Province of British Columbia

Ministry of
Energy, Mines and
Petroleum Resources

Parliament Buildings
Victoria
British Columbia
V8V 1X4

Willa
889518

June 27/89

Mr. F. Hewitt
Northair Group
860 - 625 Howe Street
Vancouver, BC
V6C 2T6

Dear Fred:

I just received better constrained results from dating of quartz latite porphyry from the Aylwin Creek deposit.

The zircons date at about 183 million years; the cores of the zircons are Proterozoic (about 2195 million years)

I attach covering documentation for the results.

Yours sincerely,

Bill

W.J. McMillan
Manager
Mineral Deposits,
Regional Mapping
and Applied Geochemistry
Geological Survey Branch

WJM/bm

Attachments.

cc - W.R. Smyth
- T.G. Schroeter
- T. Höy

Energy, Mines and
Resources Canada
Geological Survey of Canada
100 West Pender, Vancouver
V6B 1R8

Énergie, Mines et
Ressources Canada
Commission géologique du Canada
100, ouest, rue Pender, Vancouver
V6B 1R8

Your file *Votre référence*

Our file *Notre référence*

6 June 89

Dear Bill:

Please find enclosed the long-awaited U/Pb data from Aylwin Creek. My apologies for the length of time since the running of the data and the reporting of it; too many things on the go seems to be a common trait amongst geochronologists, especially those in transition mode like myself.

The data are quite acceptable on this rock as is; however, as this rock places important constraints on the timing of obduction of Quesnellia (as far as I know, it's the oldest rock intruding Quesnellia after it was emplaced onto North America), an abraded point or two wouldn't hurt. In fact, the presence of a point above the chord indicates that some lead may have been lost by the other points and the rock could be even a bit older than the 183 indicated. Unfortunately, I'm not going to be able to run them unless I find time in the fall. I'll take a look at the remaining sample when I return in the fall to see if there is enough to run more points and give you a call then to see if you're interested.

Anyway, have a good summer.

Cheers,

Don Murphy

Canada

(NTS _____)

U-Pb

☐ Mineral analysis
☑ Concordia interpretation
☐ Mineral or rock isochron

Sample Number(s) and Reference(s)
Lab No:

Ref:

Record No:
Suite No:
Sample Name:

AYLWIN CREEK MAFIC PLAGIOCLASE PORPHYRY

decay constant
☐ old: 0.1537/0.9722/0.0499/137.8
☑ new: 0.155125/0.98485/0.049475/137.88
☐ other: _____
☐ not reported

Upper Intercept — 2σ error
Computed ☑ 2195 +170
Assumed ☐ ~~2330~~ ± -164 Ma

Lower Intercept — 2σ error
Computed ☑ 182 +8.5
Assumed ☐ ~~194~~ ± -8.5 Ma

^{238}U-^{206}Pb date ± Ma

^{235}U-^{207}Pb date ± Ma

$^{207}Pb/^{206}Pb$ date ± Ma

^{232}Th-^{208}Pb date ± Ma

Number of Points: n= ~~3~~ 4

Latitude: Longitude: (X° Y' Z" or X° Y.Y')
(49 ° 53 ' " N, 117 ° 22 ' " W (±); Elevation: _____

UMT Zone 11 474000 E 5525500N; Province: B.C.

Sec. ____, T. ____, R. ____; _____ Co., State _____

(NTS 82 F/8) _____ Map Area (1:250,000)

Location: EXPLORATION ADIT NORTH OF AYLWIN CREEK
Source Type:
Rock Types: ALTERED 'QUARTZ LATITE' PORPHYRY
Geologic Unit:
Geologic Setting: INTRUDES ROSSLAND (?) VOLCANICS + SEDIMENTS IN A ROOF PENDANT
Material Analysed: ZIRCON w. COMMON XENOCRYSTIC CORES

Comment on Analyses: 3 POINT DISCORDIA DOES'NT GIVE MEANINGFUL RANGE OF INTERCEPT ERRORS. NEED ANALYSIS OF 1 MORE FRACTION FOR BETTER ERROR CONTROL

Interpretation: EARLY JURASSIC INTRUSION. ZIRCONS CONTAIN LARGE AMOUNT OF INHERITED (XENOCRYSTIC) Pb OF EARLY PROTEROZOIC AGE

