



ABN 48 1 16 296 541

<b>Titleholder</b>	Minemakers Australia Pty Ltd
<b>Operator</b>	Minemakers Australia Pty Ltd
<b>Tenements</b>	EL28233 (North Wonarah)
<b>Report name</b>	Annual and Final Report for EL28233 (North Wonarah) for the period 04 March 2011 to 19 March 2013
<b>Personal authors</b>	R. Fulton
<b>Corporate author</b>	Minemakers Australia Pty Ltd
<b>Target commodity</b>	Phosphate
<b>Date of report</b>	16 May 2013
<b>Datum/Zone</b>	GDA94, Zone 53
<b>250,000 map sheet</b>	Alroy SE5315
<b>100,000 map sheet</b>	Wonarah 6158
<b>Contact details</b>	Fulton, R. Minemakers Australia Pty Ltd PO Box 1704 West Perth WA 6874 Fax: (08) 9264 7099 Ph: (08) 9264 7000
<b>Email for technical details</b>	<a href="mailto:russellf@minemakers.com.au">russellf@minemakers.com.au</a>

## **ABSTRACT**

This Annual and Final Report details work completed on EL28233 from 4 March 2011 to 19 March 2013. The tenement was held and operated by Minemakers Australia Pty Ltd and formed part of the Wonarah Phosphate Project, with phosphate being the target commodity. The project area lies around a palaeohigh within the Georgina Basin. In 1967 the area was first pegged for phosphate potential by IMC Development Corporation and Minemakers Australia Pty Ltd has held the titles since 2008. Work since 2008 has defined two areas of JORC resources on ML27244, EL26452 and EL26451. The local geology comprises basement granite of Palaeoproterozoic age, unconformably overlain by basalt of the Helen Springs Volcanics. The volcanics are unconformably overlain by dolomitic rocks of the Thornton Limestone equivalent in part. The overlying phosphate-bearing Upper Gum Ridge Formation is divided locally into five units and is overlain by mudstone, siltstone and sandstone of the Wonarah Formation.

Two RC holes were drilled on EL28233 in 2012 for a total of 71 metres and 26 samples were submitted for analysis. The best intercept was 1m @ 10.3% P<sub>2</sub>O<sub>5</sub>. The tenement was surrendered in order to be amalgamated with EL26451 into EL29849.

## CONTENTS

<b>1.</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Location, accessibility, climate and topography.....	1
1.2	Tenure .....	2
<b>2.</b>	<b>REGIONAL AND LOCAL GEOLOGY.....</b>	<b>5</b>
2.1	Deposit style and model .....	5
2.3	Project Geology.....	7
2.3.1	Main Zone (south of EL28233).....	7
<b>3.</b>	<b>REVIEW OF PREVIOUS WORK.....</b>	<b>10</b>
3.1	Prior ownership .....	10
3.2	Historical exploration.....	10
<b>4.</b>	<b>WORK COMPLETED DURING THE REPORTING PERIOD .....</b>	<b>14</b>
4.1	Geological.....	14
4.1.1	RC Drilling.....	14
4.2	Geochemical.....	16
4.2.1	Drilling.....	16
<b>5.0</b>	<b>ENVIRONMENT .....</b>	<b>16</b>
5.1	Environmental disturbance .....	16
<b>6.0</b>	<b>CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>16</b>
6.1	Drilling.....	16
6.2	Environmental rehabilitation .....	16
<b>7.</b>	<b>REFERENCES.....</b>	<b>17</b>

## FIGURES

<b>Figure 1</b>	<b>Location of Wonarah Project .....</b>	<b>1</b>
<b>Figure 2</b>	<b>Location of EL28233 .....</b>	<b>3</b>
<b>Figure 3</b>	<b>Wonarah Phosphate Project tenements .....</b>	<b>4</b>
<b>Figure 4</b>	<b>Regional geological setting .....</b>	<b>6</b>
<b>Figure 5</b>	<b>Regional stratigraphic column .....</b>	<b>6</b>
<b>Figure 6</b>	<b>Schematic regional geological setting .....</b>	<b>9</b>
<b>Figure 7</b>	<b>Exploration Index plan.....</b>	<b>15</b>

## 1. INTRODUCTION

### 1.1 Location, accessibility, climate and topography

The Wonarah Phosphate Project is located in the Barkly region of the eastern Northern Territory, approximately 240km east of Tennant Creek. The nearest town is Camooweal in western Queensland, approximately 180km to the east.



Figure 1. Location of Wonarah Project

Access to the project is via the Barkly Highway, the main paved freight link between Queensland and the Northern Territory, which runs along the northern boundary of Minemakers' nearby EL26452. Access within the tenement is via a network of dozed tracks suitable for 4WD only.

The topography relief is very gentle with elevation ranging from about 250m at Arruwurra in the south-west part of the tenement to about 300m above sea level at the Main Zone in the north-eastern part of the tenement. The area is semi-desert with generally sparse tree and shrub cover.

## **1.2 Tenure**

MAPL is 100% holder of Exploration Licences EL 28233 in accordance with the NT Mining Act & Regulations. The tenement is part of Minemakers Wonarah Phosphate Project and was granted on 04 March 2011 for six years, comprising 4 blocks (12.92 km<sup>2</sup>).

EL28233 is located on NT Portion 773, Perpetual Pastoral Lease 988 Dalmore Downs. Exploration drilling programs have been authorised by the Department of Mines and Energy Wonarah Project Authorisation 0413-03, 0413-04.

Although the land falls under the jurisdiction of the Northern Land Council, MAPL obtained sacred site clearances through the Central Land Council as they are responsible for the majority of Wonarah tenements south of the Barkly Highway (Sacred Site Clearance Certificate C2012-094). The tenement is shown in Figure 2 and 3.

