



<b>Titleholder</b>	Minemakers Australia Pty Ltd
<b>Operator</b>	Minemakers Australia Pty Ltd
<b>Tenements</b>	EL 24607, EL 29840, EL 29841 and EL 29849
<b>Report name</b>	Grouped Annual Report (GR-097/09) EL 24607, EL 29840, EL 29841 and EL 29849 (Wonarah Phosphate Project) for the period ending 8 January 2016
<b>Personal authors</b>	A. Pellatt and R. Fulton
<b>Corporate author</b>	Avenira Limited
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<b>250,000 map sheet</b>	Alroy SE5315, Ranken SE5316, Frew River SF5303 and Avon Downs SF5304
<b>100,000 map sheet</b>	Wonarah 6158, Joildung 6157, Ranken 6258 and Barry Caves 6257
<b>Contact details</b>	Fulton, R. Avenira Limited PO Box 1704 West Perth WA 6874 Mob: 0427 956 297 Fax: (08) 9264 7099
<b>Email for technical details</b>	apellatt@avenira.com
<b>Email for expenditure</b>	rfulton@avenira.com

## **ABSTRACT**

This Combined Annual Report details work completed on EL 24607, EL 29840, EL 29841 and EL 29849 from 9 January 2015 to 8 January 2016. The tenements are held and operated by Minemakers Australia Pty Ltd and together with ML 27244 and EL 23767, form 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 - Main Zone and Arruwurra. The resources lie mostly within ML 27244 but extend onto both EL 29849 and EL 29841. 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. No work was completed during the reporting year. Exploration work that was scheduled to take place in conjunction with feasibility geotechnical studies on ML 27244 was postponed along with the feasibility study work. Minemakers Australia Pty Ltd is proposing to use the Improved Hard Process ("IHP") to produce super phosphoric acid from rock phosphate mined at the Wonarah deposit and is waiting for commercial validation of the technology. Delays in the validation process, being undertaken at a demonstration plant in Florida, USA, have resulted in postponement of feasibility study activities at Wonarah.

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## 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 240 km east of Tennant Creek. The nearest town is Camooweal in western Queensland, approximately 180 km to the east.

