## PARTIAL RELINQUISHMENT REPORT

## for two sub-blocks on

# **EXPLORATION PERMIT FOR MINERALS (EPM) 13236**

"Spring Creek"

**Environmental Authority No. M5557** 

9 March 2003 - 8 March 2005

# Australian Diatomaceous Earth Joint Venture

#### **Contact details:**

Australian Diatomaceous Earth Joint Venture C/ - Environmental & Licensing Professionals Pty Ltd GPO Box 559 BRISBANE QLD 4001

#### Prepared by:

Environmental & Licensing Professionals Pty Ltd

Ph: 07 3239 9700 Fax: 07 3220 2135

Date: January 2005



# **Table of Contents**

Summary	1
1.0 Introduction	2
2.0 Tenement Details	
3.0 Topography	
4.0 Geology	
5.0 Work Done	
5.1 Geological Data	
5.2 Geophysical Data	4
5.3 Geochemical Data	4
5.4 Drilling Data	4
5.5 Remote Sensing Data	4
5.6 Resource Statement	4
6.0 Conclusion	5

# **Appendices**

APPENDIX 1 EPM 13236 - Area Subject to Relinquishment

### PARTIAL RELINQUISHMENT REPORT

# for two sub-blocks on EXPLORATION PERMIT FOR MINERALS (EPM) 13236 "Spring Creek"

#### **Summary**

The Greenvale Diatomaceous Earth Project is focused on the exploration of diatomaceous earth. During this period of reporting, a desktop appraisal, literature review and air photo interpretation was conducted.

This area has a lower potential for hosting suitable diatomaceous earth resources and therefore, exploration undertaken by the Australian Diatomaceous Earth Joint Venture ("ADEJV") was dedicated to the remaining portions of EPM 13236 and other tenements within the project area. Accordingly, no diatomaceous earth resources were identified within the two relinquished sub-blocks.

#### 1.0 Introduction

EPM 13236 "Spring Creek" was granted to Australian Diatomaceous Earth Pty Ltd on 9 March 2001 for a term of two years over 17 sub-blocks. EPM 13236 has a standard Environmental Authority (approval granted by the Environmental Protection Agency on 8 February 2001, M5557). The EPM is located approximately 48 kilometres northwest of Greenvale. Two sub-blocks have been relinquished from this EPM. This report therefore relates to the two relinquished sub-blocks. See Appendix 1 for Location of EPM 13236.

#### 2.0 Tenement Details

The tenement comprises a diatomite-bearing sequence located on the Conjuboy 1:100,000 topographic sheet. EPM 13236 has been granted only over exclusive tenure. In the southern area of the tenement, a stock route (non-exclusive tenure) has been excised from the tenure. The current area is made up of 15 sub-blocks after two sub-blocks were relinquished on 5 March 2003. The relinquished area comprises sub-blocks in the Townsville block identification map (refer to Table 1).

Table 1: Sub-blocks to be relinquished in EPM 13236

BIM	Block	Sub-Blocks
TOWN	2315	J, O

On 29 May 2002, an assignment was approved for EPM 13236. This tenement was subject to a transfer between three parties known as the Australian Diatomaceous Earth Joint Venture ("ADEJV"). The EPM was successfully transferred from Australian Diatomaceous Earth Pty Ltd and is now held as follows:

**Table 2: Tenure Holders** 

Holder	Percentage
Australian Diatomaceous Earth Pty Ltd	29.4 %
Diatomaceous Earth Investments Pty Ltd	40.0 %
ADE Filter Aid Pty Limited	30.6 %
TOTAL	100%

Australian Diatomaceous Earth Pty Ltd is the nominated principal holder.

EPM 13236 forms part of the Greenvale Diatomaceous Earth Project group of tenements held by the ADEJV. The EPM was initially applied for to identify further economic resources of diatomaceous earth in the areas adjacent to MDL's 325 and 326 (previously EPM's 4436 and 10419) and continues to be an integral part of the Greenvale DE Project.