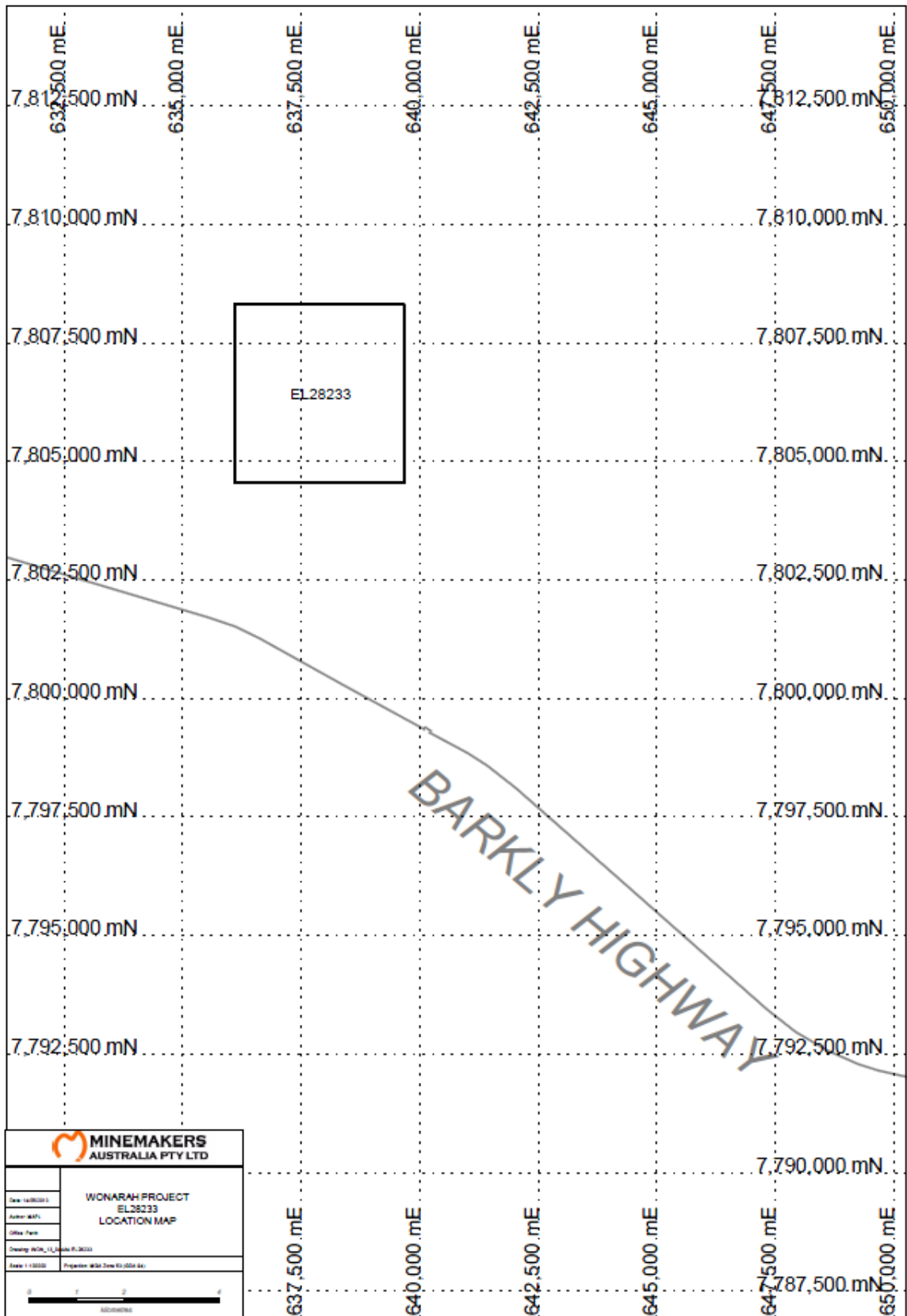


Figure 2: Location of EL28233

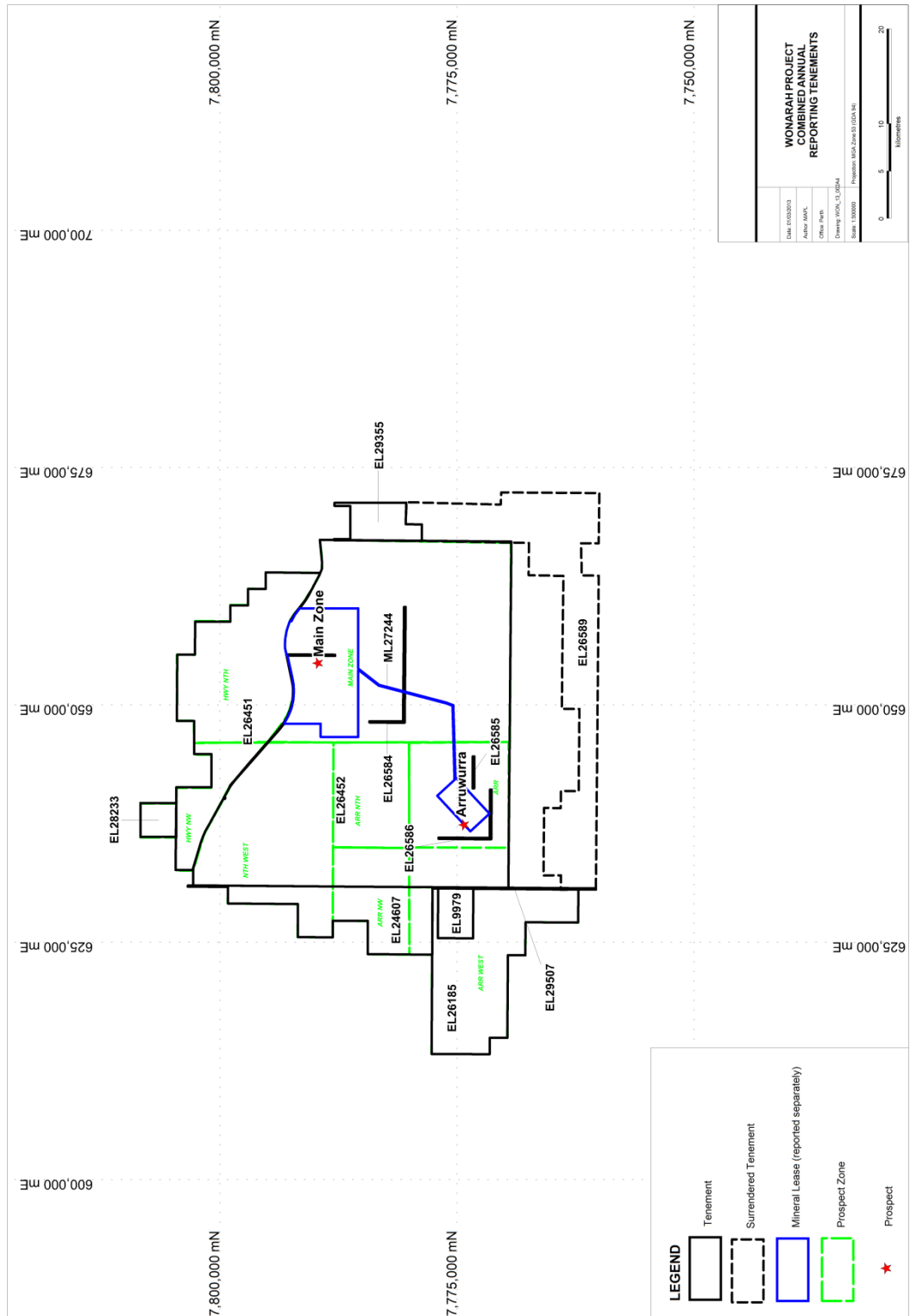


Figure 3: Wonarah Phosphate Project tenements

## **2. REGIONAL AND LOCAL GEOLOGY**

### **2.1 Deposit style and model**

Minemakers Australia is seeking to develop a large sedimentary phosphate deposit within the Georgina Basin. The Georgina Basin is an extensive late Proterozoic to early Palaeozoic basin that extends from northwestern Queensland through much of the eastern Northern Territory area and which hosts several large sedimentary phosphate deposits. A map representing the regional geological setting is presented in Figure 4.

Sedimentary phosphate deposits are restricted in their occurrence globally. The model for phosphate deposition requires