

ANNUAL TECHNICAL REPORT FOR THE PERIOD

30 December 2006 to 29 December 2007

EXPLORATION LICENCES 24709 and 24710

“Wave Hill Project”

North West NORTHERN TERRITORY

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ABSTRACT

Australian Mineral Mines Pty Ltd (AMM) is exploring Exploration Licences 24709 and 24710 “Wave Hill” for prehnite, agate, amethystine and smoky quartz within Lower Cambrian Antrim Plateau Volcanics. The area is renowned for producing beautiful specimens of these minerals.

Previous exploration has included: literature review; submission of a Mine Management Plan and organizing a Security Bond; Sacred Site Searches & other Native Title Issues; a field reconnaissance trip; a field sampling trip (10 tonnes of prehnite hand collected); transportation of samples to Melbourne; cutting and polishing of prehnite samples; shipping of 2 tonnes of prehnite to Los Angeles for marketing and research purposes.

In addition permission was granted to Johan Pieter Pas to lodge a Mineral Lease application (No 25724) within EL 24709.

Exploration during the reporting period included the signing of an Agreement with the Native Title Claimants via the Northern Land Council on Mineral Lease 25724, cutting and polishing of prehnite samples for marketing and research purposes.

KEYWORDS

Exploration Licence
North West Northern Territory
Wave Hill
Lower Cambrian
Antrim Plateau Volcanics
Prehnite
Agate
Amethystine & Smoky Quartz
Hand Collecting

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1. INTRODUCTION

1.1 Exploration rationale

Exploration Licences 24709 and 24710 “Wave Hill” are being explored by the licensee Australian Mineral Mines Pty Ltd (AMM) for prehnite, agate, amethystine and smoky quartz within Lower Cambrian Antrim Plateau Volcanics. The area is renowned for producing beautiful specimens of these minerals.

The project area is located south of Kalkarindji. The Buchanan Highway traverses the central parts of both Exploration Licences. There are numerous minor roads and tracks to access the project area.

Land tenure comprises Perpetual Pastoral Lease No.1002 held by Gambamora Industries Pty Ltd.

Tenement details are as follows:

Type of Licence	Tenement Number	Tenement Name	Area (Sq. km)	Date of Grant	Date of Expiry	Tenement Holder	Expenditure Commitment
EXPLORATION LICENCE	24709	WAVE HILL	195.3	30/12/05	29/12/11	Australian Mineral Mines PL	\$25,500 pa
EXPLORATION LICENCE	24710	WAVE HILL	117.5	30/12/05	29/12/11	Australian Mineral Mines PL	\$25,500 pa

1.2 Geological Setting:

The Wave Hill Project is located in the Victoria River District and is underlain by rocks of the Lower Cambrian Antrim Plateau Volcanics, a series of flows that outcrop over some 35,000 km² and underlie the sedimentary strata of a number of Palaeozoic basins in Western Australia and the Northern Territory. The volcanics consist of lava flows with thin interbeds of sandstone, chert, silicified carbonate rocks, limestone and pyroclastic rocks. Their overall thickness is estimated to range between 142 to 183 metres.

The basalt flows within the series contain geodes and amygdales, which vary from microscopic size to tens of centimetres across. In general the geodes and amygdales are found near the top of the lava flows. These weather out of the lava to form hollow lava-encrusted boulders with their inner surfaces encrusted with crystals. The geodes can be found scattered on the ground and in the soil.

Where the basalt shell has been removed, concentrically banded red and white agate or quartz crystal remains. Another mineral, prehnite, is also found in geodes or as nodules on the surface. The prehnite occurs as yellow to green radiating crystalline aggregates about 10cm thick. Opaque and the more highly prized translucent varieties can be found.

These minerals probably formed under conditions of low pressure and low temperature. Heated waters rising from below and surface waters filtering downwards most likely leached elements from the basalt and redeposited them as new minerals in cavities.

2. REVIEW OF PREVIOUS WORK

Previous exploration has included: literature review; submission of a Mine Management Plan and organizing a Security Bond; Sacred Site Searches & other Native Title Issues; a field reconnaissance trip; a field sampling trip (10 tonnes of prehnite hand collected); transportation of samples to Melbourne; cutting and polishing of prehnite samples; shipping of 2 tonnes of prehnite to Los Angeles for marketing and research purposes.

In addition permission was granted to Johan Pieter Pas to lodge a Mineral Lease application (No 25724) within EL 24709.

3. EXPLORATION COMPLETED DURING THE REPORTING PERIOD

Exploration during the reporting period included the signing of an Agreement with the Native Title Claimants via the Northern Land Council on Mineral Lease 25724, cutting and polishing of prehnite samples for marketing and research purposes.

4. DISCUSSION OF RESULTS

Previous field reconnaissance identified an area of good prehnite surface outcrop within EL 24709 (northeast of Fossickers Area 8 Wave Hill).

Mr. Johan Pas has been given permission by AMM to apply for a Mineral Lease No 25724 in this area.

5. CONCLUSIONS AND RECOMMENDATIONS

Additional field reconnaissance and sampling activities will be carried out in the coming 12 months over all areas of EL's 24709 and 24710 not covered during the first two years of tenure. Expenditure is expected to be in line with the annual licence commitments of \$25,500.

The prehnite has good potential as carving material. Overseas marketing and research of the material is also proposed for the next reporting period.

6. ENVIRONMENT

No rehabilitation activities were carried out on the licences during the reporting period.

7. EXPENDITURE

Expenditure during the first twelve months of tenure totals \$6,501 on EL 24709, and \$1,360 on EL 24710, made up as follows:

WORK CARRIED OUT	EL 24709	EL 24710
Geology (incl. Compilation of Annual Tech. Report, Salaries & Wages)	\$2,450	\$1,075
Technical Requirements	\$242	
Sample Transportation	\$396	
Cutting and Polishing of Samples	\$2,500	
Vehicles, Fuel, Air Fares, Field Supplies, Food, Accommodation	\$322	\$162
Administration (10%)	\$591	\$123
TOTAL	\$6,501	\$1,360

8. REFERENCES

Bultitude, R. J., 1972: *Explanatory Notes on the Wave Hill Geological Sheet – 1:250,000 series*. Bureau of Mineral Resources, Australia

O’Byrne, D., 1984: Collecting minerals, gemstones and fossils in the Antrim Plateau Volcanics. *Gem and Treasure Hunter*, **96**, 15-16.

Sutton, P., 2003: Quartz, prehnite and associated minerals from the Wave Hill area, Northern Territory. *Australian Journal of Mineralogy*, Vol. 9, No.2, 73-80.

APPENDIX 1

Disk 1 – Digital copy of Annual Report on EL 24709 & 24710.
February 2008 (EL24709_24710_200712.pdf)