#### 3.0 Topography

The EPM is located at an elevation of about 520 metres and lies on the southern margins of a basalt dome of about 5000km² that forms the McBride Plateau. The centre of the dome reaches an elevation of 1028 metres. The dome comprises numerous basalt lavas that flowed radially outward from 164 volcanic centres. The volcanic centres range from low hills formed by eroded plugs to well persevered cones with craters.

Around the margins, where the basalt is locally 5 metres thick, surface drainage features are separated by, and run parallel to the basalt flows. Basalt flow fronts present low, but distinctive 'jump ups' in the generally subdued topography.

The EPM is immediately adjacent to a low basalt wall that represents the southernmost extension of the lava flows. It is located largely on a topographic feature known as Greasy Plain – an area of heavy dark clay. Greasy Plain is located on the fringe of the southern extent of the basalt lava flow and has been developed by intensive *in situ* chemical weathering of the underlying clayey Tertiary to Quaternary rocks, some of which are diatomaceous. It is around 5 metres lower in elevation than the basalt flow.

#### 4.0 Geology

EPM 13236 is over an area within which a widespread body of diatomaceous earth is exposed in a creek cutting through the overlying Tertiary basalt cover.

The geology of the region comprises Tertiary-Quaternary basalt, underlain by lacustrine diatomaceous earth and claystone, which overlies a Cambrian metamorphic sequence.

The surface geology is dominated by Tertiary-Quaternary basalt cover that is dissected by the drainage channels of the Wyandotte and Forester Creeks, exposing a Tertiary-Quaternary lacustrine sedimentary sequence. This sequence is dominated by a thick layer of diatomaceous earth which is the main unit of economic interest. These sediments are underlain by clay.

Regionally, the diatomaceous earth unit is typically poorly cemented, containing a few clay lenses and minor sandy intercalations. Where exposed in creek cuttings, the diatomite horizon is around 10-15 metres in thickness and is covered by 0-5 metres of sandy clay, diatomite rubble, basalt rubble and soil.

The basement is comprised of Cambrian metamorphic rocks that underlie the lacustrine sequence. Other basement sequences in the region include meta-sedimentary rocks of the Upper Cambrian Balcooma Metavolcanics and igneous rocks of the Upper Cambrian Ringwood Park Microgranite and Silurian Dido Granodiorite.

Geological interpretation of the Greenvale Project area suggests that the lacustrine sediments were deposited in a fairly shallow basin. A basal clay unit is identified throughout the area, which underlies the diatomite-bearing portion of the sequence.

Tertiary basalt overlies the diatomite-bearing horizon and has an apparent gentle slope to the west. This slope is accentuated in the southern portion of the area where elevation differences at the base of the basalt straddling Wyandotte Creek infers either some late stage faulting or alternatively, two separate flows.

#### 5.0 Work Done

#### 5.1 Geological Data

During this period of reporting, desktop appraisal, literature review and air photo interpretation was conducted. Detailed geological investigation on the ground was not conducted.

#### 5.2 Geophysical Data

There is no geophysical data for the two relinquished sub-blocks because the exploration activities did not extend to performing geophysical surveys or assessment of existing data.

#### 5.3 Geochemical Data

There is no geochemical data for the two relinquished sub-blocks because the exploration activities did not include geochemical sampling activities.

#### 5.4 Drilling Data

No drilling was undertaken on the relinquished sub-blocks.

#### 5.5 Remote Sensing Data

No assessment of remote sensing data was conducted.

#### 5.6 Resource Statement

As exploration was restricted to desktop assessment, no diatomaceous earth resources were identified within the two relinquished sub-blocks.

#### 6.0 Conclusion

The area subject to relinquishment is considered to hold a lower potential for locating suitable diatomaceous earth resources than surrounding areas currently held by the ADEJV under tenement. As a result, limited low impact exploration was undertaken within the two sub-blocks. No further assessment is considered to be warranted at this time.