upwelling, cold phosphate-saturated water depositing phosphate onto the continental shelf where the required narrow pH range is locally present. Co-deposition with carbonate occurs at slightly higher pH values. Carbonate deposition becomes dominant at higher pH. Post-depositional reworking and replacement of carbonate facies by phosphatic mineralisation is probably an important factor in upgrading phosphorite grades to economic levels.



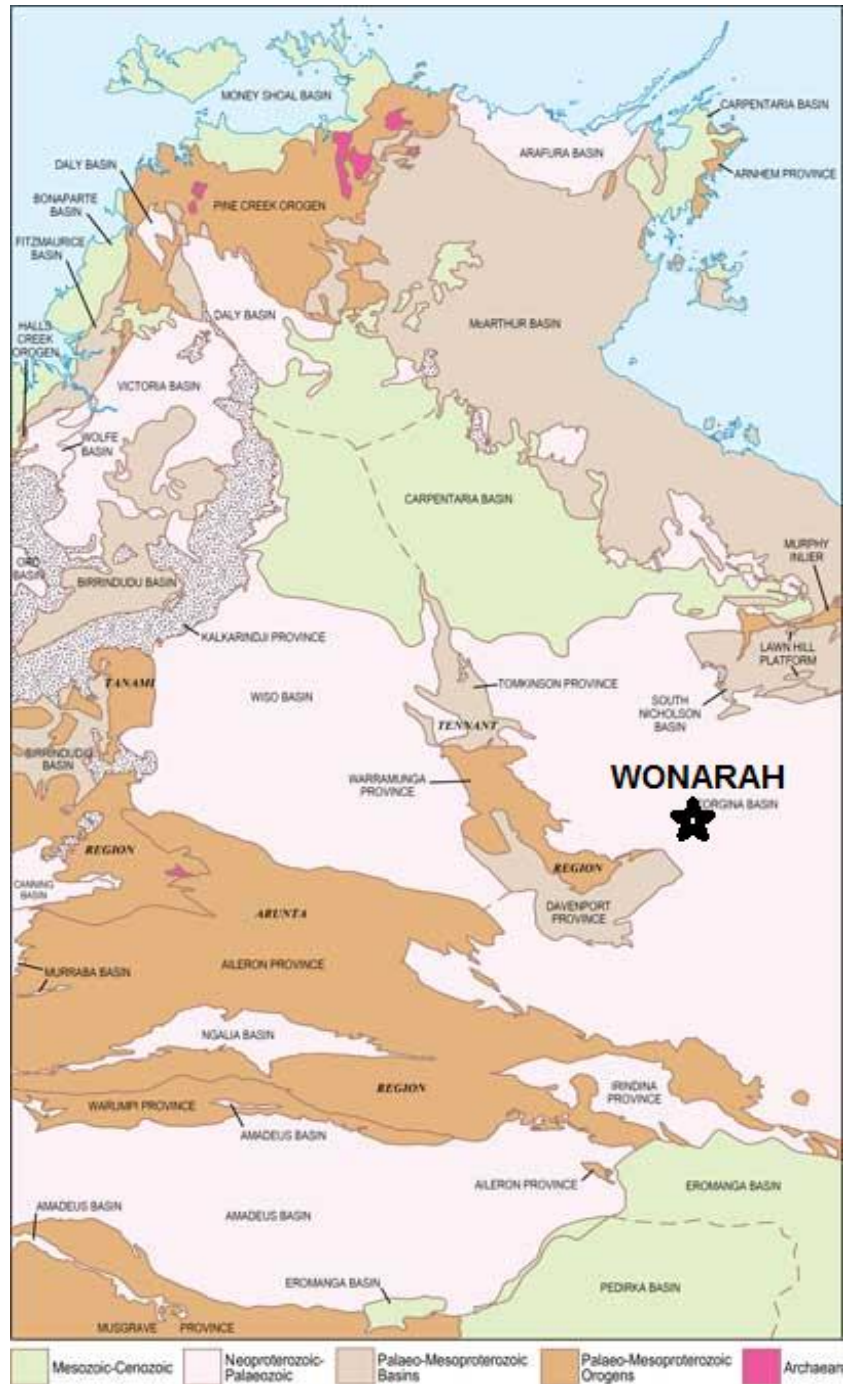


Figure 4: Regional geological setting

## **2.2 Regional geology**

The Wonarah phosphate project is situated in the central western Georgina Basin, a large late Proterozoic to early Palaeozoic basin that extends from northwestern Queensland through much of the eastern Northern Territory.

