



Titleholder	Minemakers Australia Pty Ltd
Operator	Minemakers Australia Pty Ltd
Tenements	EL29840, EL29841, EL29849 and EL31477
Report name	Grouped Annual Report (GR-097/09) EL29840, EL29841, EL29849 and EL31477 (Wonarah Phosphate Project) for the period ending 8 January 2018
Personal authors	A. Pellatt and R. Fulton
Corporate author	Avenira Limited
Target commodity	Phosphate
Date of report	02 March 2018
Datum/Zone	GDA94, Zone 53
250,000 map sheet	Alroy SE5315, Ranken SE5316, Frew River SF5303 and Avon Downs SF5304
100,000 map sheet	Wonarah 6158, Joildung 6157, Ranken 6258 and Barry Caves 6257
Contact details	Pellatt, A. Avenira Limited PO Box 1704 West Perth WA 6874 Ph: (08) 9264 7000 Fax: (08) 9264 7099
Email for technical details	apellatt@avenira.com
Email for expenditure	rwheatley@avenira.com

ABSTRACT

This Combined Annual Report details work completed on EL29840, EL29841, EL29849 and EL31477 from 9 January 2017 to 8 January 2018. The tenements are held and operated by Minemakers Australia Pty Ltd and 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 EL31477 but extend onto EL29840, EL29841 and EL29849. 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. Work completed during the reporting year comprised environmental monitoring, weed control and general tidying up.

CONTENTS

1.	INTRODUCTION	4
1.1	Location, accessibility, climate and topography.....	4
1.2	Tenure	5
2.	REGIONAL AND LOCAL GEOLOGY	7
2.1	Deposit style and model	7
2.3	Project Geology	9
2.3.1	Main Zone	9
2.3.2	Arruwurra	12
3.	REVIEW OF PREVIOUS WORK.....	12
3.1	Prior ownership	12
3.2	Historical exploration	13
4.	WORK COMPLETED DURING THE REPORTING PERIOD	17
5.	CONCLUSIONS AND RECOMMENDATIONS	18
6.	REFERENCES	19

FIGURES

Figure 1	Location of Wonarah Project
Figure 2	Tenements and Exploration Index Plan
Figure 3	Regional geological setting
Figure 4	Regional stratigraphic column
Figure 5	Schematic regional geological setting

Copyright

This document, the data it contains, and its attachments are submitted under the *NT Mineral Titles Act*. As such, the copyright normally reserved by Minemakers Australia Pty Ltd is controlled by that Act as well as the Commonwealth Copyright Act, as may be applicable. This statement authorises the NT Department of Primary Industries and Resources to copy, store and distribute this document, data and attachments subject to the confidentiality restrictions of the relevant NT Acts.

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.

