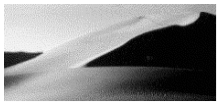
MEMORANDUM

DuneLabs Pty Ltd



Heavy Mineral Services

To: John Baxter **File Ref:** RXH2002-3

From: R Hamilton

Date: 20 May 2005

Keywords: Indicator

Subject: **OLYMPIA RESOURCES SAMPLES COST 1, DUNE 1,FP 1 & PAL 1**

INTRODUCTION

Samples, as sized HMC collected 8/12/02 with the instruction to establish the mineralogy in a one day at a set cost.

WORK DONE

Sized fraction recombined and magnetically separated using a MECAL lift magnet as follows:

PAL 1 : screened to +0.4mm and –0.4mm and fractions treated separately

Other samples : treated in one pass

The lift magnet produces five fractions : the magnetic fractions MAG1 and MAG 2 (combined as MAG), two paramagnetic fractions (PM1 and PM2) and a non-mag' fraction (NM).

Fractions PM1 and NM were treated in methylene iodide (SG tested as 3.30) in order to produce a relatively clean garnet product (PM1) and to test for possible exotic heavy species free of amphibole contaminant (NM).

Between 100 and 200 grains were counted per fraction. Note that with the exception of PAL 1, unsized fractions were counted. This will lead to counting errors.

RESULTS

The results are shown in modal analysis format (Tables 1-4). Mineral variations between samples can be readily seen by comparing the HEAD values. Species distribution by magnetic fraction are also readily apparent.

Garnets are angular and have a low inclusion content. Grains with a mid orange colour dominate over pink garnets. The colour is probably related to the almandine molecule content.

Significantly, garnets overlap with ilmenite on SG and magnetic susceptibility with both species reporting to PM 1 MI sinks. Contaminants increase strongly as grain size decreases.

Amphibole dominates all the samples. A small proportion of amphibole is denser than SG 3.3

There are no economic species other than garnet. The content of rutile is to low to be of interest. There traces of uvarovite and epidote in the NM MI sinks.

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CONCLUSIONS AND RECOMMENDATIONS

1. Only garnet has economic potential
2. Garnet could be chemically characterised by EMP analysis
3. A clean garnet product cannot be made on the basis of density and magnetic susceptibility. Cleaning with an electrostatic separator should improve product quality.

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Attachments: (3)