Basement rocks in this part of the Georgina Basin are comprised of granites of unknown age. They are possibly correlates of the Palaeo-proterozoic rocks of the Tennant Creek region. Mesoproterozoic sediments and volcanics are overlain by the Early Cambrian Helen Springs Volcanics (formerly Peaker Piker Volcanics). A northeast-southwest trending basement high runs through the Wonarah project area.

Overlying Middle Cambrian sediments are divided into two basin-wide sequences. Sequence One deposited clastics, carbonates, organic shales and minor phosphorites during gradual transgression which was abruptly terminated by rapid regression. In the Wonarah region, basement highs are flanked by onlapping dolomitic rocks equivalent to the Thornton Limestone. An erosional unconformity is represented by the development of a karst surface.

Sequence Two deposited shallow clastics, carbonates, grainstones, peritidal phosphorites and phosphatic limestones in a transgressive tract system. At Wonarah dolostone, mudstone and phosphorite of the lower Middle Cambrian Upper Gum Ridge Formation overlie Sequence One rocks and basement highs. This formation contains major phosphorite mineralisation and is equivalent to the Beetle Creek Formation on the eastern Margin of the basin which hosts Phosphate Hill and Lady Annie-D-Tree phosphate deposits. The overlying Wonarah Beds are Middle Cambrian mudstone, siltstone and dolostones. Silcrete, ferricrete and calcrete regolith are extensively developed and large areas are covered by stabilised aeolian sand.

## **2.3 Project Geology**

### **2.3.1 Main Zone (south of EL28233)**

Basement in the Main Zone area is alkali feldspar granite of Palaeo-proterozoic age. Zircons were obtained from the granite and a  $^{207}\text{Pb}/^{206}\text{Pb}$  age of  $1838\pm 12$  Ma was estimated using LA-ICPMS at the University of Tasmania. These are overlain by the Helen Springs Volcanics. The top of the basalt is extremely weathered and a ferruginous and manganiferous duricrust is developed locally. Where less weathered, the basalt is vesicular, amygdaloidal and irregularly porphyritic. Dolomitic rocks of the Thornton Limestone equivalent are present above the basalt at the southeastern extremity of the Main Zone. To the east and the south the carbonate rocks are developed extensively.

The overlying phosphate-bearing Upper Gum Ridge Formation is divided into five main units: a basal, indurated high grade phosphorite; muddy to sandy, clay-rich transitional sediments; a chert breccia phosphorites; a mudstone phosphorite; and a convolute mudstone.

The basal Transitional Phosphorite is a laterally discontinuous high grade indurated phosphorite up to 3m thick developed throughout the eastern and southern part of the Main Zone.

The Transition Sediments (TUN) are laterally continuous, 4-6m thick and comprised of clay-rich mudstone and siltstone with minor phosphorite, dolomite, sandstone and basal epiclastic.

The Chert Breccia Phosphorite forms a distinctive, laterally continuous horizon, 1-10m thick, and comprised of yellow, grey or pink, variably friable or indurated, low to high grade phosphorite with abundant dark grey chert. Chert averages 50-60%.

The Mudstone Phosphorite is the main phosphate-bearing unit at Wonarah and is comprised of 1-10m of yellow and pink mudstone phosphorite with trace to minor dark grey chert. The mineralogy is dominated by fluorapatite,  $\text{Ca}_5(\text{PO}_4)_3\text{F}$ , although XRD analysis indicates the either the presence of hydroxyl fluorapatite or carbonate fluorapatite (francolite) in minor amounts or the minor substitution of hydroxyl or carbonate within the apatite structure. The MPH is variably friable or indurated with the indurated phosphorite typically being high to very high grade (30-40 %  $\text{P}_2\text{O}_5$ ).

The Convolute Mudstone is a 1-10m thick unit of white, light grey and yellow clay-rich variably convolute mudstone with minor siltstone and fine sandstone interbeds. It generally contains minor (<10 %)  $\text{P}_2\text{O}_5$ . Crandallite, a lateritic phosphate mineral with the composition  $\text{CaAl}_3(\text{PO}_4)_2(\text{OH})_5 \cdot \text{H}_2\text{O}$ ,

The Wonarah Beds overlie the Convolute Mudstone and are comprised of mudstone and siltstone with minor chert, the Hangingwall Mudstone. The Wonarah Beds thicken towards the east and south away from the basement high that defines the western fringe of the Main Zone. Dolomitic units, the Hangingwall Dolostone, are present east and south of the Main Zone.

Regolith is extensively developed throughout the Main Zone with silcrete and ferricrete present in most holes. Low silcrete ridges are prominent features. Colluvial and alluvial deposits are common and extensive stabilised aeolian deposits cover much of the regolith.

The phosphatic units thin and peter out towards the basement high which trends in a northeast-southwest direction towards Arruwurra. To the east and south the phosphatic units, although still present with grade and thickness, are too deep to be of economic interest at this time.

A stratigraphic column and schematic section are presented in Figure 5 and Figure 6, respectively.