Collected by: W.J. McMILLAN
Dated by: P. VAN DER HEYDEN
D. Murphy

Date of listing: _____

Sample Name or Number:

Sheet ☐

Split-Mineral	ppm U	ppm Pb	206	207	208	204	Meas. 206/204	Mole % Blank Pb	Rad. Pb Rad+ComPb	Common Pb Age
70-100 m NM 2/10	440.8	22.6	100	9.3794	9.3839	0.0315	2568	0.4	0.981	300

2.4 mg	206 Pb/238 U ratio ±	207 Pb/235 U ratio ±	207 Pb/206 Pb ratio ±	206 Pb/238 U date ±	207 Pb/235 U date ±	207 Pb/206 Pb date ±	R
	0.04970 ±0.00040	0.6126 ±0.0051	0.08939 ±0.00017	312.7 ± 2.5	485.2 ± 3.2	1412.5 ± 3.7	.98

Split-Mineral	ppm U	ppm Pb	206	207	208	204	Meas. 206/204	Mole % Blank Pb	Rad. Pb Rad+ComPb	Common Pb Age
100-200 m NM 2/10	408.0	18.3	100	9.2834	11.5007	0.0716	1146	0.9	0.957	300

1.0 mg	206 Pb/238 U ratio ±	207 Pb/235 U ratio ±	207 Pb/206 Pb ratio ±	206 Pb/238 U date ±	207 Pb/235 U date ±	207 Pb/206 Pb date ±	R
	0.04252 ±0.00030	0.4851 ±0.0037	0.08274 ±0.00019	268.5 ± 1.9	401.6 ± 2.5	1263.0 ± 4.4	.97

Split-Mineral	ppm U	ppm Pb	206	207	208	204	Meas. 206/204	Mole % Blank Pb	Rad. Pb Rad+ComPb	Common Pb Age
7200 m M 1.8/20	474.2	22.1	100	9.5703	12.8828	0.1209	714	1.1	0.928	300

0.6 mg	206 Pb/238 U ratio ±	207 Pb/235 U ratio ±	207 Pb/206 Pb ratio ±	206 Pb/238 U date ±	207 Pb/235 U date ±	207 Pb/206 Pb date ±	R
	0.04332 ±0.00031	0.4692 ±0.0034	0.07856 ±0.00013	273.4 ± 1.9	390.7 ± 2.4	1161.2 ± 3.3	.98

Split-Mineral	ppm U	ppm Pb	206	207	208	204	Meas. 206/204	Mole % Blank Pb	Rad. Pb Rad+ComPb	Common Pb Age
74-149 M 1.8A/2	319	11	100	7.2003	11.3658	0.0535		4.29	0.967	185±20