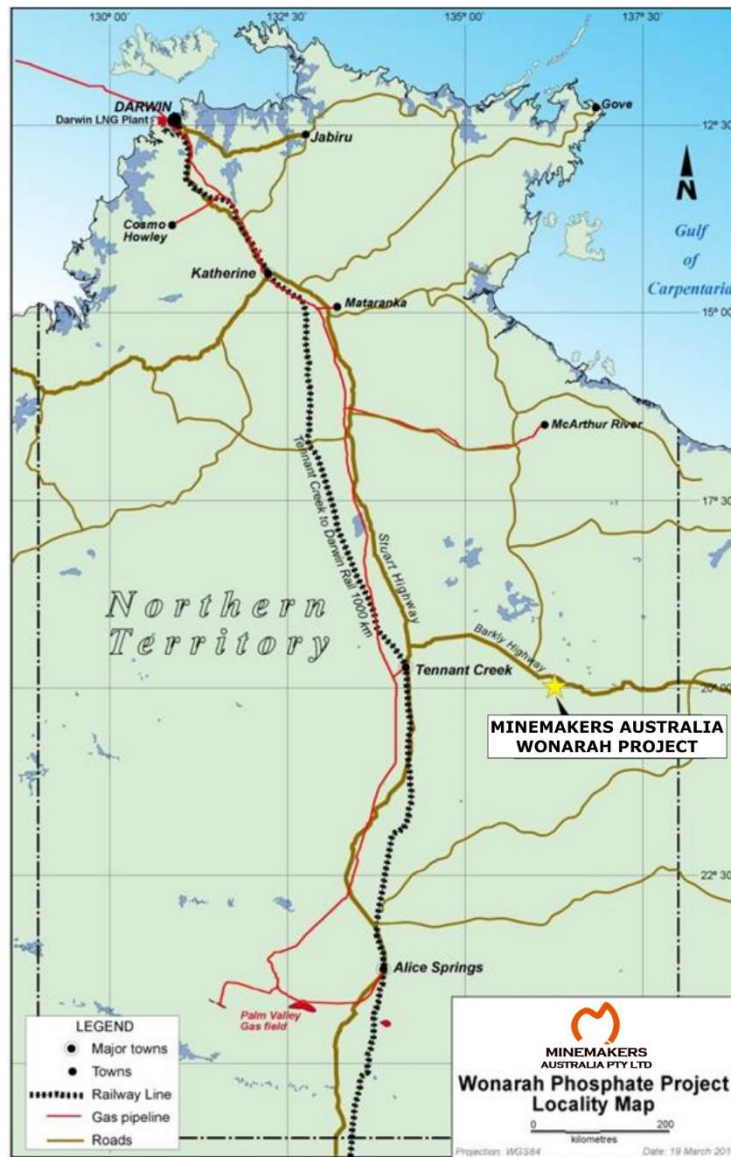


Figure 1. Location of Wonarah Project

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 EL 29841. Access within the tenements is via a network of dozed tracks suitable for 4 WD only.

The topography relief is very gentle with elevation ranging from about 250 m at Arruwurra in the south-west area of the tenements to about 300 m 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

Minemakers Australia Pty Ltd (ABN 18 081 911 917), (MAPL) is the registered holder of Miners Right # 556124.

MAPL is 100% holder of Exploration Licences (EL) EL 24607, EL 29840, EL 29841 and EL 29849 which were granted on 19 March 2013 due to amalgamation of the following tenements: EL 9979, EL 26185, EL 26451, EL 26452, EL 26584, EL 26585, EL 26586 and EL 28233. EL 23767 and ML 27244 also form part of the Wonarah Phosphate Project and are contiguous, but do not have group reporting status and are reported separately but shown in figures for reference.

EL 24607 was due to expire on 3 July, 2015 and the tenement had a compulsory 50% reduction and was renewed until 2 July, 2017 (Table 1).

On 19 March, 2015, EL 29840, EL 29841 and EL 29849 had reductions retained.

*Table 1. Tenement details*

Tenement	Blocks	Date of grant	Expiry	Comments
EL 24607	22 (was 45)	03/07/09	02/07/15	50% reduction, renewed to 02/07/17
EL 29840	86 (was 172)	19/03/13	18/03/19	
EL 29841	94 (was 189)	19/03/13	18/03/19	
EL 29849	41 (was 83)	19/03/13	18/03/19	

ELs 29840 and 29841 are located on NT Freehold Land (NT Portions 03747-03756) owned by the Arruwurra Aboriginal Corporation. ATC's NT Portion 1413 is excluded from EL29841. EL 29840 is also partially located on NT Portion 4246, VCL.

EL 29849 is located on NT Portion 773, PPL 988 Dalmore Downs. EL 24607 is located on NT Portion 3976, Wakaya Aboriginal Land Trust.

ELs 29840 and 29841 are subject to a confidential Deed for Exploration (19 March 2009) between MAPL and the Central Land Council (CLC).

Exploration drilling programs have been authorised by the departments of Resource Development, Primary Industries, Fisheries & Mines (Mining Management Plan): Wonarah Project Authorisation 0413-01, 0413-02, 0413-03, 0413-04 and 0417-02.

MAPL has obtained sacred site clearances through the Central Land Council: Sacred Site Clearance Certificate C2008-008, C2008-087, C2009-003, C2010-032 and C2012-094. The tenements are shown in Figure 2.