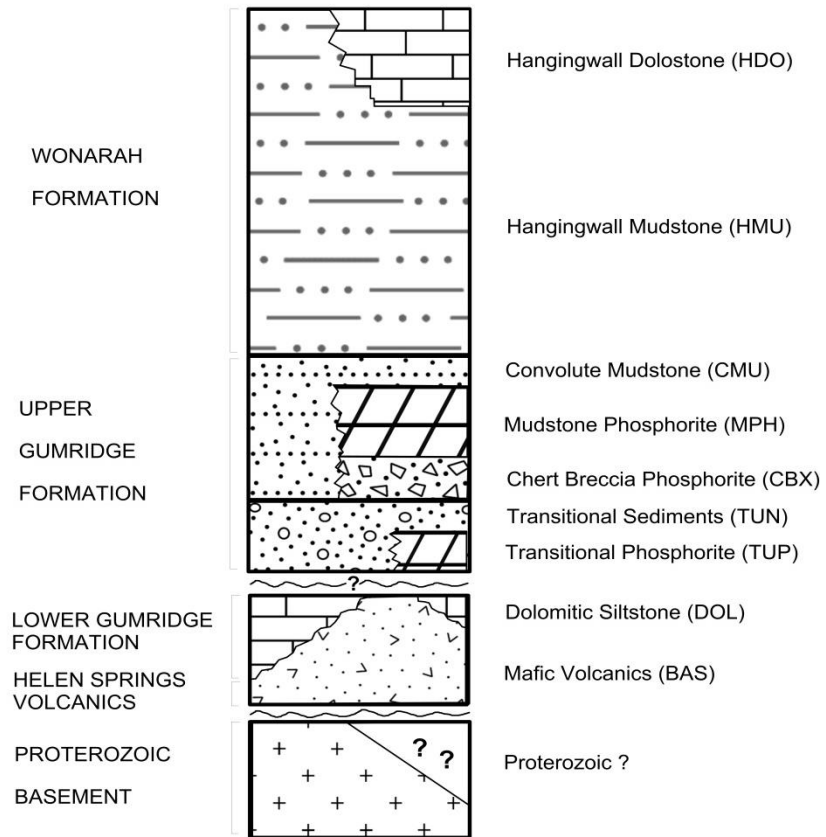


Figure 5: Regional stratigraphic column

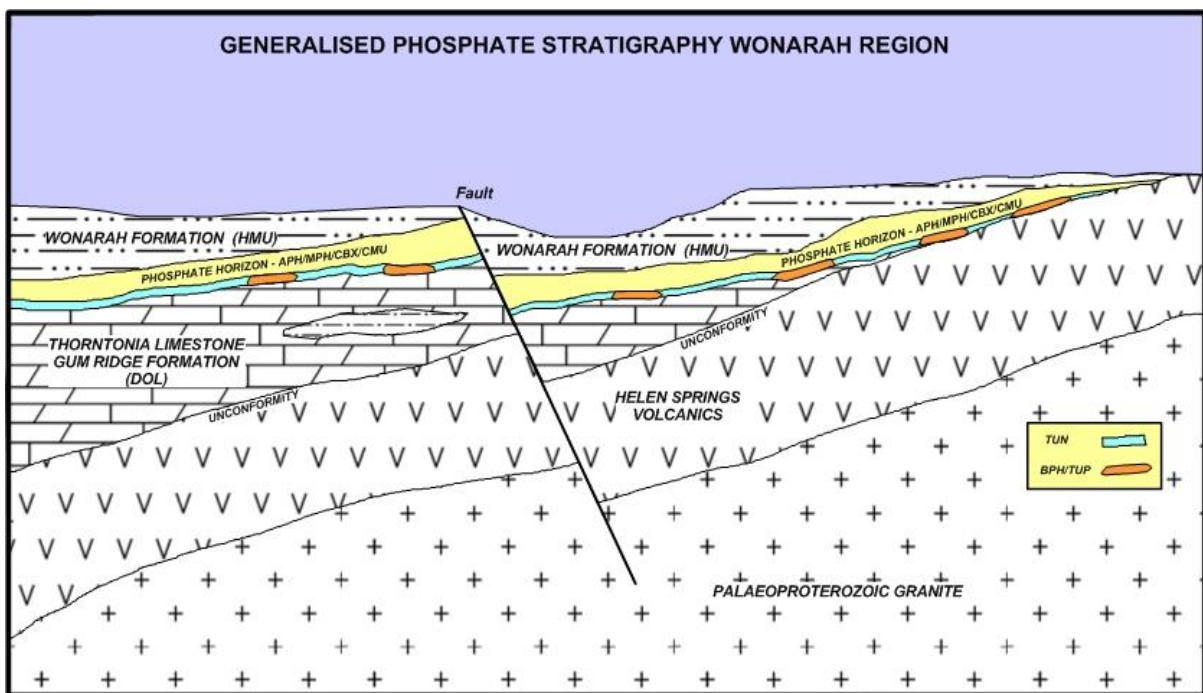


Figure 6: Schematic regional geology section.

### **3. REVIEW OF PREVIOUS WORK**

#### **3.1 Prior ownership**

The following relates to the entire Wonarah tenement package.

IMC Development Corporation was granted PL 1802 over the Wonarah region on 18 July 1967 covering a total area of 3309 square miles (8570.31 km<sup>2</sup>) (CR19680030). The tenure converted to PA 2161 Wonarah (CR19690022) on renewal on 12 December 1968 due to conditions governing the expiry and renewal of prospecting Licenses in NT. The area was relinquished and declared Ministerial Reserve No 819 by the Northern Territory Government.

EL1084 was granted to ICI Australia Ltd and Australian Fertilizers Ltd on 8 May 1976 for an area of 410 square miles (1061.9 km<sup>2</sup>) north and adjacent to the Barkly Highway. The adjacent EL1083, located south of the Barkly Highway, was granted in February 1978 for a total area of 848.5 km<sup>2</sup> (CR19780059).

The area to the south of the Ministerial Reserve 819 was taken up by CRA Exploration Pty Ltd (CRAE) and EL3571 was granted on 25 May 1983. The project was abandoned in April 1985.

In September 1997 Rare Earths and Minerals Pty Ltd and Pilbara Chemical Corporation NL applied for four exploration Licenses, covering the Wonarah phosphate deposit and adjacent areas including the former CRAE tenure.

In January 1998 AKD entered into an exclusive option with REM/PCC to acquire the project and subsequently EL 9976 was applied for by AKD Ltd (Australian Kimberley Diamonds N/L, changed to INDO Mines Ltd in 1996) which was granted on 6 February 1998. In March 1999 Rio Tinto Exploration Pty Limited (RTE) entered into a farm-in and joint venture agreement for EL 9976 with Indo Mines (AKD N/L). RTE was the manager of this tenement. EL's 22167 and 22168 were applied for by RTE on 31 August 1999 and granted on 4 August 2000 (CR2001-0280). RTE withdrew from the joint venture in November 2002 due to a determination that the project was NPV negative.

The underlying land tenure is Arruwurra Aboriginal Corporation NT freehold. Tenure information was extracted from the Consultant Geologists' report within the Minemakers Prospectus where reports are not cited.