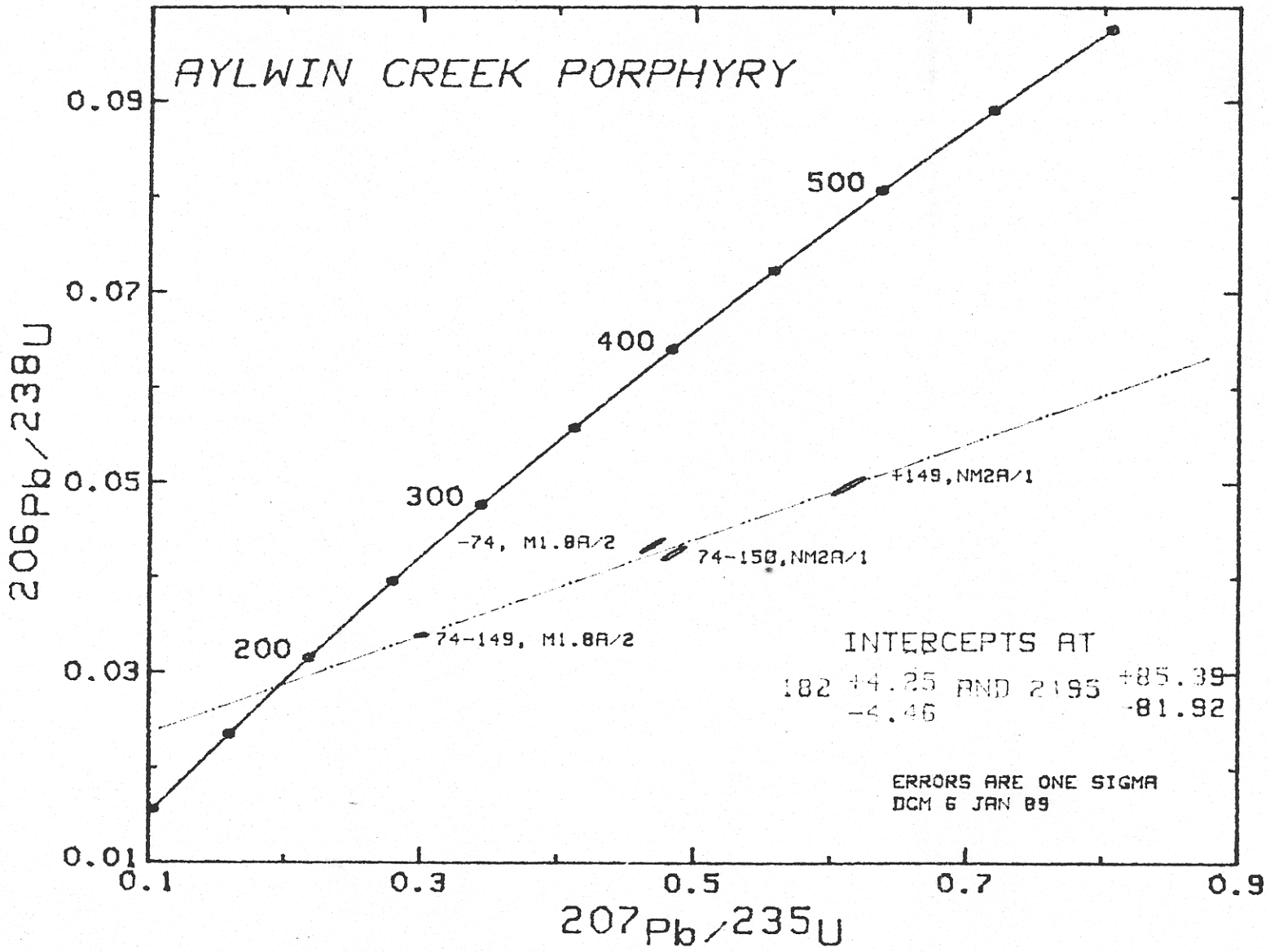
0.2 mg	206 Pb/238 U ratio ±	207 Pb/235 U ratio ±	207 Pb/206 Pb ratio ±	206 Pb/238 U date ±	207 Pb/235 U date ±	207 Pb/206 Pb date ±	R
	0.03384 ±0.00008	0.29996 ±0.0014	0.06428 ±0.00022	214.5 ± 0.5	266.4 ± 1.1	751 ± 7.2	.92

Split-Mineral	ppm U	ppm Pb	206	207	208	204	Meas. 206/204	Mole % Blank Pb	Rad. Pb Rad+ComPb	Common Pb Age

	206 Pb/238 U ratio ±	207 Pb/235 U ratio ±	207 Pb/206 Pb ratio ±	206 Pb/238 U date ±	207 Pb/235 U date ±	207 Pb/206 Pb date ±	R
	±	±	±	±	±	±	

Statement of Uncertainties: ERRORS ARE 1σ

Isotopic composition of blank: ☐ S-K Modern Pb (6/4:18.7, 7/4:15.63, 8/4:38.63) or ☑ Other (6/4:17.75 7/4:15.50 8/4:37.30)
Isotopic composition of common Pb based on S-K growth curve: 6/4=11.152, 7/4=12.998, 8/4=31.23 at 3.7Ga with 238U/204Pb=9.74, 232Th/204Pb=37.19; decay constants 0.155125, 0.98485, 137.88; or ☐ Other (6/4: 7/4: 8/4:)


AYLWIN CREEK PORPHYRY
0.09
0.07
0.05
0.03
0.01
206Pb/238U
0.1
0.3
0.5
0.7
0.9
207Pb/235U
500
400
300
200
+149, NM2A/1
-74, M1.8A/2
74-150, NM2A/1
74-149, M1.8A/2
INTERCEPTS AT
182 +4.25 -4.46 AND 2195 +85.39 -81.92
ERRORS ARE ONE SIGMA
DCM 6 JAN 89