of that which develops when lead is lost or uranium is gained in the system. Detailed interpretation of discordant ages is beyond the scope of our routine analytical services inasmuch as a knowledge

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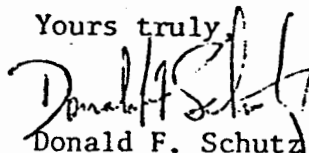
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of the geological relationships of the minerals is required. I have, however, enclosed a discussion of discordant ages from Lead Isotopes in Geology (Russell-Farquhar, 1960) to provide you with some basic information on interpretation of the data.

If I can be of help to you in pursuing further study of the data presented, please let me know.

Yours truly,

A handwritten signature in dark ink, appearing to read "Donald F. Schutz". The signature is written in a cursive style with a large, prominent initial "D".

Donald F. Schutz  
President

DFS:mm

enclosure: Pages 104-107, Lead Isotopes in Geology,  
Russell-Farquhar, 1960

## Specimen Description

Specimen A - Brannerite in weakly fractured light coloured Unit 3 metavolcanics from the Main Showing at the north end of Quartet Mountain on the Wernecke claims. A K-Ar date of 1.03 billion years was obtained from a specimen of Unit 3 in the same area but slightly higher (100' + ) in the section.

Specimen B - Brannerite crystal in weakly quartz veined Unit 5 argillite from the locality now staked as the Gnuckles claims.

Specimen C - Brannerite crystal from the east striking vein on the Otis claims.

Specimen D - Brannerite crystal from the north striking vein on the Otis claims.

\* Specimen E - Small pocket of pitchblende from a barite vein cutting hematite on the Igor claims.

Specimen F - Pitchblende in carbonate-Unit 3 breccia from headwall of Pterd cirque. The original specimen assayed 7.67%  $U_3O_8$  and is described on page 52 of the 1975 WJV report.