#### **3.2 Historical exploration**

##### *Pre-Minemakers*

The following is a summary of exploration across all the Minemakers Wonarah tenements. IMC drilled one hole on the present EL28233 which returned 0.76m @8.2% P<sub>2</sub>O<sub>5</sub> from 32m.

During the period of 1967 to 1971 IMC Development Corporation drilled 139 vertical rotary-percussion holes within PA2161, accompanied by mapping of photo patterns and soil types, radiometric traverses, analysis of B.M.R. gravity data and radiometric logging of open water bore holes. The drill pattern was spaced at 1 hole per 5.5 km<sup>2</sup>

with no two holes less than 1.2 km apart (CR2000071). IMC described a common phosphorite association within silt-chert, with the main chert concentration located above the phosphorite, and an extensive but non-DSO Phosphorite was defined using the widely spaced drilling pattern. The phosphorite was located at depths of 17 m to 45 m and reached a maximum thickness of 18 m at the eastern end of the deposit.

Beneficiation studies (CR19690022) were undertaken on 6 samples taken from samples of clayey-siltstone-chert. The study produced a high-grade beneficiated product with an overall BPL recovery of 45-48 %. Flotation concentrate of the samples yielded 77.8 % BPL, 7.8 % Insol, 2.8 % total I & A and a CaO/P<sub>2</sub>O<sub>5</sub> ratio of 1.32.

Following completion of the 139 open hole rotary percussion series, (total of 18,733 ft or 5709.8 m) calculations of the phosphorite were reported in CR19700038 as 669 million short tons (606.8 Mt) averaging 15.73 % P<sub>2</sub>O<sub>5</sub>, calculated at a cut off average at 10 % P<sub>2</sub>O<sub>5</sub>. A total of 532 million short tons (482.5 Mt), using a cut-off of 14 % P<sub>2</sub>O<sub>5</sub> averaging 16.74 % P<sub>2</sub>O<sub>5</sub> and 307 million short tons (278.4 Mt) averaging 18.98 % P<sub>2</sub>O<sub>5</sub> indicated using a cut-off average of 18 % P<sub>2</sub>O<sub>5</sub>. Restrictions applied included limitation of phosphorite reserves to 2000 ft (6096 m) beyond a drill hole on the margins of the deposit.

IMC's second calculation of reserves was made extending the limit of phosphorite to 4000 ft (1219 m) beyond a hole. Calculations were reported as : at 10 %, 14 % and at 18 % P<sub>2</sub>O<sub>5</sub> cut-off reserves were 970 million short tons (879.8 Mt) at 15.71 % P<sub>2</sub>O<sub>5</sub>, 771 million short tons (699.3 Mt) at 16.46 % P<sub>2</sub>O<sub>5</sub> and 418 million short tons (379.1 Mt) at 18.96 % P<sub>2</sub>O<sub>5</sub> respectively. Calculations were undertaken using the polygon method, with consideration to the widely spaced drilling. Mining-related limiting factors were not accounted for in the calculations.

At that time, conditions did not allow for an economic deposit.

Between 1976 and 1979, ICI and AFL tenure was marked by problematic re-location of IMC drilling and a rotary percussion drilling program (CR19780059) on the eastern side of the mineralisation, of 10 rotary-percussion holes (9 holes for 514 m and a 5 m hole abandoned). The program intersected phosphorite at depth, accompanied by drilling difficulties that plagued IMC in the same area. Drilling results indicated a thickening of the phosphorite on the eastern edge of the Wonarah volcanic high and confirmed the depths and phosphate grades, and indicated reasonable continuity of the phosphorite bed over an area of some 6 square kilometres at overburden ratios of less than 7/1" (CR197800007). Results from a 1979 metallurgical investigation were not cited.

In 1983-1984 CRAE carried out a low-level aeromagnetic survey, to define the volcanic basement, however internal review of commodity targets and lack of transport infrastructure closed the project in 1985.

In 1992-1993 the area was explored for diamondiferous diatremes based on airborne magnetic and radiometric surveys. A program of loam sampling was undertaken and in 1993 one hole was drilled to test a ground magnetic anomaly, within EL 9976, which intersected a thin phosphatic claystone unit overlying mafic volcanic.

In January 2000, Rio Tinto Technical Services conducted a Prefeasibility Study using available data, which identified a “global resource estimate of 1955 Mt at 14.4 % P<sub>2</sub>O<sub>5</sub>” (CR20000071), at depths ranging from 30 and 50 m, with a maximum assayed grade of 28.6 % P<sub>2</sub>O<sub>5</sub>.

During 2000-2001, RTE drilled three phases of mainly RC holes (120 holes, 6215.5 m), minor PAB (2 holes, 130 m) and 12 diamond holes for 296.1 m core and 368.1 m of pre-collar, with accompanied down-hole gamma ray logging. A gravity survey was undertaken to define basement highs, with limited success. The drilling program focused upon ground with no previous drilling and placed a series of closely spaced holes within the well mineralised region in the southern area of the mineralisation identified by IMC, enabling them to define an Inferred Resource.

A 23 square kilometre resource, that mainly excludes the area drilled by IMC, was delineated within mudstone phosphorite, but did not include the underlying lower grade chert breccia phosphorite, which runs poorer lateral continuity. The inferred mineral resource was reported as 115 Mt at 22 % P<sub>2</sub>O<sub>5</sub> at a cut-off grade of 15 %.

Following additional infill drilling, a recalculation and delineation of an inferred resource in December 2001 was reported as 72 Mt at 23 % P<sub>2</sub>O<sub>5</sub>, at a cut-off of 15 %. The drill density and pattern was noted as uneven with some holes up to 1800 m apart and the author of the resource report advised caution if this category was to be considered in economic studies.

Rio Tinto carried out beneficiation tests to determine the potential of upgrading the Wonarah ore, based upon tests limited to washing and screening. The deleterious elements were reduced but the process failed to give a major increase in grade.

A combination of reduced estimate size and failure to upgrade the mineralisation economically lowered the projects potential and after RTE initiated a reverse economic study, indicating that the project was then NPV negative, withdrew from the joint venture in 2002.

Exploration also included field work on the outcropping phosphorite beds at Arruwurra, where rock chip sampling indicated that the grade was high but of unknown extent. Joint venture exploration activity also included interpretation of Landsat 5 Thematic Mapping of regolith types, petrological study of core samples and the Arruwurra outcrop and soil sampling.