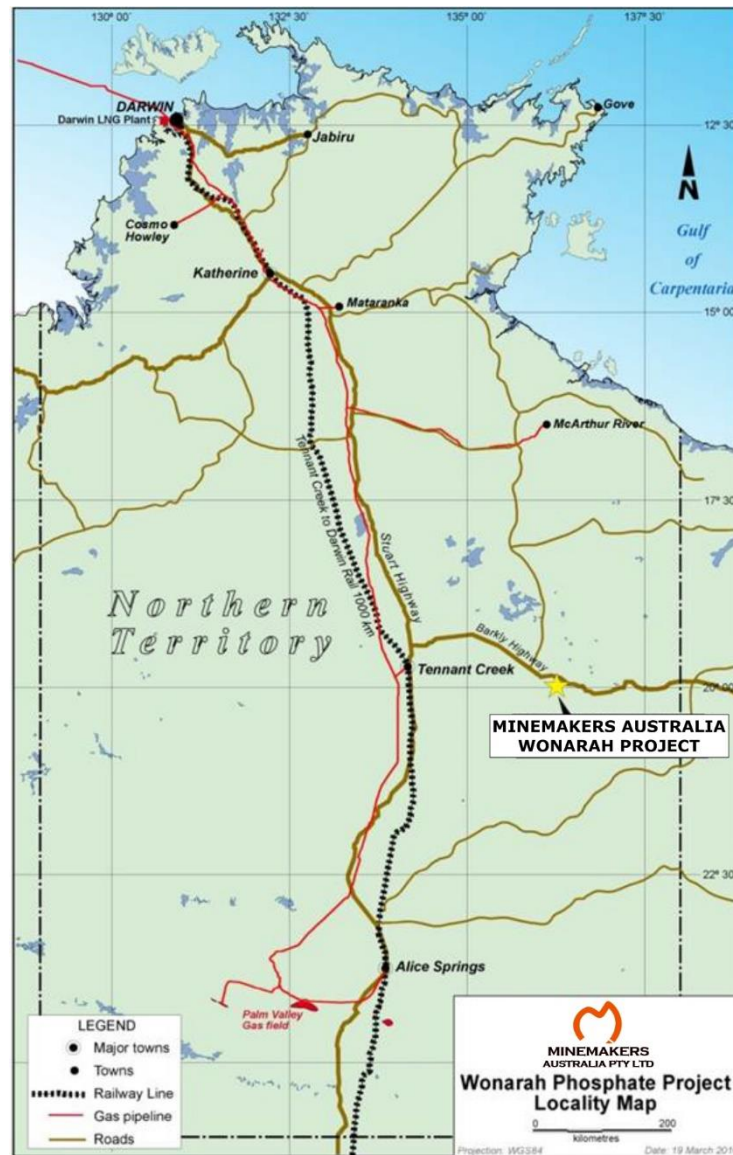


Figure 1. Location of Wonarah Project

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 EL29841. Access within the tenements is via a network of 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), EL29840, EL29841 and EL29849 which were granted on 19 March 2013 due to amalgamation of the following tenements: EL9979, EL26185, EL26451, EL26452, EL26584, EL26585, EL26586 and EL28233. EL31477 is 100% owned by MAPL, was granted on 23 May 2017 to replace the northern part of the surrendered ML27244.

Table 1. Tenement details

Tenement	Blocks	Date of grant	Expiry	Comments
EL29840	49	19/03/13	18/03/19	
EL29841	54	19/03/13	18/03/19	
EL29849	23	19/03/13	18/03/19	
EL31477	18	23/05/17	22/05/23	

EL's 29840, 29841 and EL31477 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. EL29840 is also partially located on NT Portion 4246, VCL.

EL29849 is located on NT Portion 773, PPL 988 Dalmore Downs. EL24607 is located on NT Portion 3976, Wakaya Aboriginal Land Trust.

EL's 29840, 29841 and EL31477 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.

