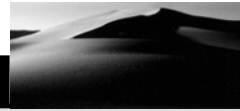


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# facsimile transmittal



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To: John Baxter Fax: 9478 3987

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From: Roger Hamilton Date: 20/05/2005

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Re: PAL 1 Pages: 2

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John,

Results for PAL 1 attached. Note that these data are indicative only because, 1) the grain size ranges were too long, and 2) insufficient grains were counted to provide reliable grain count statistics. This sample is black - we now know why: it is ~80% dark amphibole. The good news is the garnets for the most part partition nicely into one mag' fraction (PM1). The dilutant is amphibole. The density difference of >1 SG unit should allow these to be separated easily.

This sample took over four hours to complete. For the remainder I propose combining all the sieve fractions, doing a mag'sep and then a grain count.

If you want to discuss this please ring me on 9367 9730 before 11am and on 9356 3344 after that time. The results have also been sent to your email address.

Regards,

Roger Hamilton

File Note: Olympia  
Date: 6 December 2002  
Subject: Palaeochannel 1

Table 1. Sample PAL 1. +0.4mm magnetic separate mineralogy.

	MAG	PM1	PM2	NM+3.3	NM-3.3	HEAD
Fraction%	0.2	75.6	21.3	0.2	2.7	100
Oxides <sup>1</sup>	0	0	0	0	0	0
Garnet <sup>2</sup>	0	30.3	3.3	31.4	0	23.7
Amphibole	0	53.8	78.5	63.8	90.0	60.0
Titanite	0	0	0	0		0

Al-Silicates	0	0	0	0		0
Other <sup>3</sup>	0	0	0	0		0
Rock <sup>4</sup>	100	15.9	18.2	4.8	10.0	16.3
	100	100	100	100	100	100

Explanation

MAG : most magnetic fraction; PM1: paramagnetics 1; PM2: paramagnetics 2 (grains have weaker magnetic susceptibility than PM1); NM+3.3: non-mag<sup>7</sup>, methylene iodide sink; NM-3.3: non-mag MI floats

<sup>1</sup> Ilmenite, titanomagnetite and ironstone

<sup>2</sup> Garnet as follows: pink 40%, mid-orange 59%, deep orange 1%

<sup>3</sup> Other includes quartz, leucosene, titanite and undetermined Alumino silicates

<sup>4</sup> Amphibole-felspar-biotite-quartz gneiss

Table 2. Sample Palaeochannel 1. **-0.4mm** magnetic separate mineralogy.

	MAG	PM1	PM2	NM+3.3	NM-3.3	HEAD
Fraction%	0.3	35.4	54.6	1.8	8.0	100
Oxides	100	0	0	0	0	0.3
Garnet <sup>1</sup>	0	24.1	3.8	1.2	0	10.6
Amphibole	0	75.9	96.2	62.7	70.5	86.0
Titanite	0	0	0	25.6	0	0.5
Al-Silicates	0	0	0	0	8.2	0.7
Other <sup>3</sup>	0	0	0	0	21.3	1.9
Rock <sup>4</sup>	0	0	0	0	0	0
	100	100	100	100	100	100

<sup>1</sup> Garnet: pink 20%, orange 80%

Table 3. Sample Palaeochannel 1 Head

Oxides	0.2
Garnet	14.2
Amphibole	78.9
Titanite	0.3
Al-Silicates	0.5
Other	1.4
Rock	4.5
	100

R Hamilton