Historical exploration information was extracted from the Consultant Geologists’ report within the Minemakers Prospectus where reports are not cited.

### Minemakers

Minemakers commenced field work at Wonarah in February 2008. No work was carried out on EL28233 until 2012. Work carried out on the project during the period 2008-2012 is detailed below.

During the year ended January 2009 the following work was carried out:

- 220 reverse circulation percussion holes were completed for 10,500 m
- 40 PQ, HQ and NQ sized diamond cored holes were completed for 1,990 m
- 4,973 split RC samples were submitted for XRF analysis of major oxide elements

- 109 crushed core samples were submitted for XRF analysis of major oxide elements
- The majority of metres drilled were tested for magnetic susceptibility and gamma radiation by hand-held instruments
- Metallurgical test work was carried out at Optimet Laboratories in Adelaide to determine optimal beneficiation pathways for phosphorite ore
- An airborne EM survey was carried out by Fugro Airborne Surveys Corporation Ontario, with the purpose of providing information that could be used to map the geology and structure of the surveyed area as part of program to delineate potential ground water resources
- A scoping study was commenced and then terminated in December prior to commencement of a full feasibility study

During the year ended January 2010 the following work was carried out:

- 1,066 reverse circulation percussion holes were completed for 52,491 m
- 58 PQ and HQ-sized diamond cored holes were completed for 1,326 m
- 19,712 split RC samples were submitted for XRF analysis of major oxide elements
- 599 crushed core samples were submitted for XRF analysis of major oxide elements
- The majority of metres drilled were tested for magnetic susceptibility and gamma radiation by hand-held instruments
- A full feasibility study was conducted into mining “direct shipping ore” DSO from the Arruwurra deposit

During the year ended January 2011 the following work was carried out:

- Completion of a full feasibility study into mining at the Arruwurra deposit
- Conversion of the part of SEL 26452 containing the majority of the JORC-compliant resources to ML status
- 100 reverse circulation percussion holes were completed for 4,347 m
- 1,462 samples split RC samples were submitted for XRF analysis of major oxide elements
- All RC samples were tested for gamma radiation and a number were tested for magnetic susceptibility
- 20 samples from the mineralised zones (drilled in previous years) were submitted for REE content by ICP-MS
- 92 soil samples were collected for analysis using a proprietary Ionic leach method
- A ground magnetic survey to better define some magnetic anomalies

During the year ended January 2012 the following work was carried out (see section 4 for work carried out on EL28233 and included below):

- RC program comprising 83 holes for 4,797 m
- Y testing of RC chips from this program and previous drilling
- Updated resource calculation: 252 Mt Indicated @ 18.2% P<sub>2</sub>O<sub>5</sub> (10% P<sub>2</sub>O<sub>5</sub> cut-off) and 395 Mt Inferred (18% P<sub>2</sub>O<sub>5</sub> cut-off)
- Review of metallurgical test work
- Enabling feasibility study
- Rehabilitation procedures manual
- Exploration activities site audit



## **4. WORK COMPLETED DURING THE REPORTING PERIOD**

### **4.1 Geological**

#### **4.1.1 RC Drilling**

The purpose of the 2012 drill program was to further test the shallow mineralisation in the north-west corner of the project area known from historical drilling and Minemakers' 2010 regional RC program at 500x500m spacing on EL26451.

Drilling on EL28233 by Minemakers occurred for the first time in September-October 2012 comprising 2 holes for 71 m with depth ranges from 23-75 m. Location of holes is shown in Figure 7.

The drilling was carried out by Kennedy Drilling, Kalgoorlie using a KD 150 RCA rig mounted on a MAN 6x6 truck with a Sullair 1150 cfm x 350 psi auxiliary compressor and a 1400 cfm x 700 psi Hurricane 636-41B booster. The hole diameter was 4 ¾" diameter.