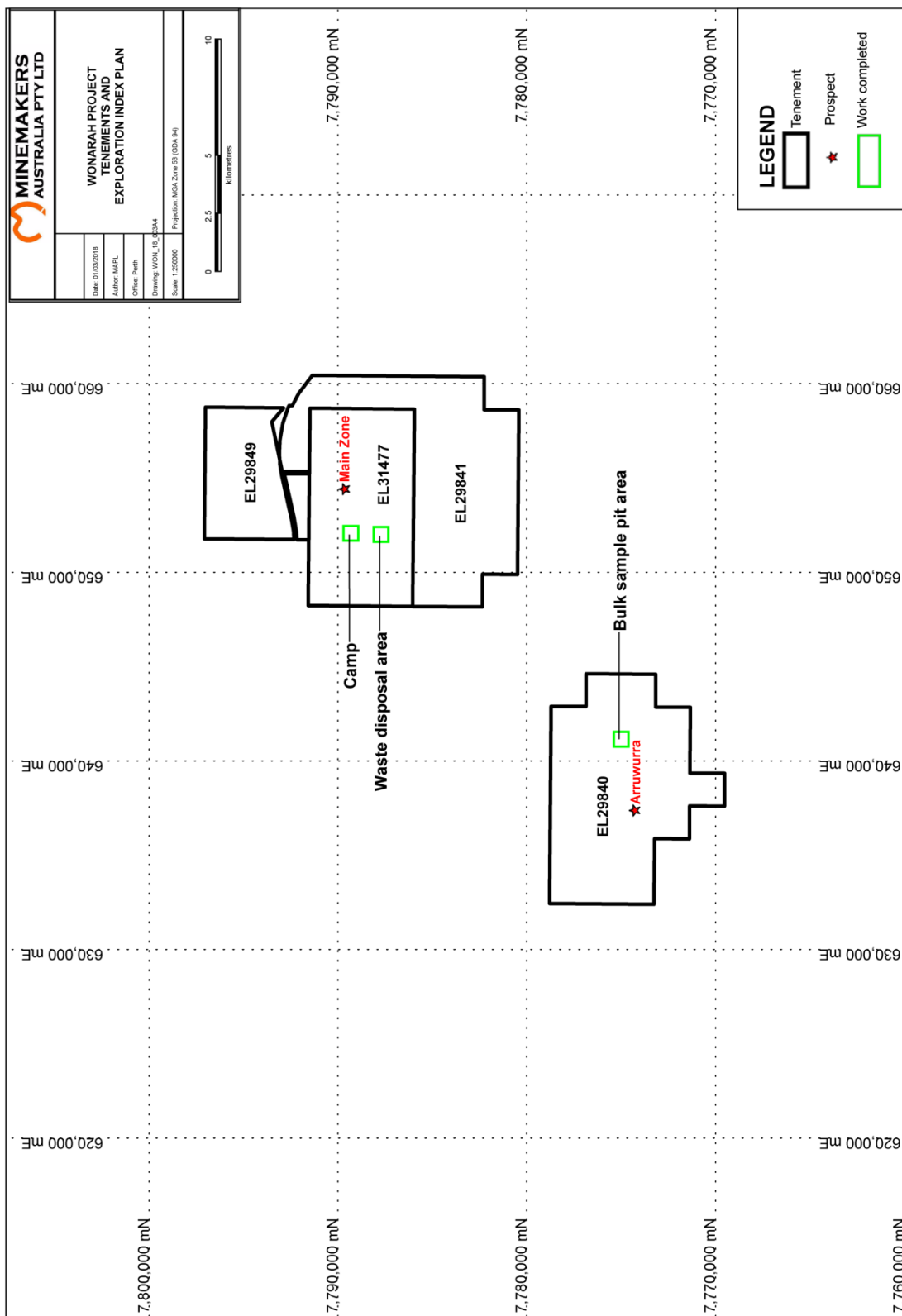


Figure 2. Tenements and Exploration Index Plan

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.