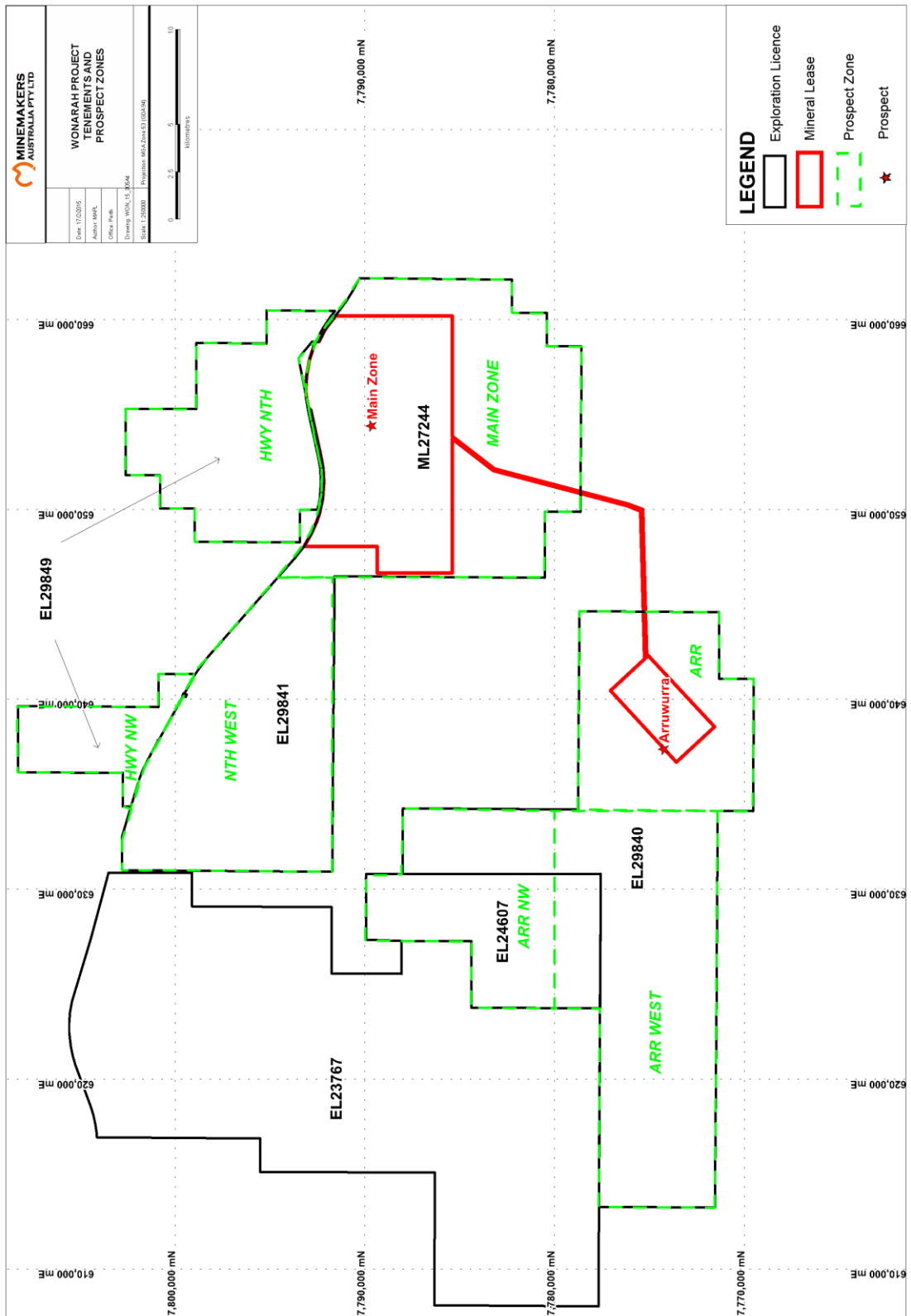


Figure 2. Tenements and prospect zones.

## **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 3.

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.

