Australian Abrasive Minerals Pty Ltd

Harts Range Spinifex Bore Garnet Project
Tenth Annual and Final Report for EL 24378
15th September, 2006 to 15th December, 2016
Formerly part of
GR078/12

TARGET COMMODITY: GARNET, URANIUM
Map Sheet: Alcoota, 1:250,000
            Delny, 1:100,000

PROJECT OPERATOR: Australian Abrasive Minerals Pty Ltd

Author: John Baxter
14th October, 2016
CONTENTS

CONTENTS ...................................................................................................................... 2
FIGURES .......................................................................................................................... 2
TABLES ............................................................................................................................ 3
APPENDICES .................................................................................................................. 3
EXECUTIVE SUMMARY/ABSTRACT .............................................................................. 4
INTRODUCTION .............................................................................................................. 5
Location ............................................................................................................................ 5
Previous Work and Acquisition ...................................................................................... 7
Australian Abrasive Minerals Activities ......................................................................... 7
GEOLOGICAL SETTING –EXPLORATION RATIONALE ............................................. 8
 Physiography .................................................................................................................. 8
 Geology and Mineralisation ........................................................................................... 8
2015-16 EXPLORATION ................................................................................................. 9
 Exploration Index Map .................................................................................................. 9
 Access Considerations ................................................................................................... 10
 Geological Studies ......................................................................................................... 11
 Geophysics and Remote Sensing ................................................................................... 13
 Surface Geochemistry ................................................................................................... 13
 Drilling 13
 Geotechnical Studies .................................................................................................... 14
 Resource estimation ....................................................................................................... 14
 CONCLUSIONS ............................................................................................................... 14
 BIBLIOGRAPHY ............................................................................................................ 15

FIGURES

Figure 1 Location Plan for Harts Range Spinifex Bore Project 2016 ................................. 6
Figure 2 Tenements in the Harts Range Garnet Project showing access .......................... 7
Figure 3 Exploration Index Map ..................................................................................... 9
Figure 4 Access Plan ....................................................................................................... 11
Figure 5 Location of Uranium Exploration EL24360, EL24378 and EL24641 ................. 12
Figure 6 Location of Air-core drill holes ......................................................................... 13
TABLES

Table 1  Australian Abrasive Minerals EL24378, September, 2016  5
Table 2  Historical Expenditure on the Spinifex Bore Garnet Project  5
Table 3  Stratigraphy of Harts Range Spinifex Bore Project Area  9
Table 4  Expenditure 2014-2015  10

APPENDICES

Appendix 1  Digital Data from Uranium Exploration

Appendix 2  Digital Data from Drilling Program
EXECUTIVE SUMMARY/ABSTRACT

Australian Abrasive Minerals Pty Ltd has surrendered EL24378 being part of the Harts Range Garnet Project. The tenement was located along the valley of the Plenty River and originally covered approximately 151 km² or 151 blocks. Australian Abrasive Minerals acquired the Harts Range Garnet Project from Matilda Zircon Ltd in 2009. In 2016 AAM have surrendered the last 40 blocks of the tenement.

This report is the annual and surrender report for EL24378. The tenement has been explored in a reconnaissance manner for garnet and uranium without success. AAM have concluded that it has no further interest in this tenement as it does not contribute to the Harts Range Garnet Project to the south of this area.

Work Completed

The data supplied to Australian Abrasive Minerals covered by the surrender of EL24378 indicates that prior to 2010, other than a brief assessment of the uranium potential, no work has been undertaken.

Since 2010 AAM has undertaken a brief drilling programme that was unsuccessful in identifying any garnet concentration.

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INTRODUCTION

The Harts Range Garnet Project has group reporting GR78/12 including EL24360, EL24378, EL28696 & EL30138. All tenements are located along the valley of the Plenty River and cover approximately 550km² or 141 blocks. The project and tenements are located about 220km east of Alice Springs on the Plenty Highway (Figure 1). A garnet resource has been identified and is now covered by ML28614. The tenements also contain a bore field which can supply process water at a rate of 1,210 m3/day (14 l/s) (Rockwater, 2007).