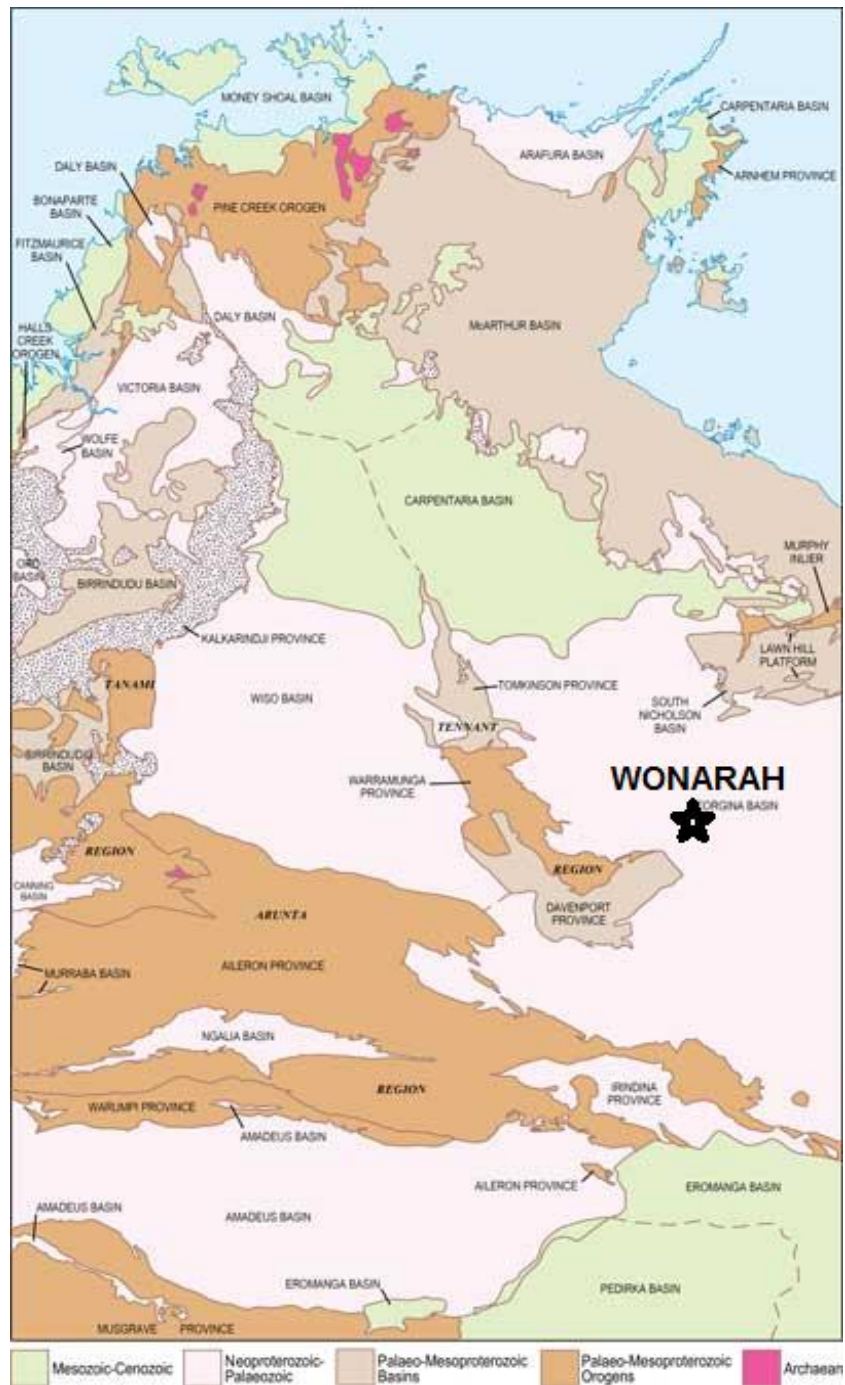


Figure 3. Regional geological setting (from the NTGS)

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 $1838 \pm 12\text{ Ma}$ 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% P_2O_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%) P_2O_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.