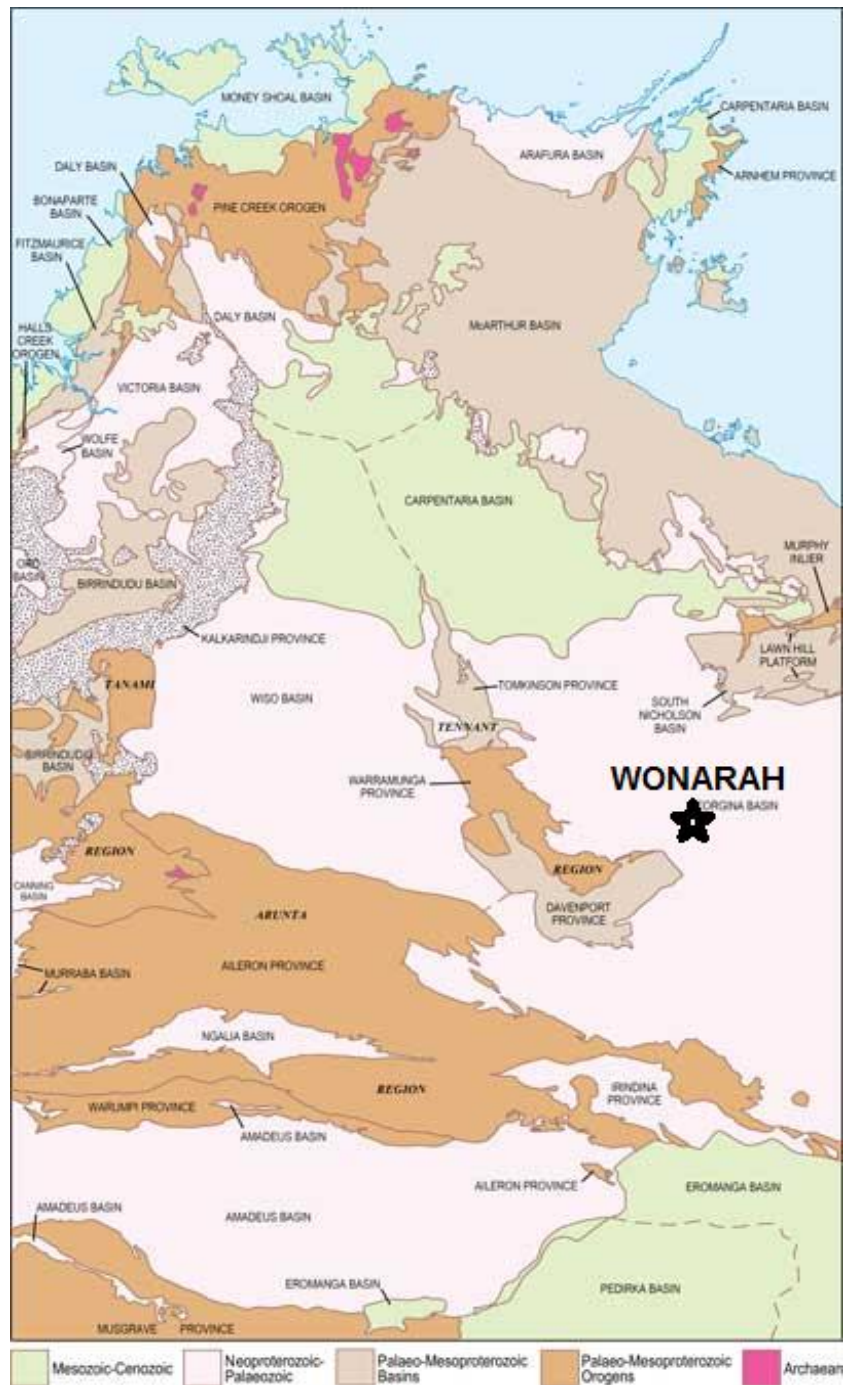


Figure 3. Regional geological setting (from the NTGS)



## 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 Palaeoproterozoic 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

Basement in the Main Zone area is alkali feldspar granite of Palaeoproterozoic 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 phosphorite; a mudstone phosphorite; and a convolute mudstone.

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

The Transition Sediments are laterally continuous, 4-6 m 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, 1-10 m 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 1-10 m 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 1-10 m 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 4 and Figure 5, respectively.