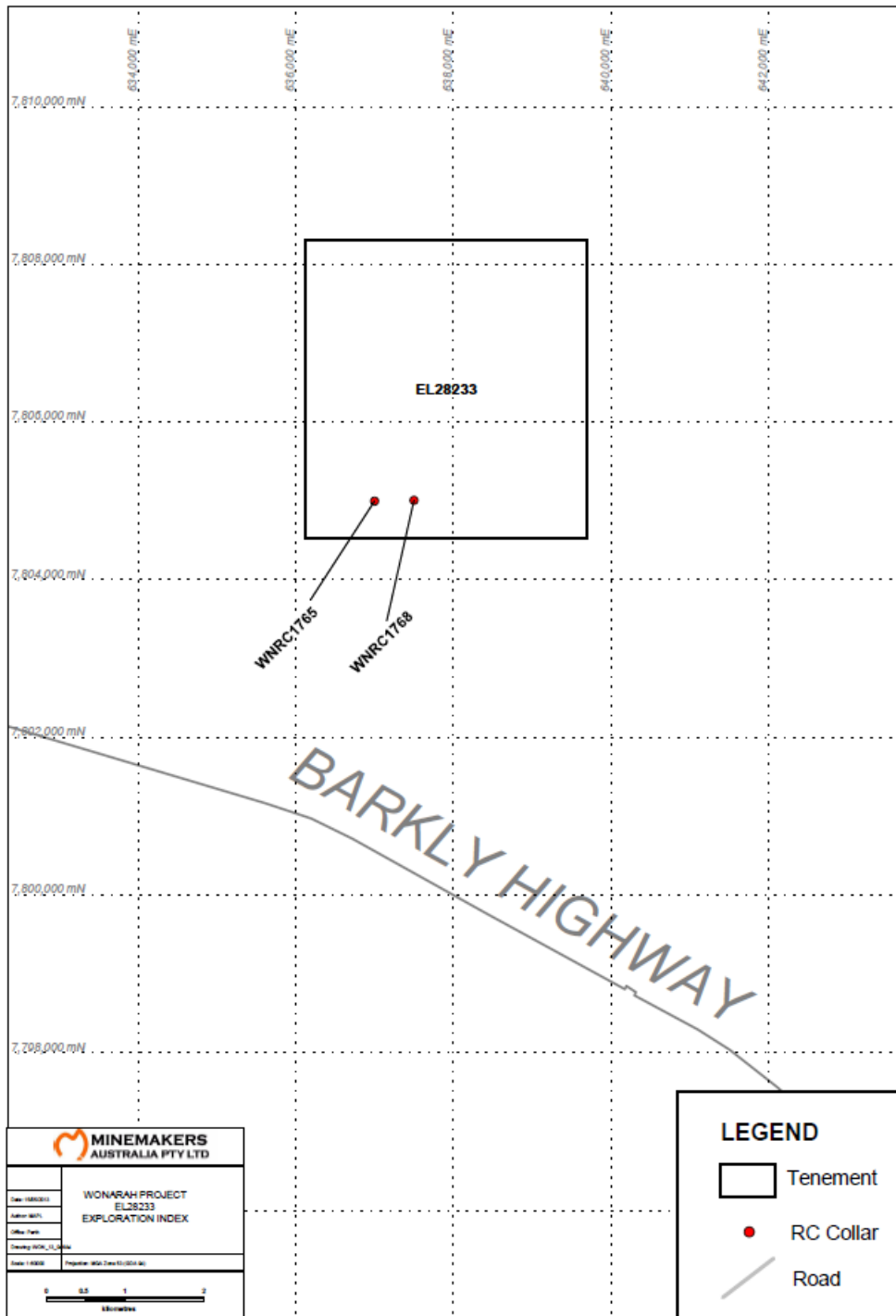


Figure 6. Exploration Index Plan.

## **4.2 Geochemical**

### **4.2.1 Drilling**

A total of 26 samples, including originals and one duplicate were sent for laboratory analysis. All RC samples were submitted to Amdel in Mt Isa. Samples were dried at 105-110 °C then crushed in a Boyd crusher. A nominal 100 g sample was rotary split from the bulk then pulverised in a tungsten-carbide mill to minimise iron contamination. A sub-sample of the analytical pulp was fused with lithium metaborate to form a glass disc which was then analysed by XRF for the following oxides: P<sub>2</sub>O<sub>5</sub>, Al<sub>2</sub>O<sub>3</sub>, CaO, K<sub>2</sub>O, Total Fe as Fe<sub>2</sub>O<sub>3</sub>, MgO, MnO, Na<sub>2</sub>O, SiO<sub>2</sub>, TiO<sub>2</sub> (lower detection limit of 0.01 % for each.) A minimum laboratory repeat rate from the pulp sample of 1 in 20 samples is carried out.

## **5.0 ENVIRONMENT**

### **5.1 Environmental disturbance**

The two RC holes were capped but RC material had not yet been buried nor the site rehabilitated. This is planned to take place in mid-2013. Tracks will be left open for further drilling on the new tenement, EL29849.

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 Drilling**

Drilling returned disappointing analytical results with the best interval of 1m @ 10.3% P<sub>2</sub>O<sub>5</sub> from 22-23m depth in WNRC1765. Although there was a significant interval of phosphatic material it was low grade, in the <10% range except for one sample. These results are typical for this part of the Wonarah area and may indicate that this area is in a more distal part of the mineralising system

In 2013, it is planned to consider drilling a few more holes to see if the mineralisation improves to the north or deteriorates.

### **6.2 Environmental rehabilitation**

RC material will be removed or buried in mid-2013 and sites rehabilitated with a small 2t excavator. The one kilometre of access tracks will be left for this year as more drilling may take place.

## **7. REFERENCES**

Cotton, B.J. 2000. EL 9976 Wonarah. Annual Report for the Year ending 5<sup>th</sup> February 2000. Aloy SE5315, Ranken SE5316, Frew River SE5303 Northern Territory. Report No. 24505. Rio Tinto Exploration Pty Limited.

Fulton, R.L., Drummond, A., Hepburn-Brown, D. and Hitchcox, A. 2009. Combined Annual Report on EL 9979, SEL 26451, SEL 26452, EL 26583, EL 26584, EL 26585, EL26586, EL 26589 and EL 26588. Wonarah Phosphate Project. Annual Report to 8<sup>th</sup> January 2009. Minemakers Australia Pty Ltd.

Fulton, R.L., Pellatt, A. and Varley, R. 2010. Combined Annual Report on EL 9979, SEL 26451, SEL 26452, EL 26583, EL 26584, EL 26585, EL 26586, EL 26589 and EL 26588. Wonarah Phosphate Project. Annual Report to 8<sup>th</sup> January 2010. Minemakers Australia Pty Ltd.

Fulton, R.L., Pellatt, A. and Varley, R. 2011. Combined Annual Report on EL 9979, SEL 26451, SEL 26452, EL 26583, EL 26584, EL 26585, EL 26586, EL 26589 and EL 26588. Wonarah Phosphate Project. Annual Report to 8<sup>th</sup> January 2011. Minemakers Australia Pty Ltd.

Lilley, G.L. and Andrews, S.J. 2001. Combined Annual Report for the Period Ending 2/9/01 EL 9976, EL 22167, and EL 22168 Wonarah Northern Territory. Report No. 2453. Rio Tinto Exploration Pty Limited.

Lilley, G.L. 2002. Partial Relinquishment Report for the period ending 2<sup>nd</sup> July 2002 for EL 22167 Wonarah 5 and EL 22168 Wonarah 6, Frew River SF53-03, Avon Downs SE53-04, Northern Territory. Report No. 25614. Rio Tinto Exploration Pty Limited.

Pellatt, A. and Fulton R.L. 2012. Grouped Annual Report (GR-097/09) for EL 9979, EL 24607, EL 26185, EL 26584, EL 26585, EL 26586, EL 26589, EL 28233, SEL 26451 and SEL 26452 (Wonarah Phosphate Project) for the period ending 8 January 2012. Minemakers Australia Pty Ltd.

Pellatt, A. and Fulton R.L. 2013. Grouped Annual Report (GR-097/09) for EL 9979, EL 24607, EL 26185, EL 26584, EL 26585, EL 26586, EL 26589, EL 28233, EL 26451 and EL 26452 (Wonarah Phosphate Project) for the period ending 8 January 2013. Minemakers Australia Pty Ltd.