Australian Abrasive Minerals Pty Ltd (‘AAM’) acquired the tenements from Matilda Zircon Ltd in 2009. Matilda had previously conducted reconnaissance exploration on EL24378. EL 24378 was granted on 15th September, 2006 has been explored for garnet and uranium unsuccessfully.

To date $102,721 has been spent on the tenement on exploration.

<table>
<thead>
<tr>
<th>Lease</th>
<th>Grant Date</th>
<th>Rent</th>
<th>Covenant</th>
<th>Current Area</th>
<th>Anniversary</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL24378</td>
<td>15/09/2006</td>
<td>$8,327*</td>
<td>$24,700*</td>
<td>40 Blocks</td>
<td>15th September</td>
</tr>
</tbody>
</table>

- After reduction 2013

Table 2 Historical Expenditure on the Spinifex Bore Garnet Project

<table>
<thead>
<tr>
<th>Tenement</th>
<th>2012 Expenditure</th>
<th>2013 Expenditure</th>
<th>2014 Expenditure</th>
<th>2015 Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL24378</td>
<td>$15,500</td>
<td>$20,475</td>
<td>$24,461</td>
<td>$6,070</td>
</tr>
</tbody>
</table>

In this reporting period 15th September, 2015 to 14th September, 2016 the main focus for Australian Abrasive Minerals Pty Ltd (AAM) has been acquiring and constructing the wet plant at Spinifex Bore and the dry plant at Woodforde. No exploration has been undertaken on EL24378.

Location

The Harts Range Garnet Project, located within the Northern Territory, is approximately 134km northeast of Alice Springs (Figure 1). The project is accessed via travelling north along the Stuart Highway for 68km then east along the Plenty
Highway for a further 143km. The first 84km along the Plenty Highway is sealed after which the remainder of the access is unsealed; with loose gravels and corrugations regularly encountered. A turn off onto a pastoral track heading north from the Harts Range police station leads into the project area.

The Plenty Highway provides excellent access to the tenements. From the highway there are numerous tracks that are generally negotiable except after heavy rain. The tenements are mainly north of the Plenty Highway.

Figure 1  Location Plan for Harts Range Spinifex Bore Project 2016
Previous Work and Acquisition

Australian Abrasive Minerals Pty Ltd (‘AAM’) acquired the Harts Range Spinifex Bore Garnet Project from Matilda Zircon Ltd in 2009. Matilda (previously Olympia Resources Ltd) had previously conducted extensive work on the tenement package including EL 24378. Matilda had conducted uranium exploration on the tenement.

Figure 2  Tenements in the Harts Range Garnet Project showing access

Australian Abrasive Minerals Activities

Between 2010 and 2015 Australian Abrasive Minerals undertook a project to assess the potential for garnet in paleochannels and abandoned channels of the Plenty River and Entire Creeks. AAM scoured available data using digital terrain models, Google Earth images and NTGS geophysics in an attempt to identify paleochannels that may contain garnet deposits or any other potential mineralisation. These observations
were integrated into the regional uranium exploration data obtained previously on the tenements. Only one suitable target was identified and this was drilled in 2013-14.

Both uranium and garnet exploration was unsuccessful.

**GEOLOGICAL SETTING –EXPLORATION RATIONALE**

**Physiography**

The Harts Range Garnet Project covers the floodplain of the Plenty River predominantly over the Kanandra Land System. It includes alluvial plains of Stones, Eblana, Ulgama, Watson and Brett Creeks.

The Kanandra System is characterized by sparsely timbered, red sandy plains on the north side of the Harts Range. The system can contain low dunes that particularly occur at the gradation to the Simpson land system which is characterized by large dunes.