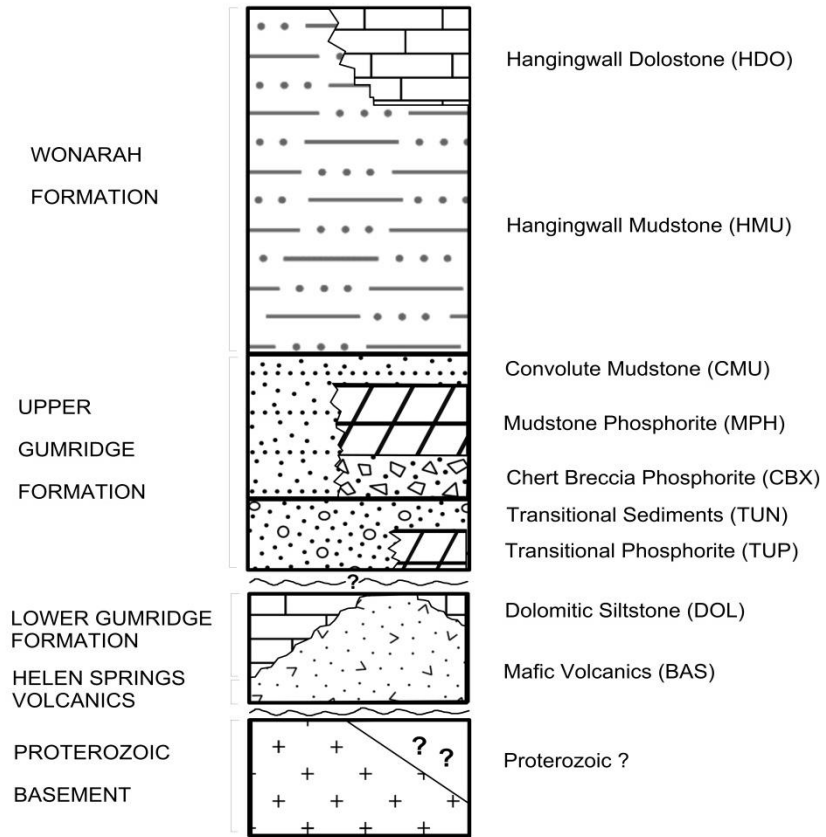


Figure 4. Regional stratigraphic column

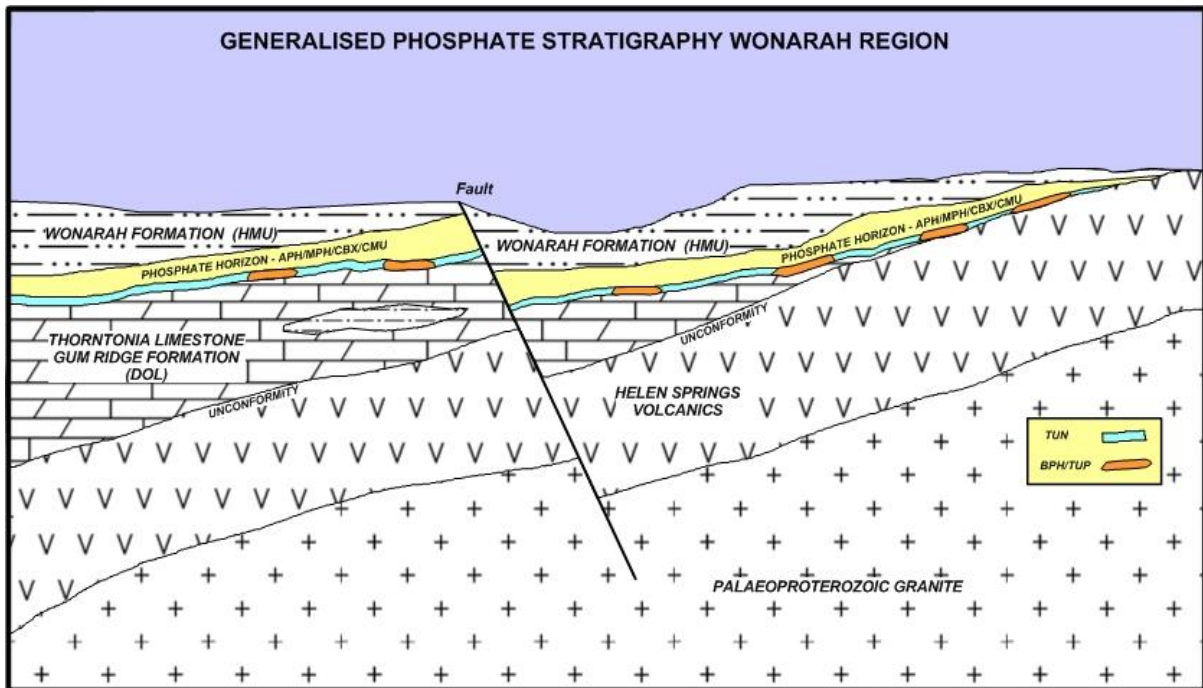


Figure 5. Schematic regional geology section.