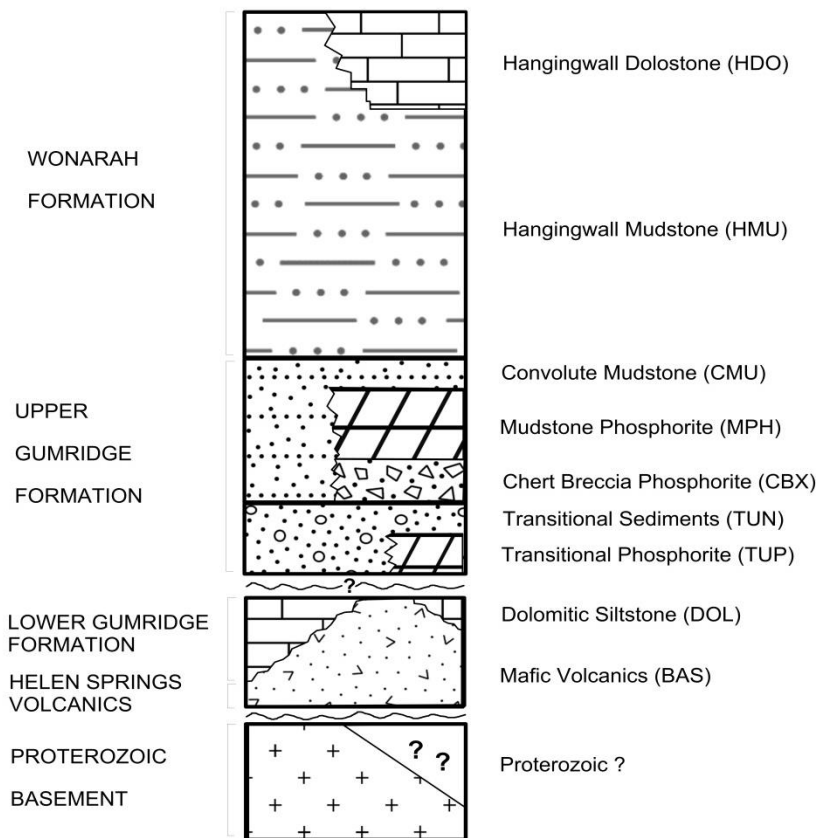


Figure 4. Regional stratigraphic column

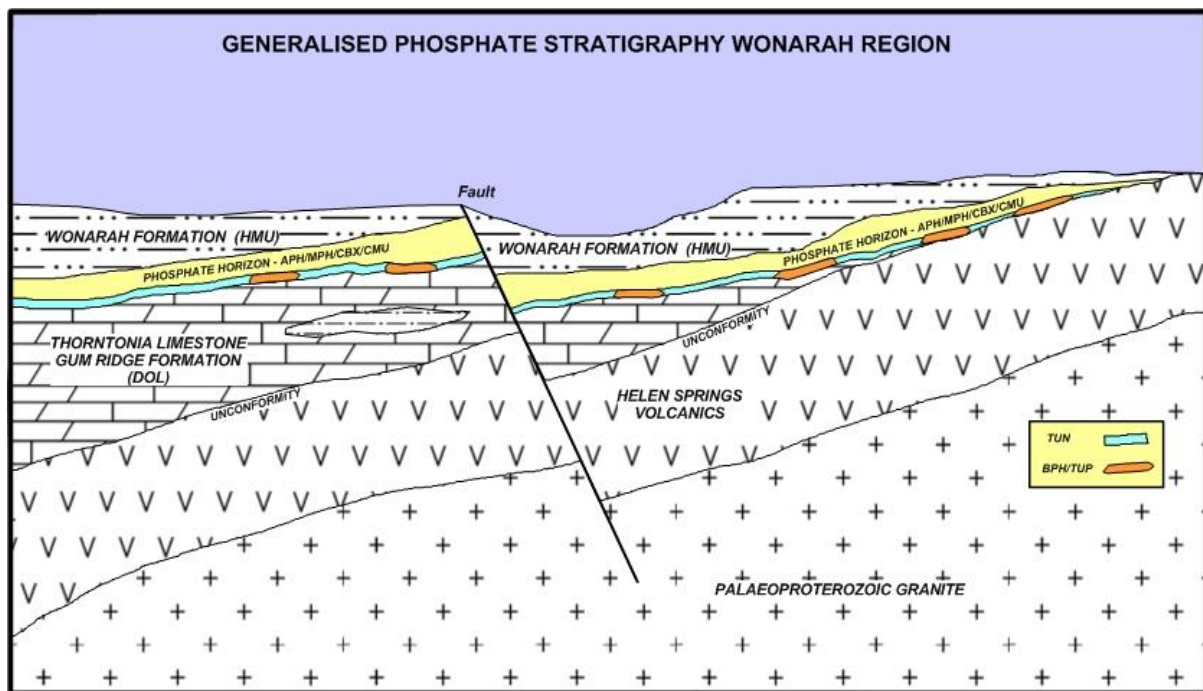


Figure 5. Schematic regional geology section

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 PL1802 over the Wonarah region on 18 July 1967 covering a total area of 3309 square miles (8570.31 km²) (CR19680030). The tenure converted to PA2161 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 km²) 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 km² (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 EL9976 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 EL9976 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 km² 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/P₂O₅ 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% P₂O₅, calculated at a cut off average at 10% P₂O₅. A total of 532 million short tons (482.5 Mt), using a cut-off of 14% P₂O₅ averaging 16.74% P₂O₅ and 307 million short tons (278.4 Mt) averaging 18.98% P₂O₅ indicated using a cut-off average of 18% P₂O₅. 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% P₂O₅ cut-off reserves were 970 million short tons (879.8 Mt) at 15.71% P₂O₅,

771 million short tons (699.3 Mt) at 16.46% P_2O_5 and 418 million short tons (379.1 Mt) at 18.96% P_2O_5 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 were 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_2O_5 " (CR20000071), at depths ranging from 30 and 50 m, with a maximum assayed grade of 28.6% P_2O_5 .