The vegetation of the Kanandra system within the project area is dominated by scattered Ironwood trees (Acacia estrophiolata), tall shrubs of Witchetty Bush (Acacia kempeana), Cassia (Senna artemisioides subsp. filifolia), low shrubs such as Saltbushes (Rhagodia species) and grasses (Aristida species and Eragrostis species).

**Geology and Mineralisation**

Garnet bearing sands in paleochannels have been identified along the Plenty River floodplain from Aturga Creek (west of the Project) to Entire Creek (east of the Project). Australian Abrasive Minerals focussed their exploration in the vicinity of the bore field identified around Spinifex Bore concentrating on the floodplains of the Plenty River and Stones, Ulgarna and Watson Creeks.

The stratigraphy of the region is now well known based on drilling and pitting, that has been conducted on the project over the past 10 years. It is summarized in Table 3.
Table 3  Stratigraphy of Harts Range Spinifex Bore Project Area

<table>
<thead>
<tr>
<th>Range</th>
<th>Lithology</th>
<th>Cement</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
<td></td>
</tr>
<tr>
<td>10cm</td>
<td>15m</td>
<td>Red fine-grained silty sand - windblown – dunes to east</td>
</tr>
<tr>
<td>1.5m</td>
<td>5m</td>
<td>Brown-Orange fine to medium grained sand-floodplain</td>
</tr>
<tr>
<td>0</td>
<td>8m</td>
<td>Calcretised grey-white sand and pebbles-paleochannel</td>
</tr>
<tr>
<td>1m</td>
<td>7m</td>
<td>White-grey sand and cobbles - paleochannel</td>
</tr>
<tr>
<td>1m</td>
<td>2m</td>
<td>Calcrete</td>
</tr>
<tr>
<td>40m</td>
<td>120m</td>
<td>Schist and clay with abundant biotite and chlorite OR Tertiary clay and sand</td>
</tr>
</tbody>
</table>

2013-16 EXPLORATION

Exploration Index Map

In 2013 two holes were drilled to examine the stratigraphy and potential for garnet south of the Plenty River.

Figure 3  Exploration Index Map
Exploration expenditure in 2014-15 is summarized in Table 5. No exploration was conducted in the 2015-2016 period.

Table 4 Expenditure 2014-2015

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geological</td>
<td>$5,090</td>
</tr>
<tr>
<td>Geochemical Activities</td>
<td></td>
</tr>
<tr>
<td>Geophysics</td>
<td></td>
</tr>
<tr>
<td>Drilling</td>
<td></td>
</tr>
<tr>
<td>Bulk Sampling</td>
<td></td>
</tr>
<tr>
<td>Rehabilitation</td>
<td></td>
</tr>
<tr>
<td>Pre-Feasibility</td>
<td></td>
</tr>
<tr>
<td>Office Studies</td>
<td>$881</td>
</tr>
<tr>
<td>Overheads</td>
<td>$100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$6,071</strong></td>
</tr>
</tbody>
</table>

Access Considerations

The Harts Range Spinifex Bore Project is located on pastoral land of Mt Riddock Station and is the subject of require clearances with AAPA and the CLC.

The project area has a significant network of tracks established for pastoral and previous mining exploration and these provide good access for exploration.

The areas of restricted access and tracks are shown on Figure 4.
Geological Studies

Garnet bearing sands in paleochannels have been identified along the Plenty River valley at Aturga Creek and Entire Creek. In an endeavour to identify a garnet resource in the vicinity of the borefield identified around Spinifex Bore exploration of the floodplains of the Plenty River and Stones and Ulgarna Creeks was completed with a reconnaissance drilling programme by Matilda. Australian Abrasive Minerals continued this exploration with a major drill out of the area in 2010.

In order to assess the potential for garnet in paleochannels and abandoned channels of the Plenty River and Entire Creeks AAM scoured available data using digital terrain models, Google Earth images and NTGS geophysics in an attempt to identify paleochannels that may contain garnet deposits or any other potential mineralisation. These observations were integrated into the regional uranium exploration data obtained previously on the tenements. In the area being relinquished no suitable targets were identified and no drilling had been reported.