### **2.3.2 Arruwurra**

At Arruwurra, the economic phosphate mineralisation occupies a broad northeast-southwest trending shelf sloping gently to the southwest. The shelf drops away sharply at the western end and along the southeastern edge. Mineralisation outcrops in the northeast before petering out against the basement high to the north.

Basement at Arruwurra is similar to the Main Zone and comprised of alkali feldspar granite of possible Palaeoproterozoic age. This is overlain by the Helen Springs Volcanics which are similar in character to Main Zone. Thornton Limestone equivalent dolomites and dolostones overlay the basalt along the southeastern and southern margin of the deposit. An abrupt change in lithology and depth to basalt basement indicates a probable fault which has thrown the deposit side upwards. A karst surface is present on the dolomite.

The Upper Gum Ridge Formation at Arruwurra is somewhat attenuated in comparison to the Main Zone. The stratigraphic equivalent of the high grade Transitional Phosphorite is called the Basal Phosphorite at Arruwurra and is the main unit of economic importance. It is a strongly indurated, very high grade brown phosphorite mudstone which averaged approximately 2 m in thickness and is developed throughout the north-eastern part of Arruwurra. The overlying Transitional Sediments are thinner than in the Main Zone and are comprised of 1-3 m of mudstone, siltstone and phosphorite. The Chert Breccia Phosphorite is absent at Arruwurra and the overlying Arruwurra Phosphorite (APH) is the stratigraphic equivalent of the Mudstone Phosphorite. The Arruwurra Phosphorite is grey to yellow and is more chert-rich than the Mudstone Phosphorite at the Main Zone. The unit varies in thickness from 1 to 6 m and is thickest along a north-east trending axis through the centre of the deposit. The Arruwurra Phosphorite is overlain by and, near surface, interdigitates with a limestone carbonate unit in the north-eastern part of the deposit area. Outcropping high grade phosphorites occur in this area.

The Convolute Mudstone is not logged at Arruwurra. The Hangingwall Mudstone unit is similar to the Main Zone except in the far east of Arruwurra where dolomitic and calcareous units, the Hangingwall Dolomite, are present.

Stabilised aeolian sand covers much of the area and is underlain by ferricrete, silcrete, and, above the carbonate unit in the northeast, calcrete and black soil.

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

### **3.1 Prior ownership**

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 EL 1083, 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 Australia

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% insoluble, 2.8% total iron and aluminium 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 Australia

Minemakers Australia commenced field work at Wonarah in February 2008 and work is summarised in previous annual reports (Fulton, R.L., et al., 2009, Fulton, R.L., et al., 2010, Pellatt and Fulton, 2011, Pellatt and Fulton, 2012, Pellatt and Fulton, 2013, Pellatt, Fulton and Bergin, 2014 and Pellatt, Fulton and Bergin, 2015).

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:

- RC program comprising 83 holes for 4,797 m
- Yttrium 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

During the year ended January 2013 the following work was carried out:

- RC program comprising 84 holes for 4,005 m
- Updated resource calculation: 842 Mt @ 18.1% P<sub>2</sub>O<sub>5</sub> (10% P<sub>2</sub>O<sub>5</sub> cut-off), including 78.3 Mt at 20.8% P<sub>2</sub>O<sub>5</sub>
- Hand-held XRF screening on RC samples for yttrium mineralisation
- Rehabilitation of RC and diamond drill holes

During the year ended January 2014 the following work was carried out:

- Rehabilitation of 84 drill holes drilled in 2012

During the year ended January 2015 the following work was carried out:

- Rehabilitation of access tracks from previous programs. All diamond holes and sumps have now been rehabilitated.

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

No work was completed during the reporting year. Exploration work that was proposed for the reporting year was scheduled to take place in conjunction with feasibility study geotechnical work on ML27244. The feasibility study work, in preparation for a proposed mining and fertiliser plant operation at Wonarah, was postponed. The development of a project at Wonarah is dependent on the commercial validation of Improved Hard Process (IHP) technology, the method proposed for treatment of Wonarah phosphate rock to produce super phosphoric acid. The commercial validation is being undertaken at the JDC Phosphate demonstration plant in Florida, USA and has encountered significant delays. Feasibility work will not be resumed until the process has been validated as commercial.



