

# Bell Cochrane & Associates

## Extractive Industries

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*BCA Reference K01-026*

### **Subject : Petrographic Description – Wallan Basalt Core Samples- Mott Property**

Dear Sir

Following your recent enquiry we have prepared a general description of the basalt from the Mott property at Wallan based on our petrographic examination of 30 thin sections of diamond drill core samples taken from the Mott property.

The rock would be described as an iddingsite olivine basalt ranging from grey to dark grey and reddish grey in colour. The basalt texture is compact and very fine grained with vesicles up to 1 cm across in some samples.

Under the microscope the basalt is dominantly very fine grained and slightly porphyritic in texture with phenocrysts of olivine set in a sometimes flow oriented intergranular groundmass of plagioclase feldspar laths, granular pyroxene, olivine and opaques.

The secondary minerals are dominantly iddingsite after olivine with minor smectite zeolite and carbonate occurring as a replacement of olivine, interstitial material and as a vesicle lining. The secondary mineral contents are generally in the range of 5% to 25% and averaging approx. 13% indicating a sound durable basalt.

There was **no crystalline silica present in any of the 30 samples** examined under the microscope. There would be no risk of silicosis due to quartz (crystalline silica) from the basalts at this site. This basalt contains around 15% of the primary mineral olivine which is incompatible with crystalline silica or quartz.

Please contact us if you require any further information.

Yours faithfully



B Natoli member Aus.IMM

**Bell, Cochrane & Associates**  
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Extractive Resource Location - Resource and Materials Evaluation - Development Planning  
Quality Assurance - Extractive Industry and Planning Permit Submissions