

JOINT ANNUAL TECHNICAL REPORT FOR THE PERIOD

1st December 2008 to 30th November 2009

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 EL 24709 and EL24710 “Wave Hill” for prehnite, agate, amethystine and smoky quartz mineralisation within Lower Cambrian Antrim Plateau Volcanics. These materials are increasingly becoming popular within the jewellery, lapidary and mineral markets and AMM is seeking to discover a significant source to potentially wholesale to these growing markets. Exploration work on the leases during this reporting period consisted of a single field trip carried out by AMM staff to investigate semi-precious stone mineralisation.

KEYWORDS

Exploration License
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 Licenses 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 target commodities are increasingly becoming popular within the jewellery, lapidary and mineral markets. AMM is seeking to explore a significant deposit of these minerals for the purposes of one day becoming an international wholesaler to the semi-precious stone markets.

AMM’s exploration strategy is to undertake field mapping and reconnaissance after the Northern Territory wet season when erosion of Antrim Plateau Volcanics and overlying sediments has taken place. AMM is led by a qualified group of geologists and field workers who have extensive experience in discovering and mining similar deposits throughout Australia.

1.2 Location

The project areas are located in the west of the Northern Territory just south of Kalkarindji and approximately 580Km south of Darwin. Access to the lease is by 4WD from the Buntine Highway which is 2km north of EL24709.

1.3 Tenure

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

Tenement details are as follows:

Type of License	Tenement Number	Tenement Name	Date of Grant	Date of Expiry	Tenement Holder	Expenditure Commitment
EXPLORATION LICENCE	24709	WAVE HILL	30/12/05	29/12/11	Australian Mineral Mines PL	\$25,500 pa
EXPLORATION LICENCE	24710	WAVE HILL	30/12/05	29/12/11	Australian Mineral Mines PL	\$25,500 pa

1.4 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 (Bultitude, 1972).

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, weathering out of the lava to form hollow lava-encrusted boulders with their inner surfaces encrusted with crystals (Sutton, 2003). 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 (O'Byrne, 1984). 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 water is rising from below and surface waters filtering downwards most likely leached elements from the basalt and redeposited them as new minerals in cavities.

2. EXPLORATION COMPLETED DURING THE REPORTING PERIOD

Exploration during the reporting period included:

- Australian Mineral Mines Pty Ltd conducted field mapping of the both Exploration leases throughout this reporting period.
- Exploration activity was limited to field mapping by AMM staff and sample inspection in the field (No sample material was removed from the lease area during this reporting year).
- Minor cutting and polishing of material collected from the first year of tenure (2005-2006 period) for quality control as a carving material.

3. DISCUSSION OF RESULTS

Results for field reconnaissance and exploration were very positive during this year's activities. Significant semi-precious stone mineralisation was found on EL24709.

4. CONCLUSIONS AND RECOMMENDATIONS

Exploration activity on these leases has been positive and plans are in place to submit Mineral Claim applications in the next 12 months.

Australian Mineral Mines Pty Ltd is currently seeking the Minister's advice on applying for two Mineral Claims within the designated fossicking reserve in the area. If this is favorable, the prospect of applying for Mineral Claims within both EL24709 and EL24710 will be increased.

It is Australian Mineral Mines Pty Ltd goal to have a number of Mineral Claims within the area in the coming years.

5. ENVIRONMENT

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

6. EXPENDITURE

Expenditure during the twelve months of this reporting period totals \$28,629 on EL24709, and \$25,731 on EL24710, made up as follows:

WORK CARRIED OUT	EL 24709	EL 24710
Geology (incl. Compilation of Annual Tech. Report, Salaries & Wages)	\$24,540	\$22,362
Technical Requirements	\$244	\$244
Cutting and Polishing of Previously Collected Samples	\$720	\$0
Vehicles, Fuel, Air Fares, Field Supplies, Food, Accommodation	\$2,460	\$2,460
Administration	\$665	\$665
TOTAL	\$28,629	\$25,731

Table 1: Expenditure for Reporting Period

7. 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.

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