## 5. CONCLUSIONS AND RECOMMENDATIONS

It is proposed to carry out work postponed from the 2015 field season. This includes finalisation of rehabilitation on EL 29849 and an independent environmental audit.

Other recommended work relates to exploration of two areas of interest (Figure 6).

A broad area of significant mineralisation exists within the south-western part of the Wonarah Project area – West Wonarah. The mineralisation was defined by broad-spaced drilling programs in 2010 and 2012 and Minemakers estimates that there is potential for a deposit of 0.5-1.0Bt of phosphate rock in this area, at similar grades to the Main Zone at Wonarah. The mineralisation is currently defined by broad spaced drilling.

A second area of scattered but shallow high grade mineralisation was also identified during the 2010 and 2012 regional RC drilling programs.

MAPL is currently seeking partners to fund further drilling on these prospects by either entering into joint venture arrangements or by sale of the prospects.

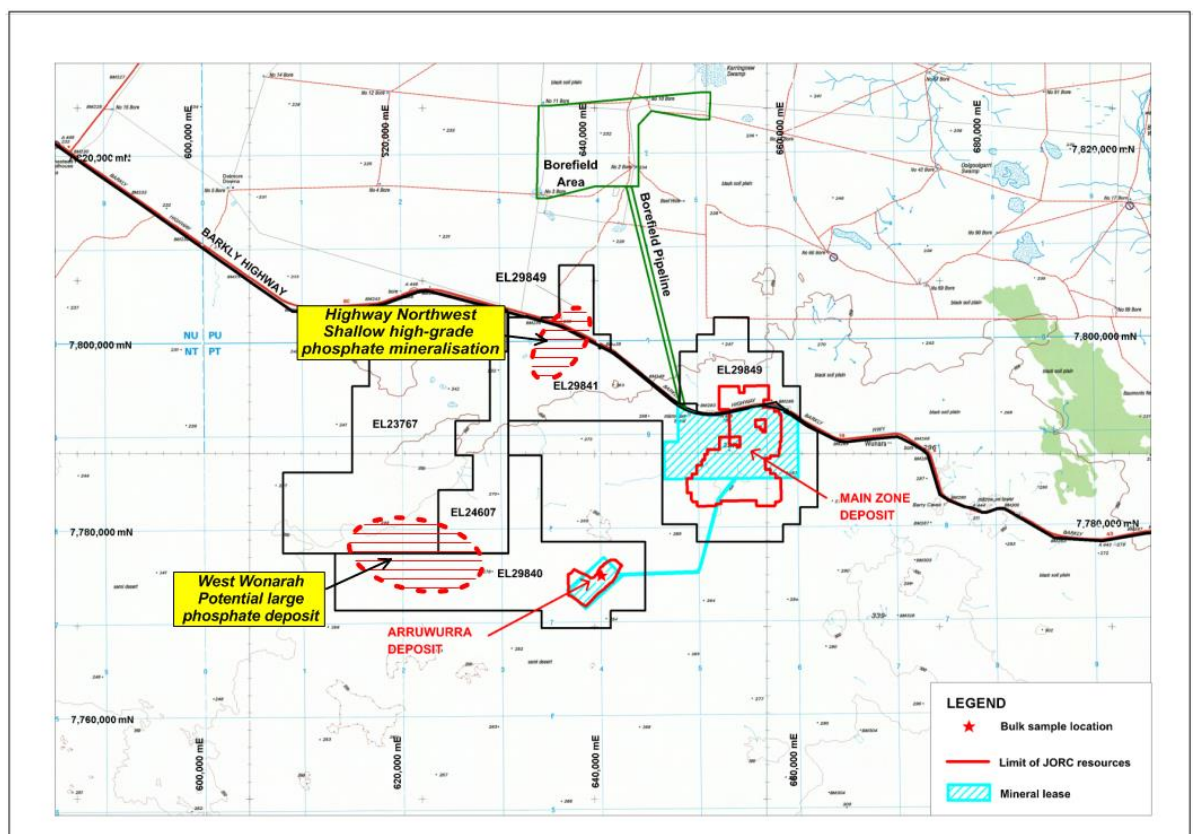


Figure 6. West Wonarah and Highway Northwest mineralisation location plan.

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