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_2O_5 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_2O_5 , 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 et al, 2014, Pellatt et al, 2015 and Pellatt and Fulton, 2016, Pellatt and Fulton, 2017 and Pellatt, 2017).

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% P₂O₅ (10% P₂O₅ cut-off) and 395 Mt Inferred (18% P₂O₅ 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% P₂O₅ (10% P₂O₅ cut-off), including 78.3 Mt at 20.8% P₂O₅
- 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.

During the year ended January 2016 the following work was carried out:

- Minor rehabilitation of access tracks.

During the year ended January 2017 the following work was carried out:

- Minor rehabilitation of access tracks and ongoing rehabilitation.

4. WORK COMPLETED DURING THE REPORTING PERIOD

Work completed during the reporting year comprised environmental monitoring as detailed in Table 2:

Table 2. Table of Scheduled Environmental Inspections.

TABLE OF SCHEDULED ENVIRONMENTAL INSPECTIONS			
Inspection area	Personnel	Schedule Frequency	Purpose
Waste stockpile	Minemakers	Annual	Erosion and weeds
Waste stockpile sediment trap	Minemakers	Annual	Effectiveness. Look for slumping
Product stockpiles	Minemakers	Annual	Erosion and weeds
Pit bunding	Minemakers	Annual	Effectiveness. Look for breaches
Pit walls	Minemakers	Annual	Erosion
Pit base	Minemakers	Annual	Water (to be sampled), weeds, wildlife
Bulk sample general infrastructure area	Minemakers	Annual	Revegetation status, weeds
Borrow pits	Minemakers	Annual	Revegetation status, weeds
Major tracks	Minemakers	Annual	Erosion, weeds
Exploration Camp	Minemakers	Annual	Revegetation, weeds
Waste disposal area	Minemakers	Annual	Revegetation, weeds
All bulk sample areas	Independent audit	Triannually during rehabilitation period	Weeds, general environmental health of site
Access tracks	Minemakers	1. Before/during construction. 2. At rehabilitation (3-6 months). 3. Through rehabilitation process until effective rehabilitation is established (biannually)	Landform, rubbish removed, revegetation, weeds
Drill pads	Minemakers	1. Before/during construction. 2. At rehabilitation (3-6 months). 3. Through rehabilitation process until effective rehabilitation is established (biannually)	Landform, rubbish removed, revegetation, weeds
Drill sumps	Minemakers	Include with pads	as above
Selected pads and tracks	Independent audit	Triannually during rehabilitation period	Landform, rubbish removed, revegetation, weeds

Work also included weed control in the area of the bulk sample pit operations and minor tidying up around the waste disposal and former camp area.

5. CONCLUSIONS AND RECOMMENDATIONS

Work proposed for the 2018 field season includes:

- Minor rehabilitation of the waste disposal and camp areas.
- Continued monitoring and removal of Kapok Bush identified at laydown area and haul road near the bulk sample pit.
- Monitoring of drill hole, access track and borrow pit rehabilitation including photography of sites.
- Independent environmental audit/weed survey to coincide with site activities described above.
- Spreading out remaining gravel and re-contouring of borrow pits 11 and 12 (pending outcome of meeting with Traditional Owners regarding future use of access road to the bulk sample pit area).

In the event that the Improved Hard Process (IHP) is proven to be commercially viable, further activities that relate to an ongoing feasibility study into the construction of an IHP beneficiation plant at Wonarah to treat Wonarah rock. The feasibility study has been affected by the significant delays that have occurred over the past few years with the commissioning of a commercial IHP demonstration plant in Florida, USA.

The completion of a feasibility study and a decision to commence mining operations at Wonarah is dependent on the successful commercialisation of IHP technology, currently being undertaken by JDC Phosphate. Minemakers Australia Pty Ltd, through its parent company Avenira Limited, has an exclusive licence to use the technology within Australia. Avenira owns approximately 8% of JDC Phosphate.