Exploration Licence EL24378 was examined in some detail for uranium and a helicopter survey was completed providing observations of the anomalous sites. The localities were selected by review of the NTGS digital database and a literature review undertaken by Vince Roberts. The
The observations are summarized in Appendix 2 (EL24378-Data.txt).

Extensive, Tertiary calcretes (chalcedonic limestone) are exposed as prominent outcrops to 50 m above plain level, in the headwaters of Plenty tributaries on and near to Australian Abrasive Minerals tenements. These occurrences attest to extensive Tertiary alluvial sediments in the area and underlying alluvials are expected to include prospective host rocks for uranium mineralisation. The prospective host rocks are expected to be the deeper, more porous and more reactive calcrete and/or sandy to pebbly, clastic sediments.

The anomaly reconnaissance showed that most anomalies occurred near the base of calcrete mesas, suggesting the underlying rock to be more favourable, as would be expected. However these areas of interest are blanketed by talus deposits, and aeolian sands, which would diminish the intensity of associated anomalies very substantially, as well as hide the underlying rock from view. The favourable part of the Tertiary alluvials is therefore expected to be preserved intact under cover of various younger sediments.
Mineralogy and Metallurgy
No Mineralogy or metallurgy was completed between 2006 and 2016

Geophysics and Remote Sensing
No remote sensing or geophysics was done between 2006 and 2016.

Surface Geochemistry
No soil or grab samples were taken between 2006 and 2016.

Drilling
In March-April 2013 clearance for six holes was obtained. Of these two were drilled in sites chosen on the basis of imagery.

The results of this drilling campaign are reported herein. The location of the holes is shown on

Figure 6 Location of Air-core drill holes
Geotechnical Studies

No geotechnical studies were between 2006 and 2016

Resource estimation

No resource estimations were made between 2006 and 2016

CONCLUSIONS

Uranium Exploration

1. In the area of the upper Plenty River and its tributaries, three initial traverses of scout drilling (RAB or RC) are recommended to investigate channels of the Cainozoic alluvials as follows:
   i) The main channel of the Plenty River, approximately 2 km easterly of Jamaica Bore (approx. longitude 135°10'20"E, latitude 22°48'55"S)
   ii) The main palaeo channel of Entire Creek, close to the southern boundary of EL 24378.
   iii) A southwest-northeast oriented traverse in the vicinity of Kanandra Gap Yard (approximately longitude 135°00'53"E, Latitude 22°51'34"S).
2. Along the northern boundary of EL24378, and extending onto the tenement to the north, there is a prominent uranium anomaly trending east west. This is marked by a prominent ridge that extends from 134°54'24.2"E, 22°47'34"S to 134°58'51.9"E, 22°48'7"S. This appears to be a prominent anomaly that warrants ground checking.
3. To the southwest of this ridge identified above there are a collection of small hills that have considerable U anomalism surrounding them. This is centred on 134°52'26.8"E, 22°49'58.4"S. It is suggested that some ground checking be conducted in this area
4. There is a significant granitoid signature in the south central part of EL24378 that is unlikely to be anomalous.

Garnet Exploration

No significant anomalies remain untested.

Recommendations

No further exploration for channel uranium or garnet be undertaken.
BIBLIOGRAPHY

Baxter, J.L., 2012, Jinka/Mt Riddock Regions, Annual Technical Group Report For the period 16th October, 2011 to 15th October, 2012, EL24360, EL24378, EL24641, and EL25098, GR078/09


McQuire, T., 2007, Drilling Report, Harts Range Project, Western Australia, Report OLY07-001

APPENDIX 1

Uranium Data collected by Olympia Resources Ltd

On attached digital File

APPENDIX 2

Drilling Data from EL24378

On attached digital disk