Subject to satisfactory progress at the JDC Phosphate demonstration plant in Florida, future planned work includes a geotechnical program to test the site of proposed infrastructure for an IHP phosphate beneficiation plant. The timing of this work will be determined by progress in validating IHP technology at the JDC commercial demonstration plant in Florida. The work will comprise:

- 40 diamond drill holes to a depth of 20 metres
- 22 test pits to be excavated by small excavator or backhoe with dimensions of 4m (length), 1m (width) x 3m (depth).
- 8.5 km of tracks to be constructed for access to pits and diamond holes using loader or small excavator with blade

6. REFERENCES

Cotton, B.J. 2000. EL 9976 Wonarah. Annual Report for the Year ending 5th February 2000. Alroy 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 EL9979, SEL26451, SEL26452, EL26583, EL26584, EL26585, EL26586, EL26589 and EL26588. Wonarah Phosphate Project. Annual Report to 8th January 2009. Minemakers Australia.

Fulton, R.L., Pellatt, A. and Varley, R. 2010. Combined Annual Report on EL9979, SEL26451, SEL26452, EL26583, EL26584, EL26585, EL26586, and EL26589. Wonarah Phosphate Project. Annual Report to 8th January 2010. Minemakers Australia.

Fulton, R.L., Pellatt, A. and Varley, R. 2011. Combined Annual Report on EL9979, SEL26451, SEL26452, EL26583, EL26584, EL26585, EL26586, and EL26589. Wonarah Phosphate Project. Annual Report to 8th January 2011. Minemakers Australia.

Lilley, G.L. and Andrews, S.J. 2001. Combined Annual Report for the Period Ending 2/9/01 EL9976, EL22167, and EL22168 Wonarah Northern Territory. Report No. 2453. Rio Tinto Exploration Pty Limited.

Lilley, G.L. 2002. Partial Relinquishment Report for the period ending 2nd July 2002 for EL22167 Wonarah 5 and EL22168 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 EL9979, EL24607, EL26185, EL26584, EL26585, EL26586, EL26589, EL28233, SEL26451 and SEL26452 (Wonarah Phosphate Project) for the period ending 8 January 2012. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2013. Grouped Annual Report (GR-097/09) EL9979, EL24607, EL26185, EL26451, EL26452, EL26584, EL26585, EL26586 and EL28233 (Wonarah Phosphate Project) for the period ending 8 January 2013. Minemakers Australia.

Pellatt, A. and Fulton R.L. and Bergin, N. 2014. Grouped Annual Report (GR-097/09) EL24607, EL29840, EL29841, EL29849 (Wonarah Phosphate Project) for the period ending 8 January 2014. Minemakers Australia.

Pellatt, A. and Fulton R.L. and Bergin, N. 2015. Grouped Annual Report (GR-097/09) EL24607, EL29840, EL29841, EL29849 (Wonarah Phosphate Project) for the period ending 8 January 2015. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2016. Grouped Annual Report (GR-097/09) EL24607, EL29840, EL29841, EL29849 (Wonarah Phosphate Project) for the period ending 8 January 2016. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2016. Final Report EL24607, 3 July 2015 to 15 June 2016. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2016. Partial Relinquishment Report EL29840 for period ending 14 April 2016. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2016. Partial Relinquishment Report EL29841 for period ending 14 April 2016. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2017. Partial Relinquishment Report EL29849 for period ending 14 April 2016. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2017. Partial Relinquishment Report EL29840 for period ending 24 March 2017. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2017. Partial Relinquishment Report EL29841 for period ending 24 March 2017. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2017. Partial Relinquishment Report EL29849 for period ending 24 March 2017. Minemakers Australia.

Pellatt, A. and Fulton R.L. 2017. Grouped Annual Report (GR-097/09) EL24607, EL29840, EL29841, EL29849 (Wonarah Phosphate Project) for the period ending 8 January 2017. Minemakers Australia.

Pellatt, A. 2017. Annual and Final Report for ML (Wonarah Mineral Lease) for the period 19 February 2017 to 23 May 2017. Minemakers Australia.