

**Final Report**  
**for**  
**EL 12/2012 – Scottsdale**

**Reporting Period:** 12 December 2016 - 11 December 2017  
**Project Operator:** ABx4 Pty Ltd  
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**Date:** 24 November 2017

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## ABSTRACT

### Objective:

Exploration Licence (EL) 12/2012 “Scottsdale” was applied for by ABx4 Pty Ltd (“ABx4”) in order to facilitate an exploration program to discover economically viable deposits of bauxite associated with Tertiary Volcanics, in an area with old peneplained surfaces preserved as plateaus. The goal of the program was to determine the quality and quantity of the bauxite in the area using an RC drill rig mounted on a light 12 tonne truck.

### Methodology:

1. Detailed geological mapping, including geomorphological mapping, to define the areas with best potential for bauxite.
2. Systematic sampling of natural outcrops and exposures in road cuts of bauxite profile.
3. Chemical analyses of samples, including specialist analyses to determine total and available alumina, total and reactive Silica, loss on ignition and other analyses as required in bauxite search.
4. Drill testing of zones with best potential defined by work under 1, 2. and 3, by an RC drill rig mounted on a light 12 tonne truck to get samples representing the whole bauxite profile.
5. Systematic drill testing at close spacings to obtain data for resource estimation in the best target areas defined by programme under 4.

### Results

In the first year of tenure, ABx4 completed drill testing of the Scottsdale bauxite targets. A total of 68 holes were drilled for 640m. The two key drill targets 'Plantation target' and 'Glennon's target' consisted of small zones of bauxite within the larger target area. The tonnage in the Scottsdale tenement has a total of less than 50,000 Tonnes of low-sub grade bauxite. These deposits are not economically viable on their own and were much less than expected.

All works occurring since the end of the first year of tenure have been of a desktop nature.

### Recommendations

In the current year of tenure ABx management made the decision to let EL12/2012 lapse upon expiry.

## INTRODUCTION

### Exploration Rationale

EL 12/2012 “Scottsdale” was applied for in order to facilitate an exploration program to discover economically viable deposits of bauxite associated with Tertiary Volcanics in an area with old peneplained surfaces preserved as plateaus. The goal of the program was to determine the quality and quantity of the bauxite in the area using an RC drill rig mounted on a light 12 tonne truck.

### Geological Setting

The historic work done by H.B. Owen (‘Bauxite in Australia’, 1954) demonstrated that bauxite in Tasmania can be found in both Jurassic Dolerite and Tertiary Basaltic Volcanics. According to Owen, these bauxite deposits - regardless of host rock type - are thought to form either as ‘grouped remnants of former continuous sheet’ or ‘formed in lenticular or pod shaped bodies in localised depressions’.

### Tenement Information

EL 12/2012 “Scottsdale” was granted on and from 12 December 2011 for a period of 5 years to ABx4 Pty Ltd, expiring on 11 December 2017. ABx4 has elected not to extend the term of EL12/2012 and let it lapse upon expiry.

This is the Final Report on EL12/2012 covering the period 12 December 2011 to 11 December 2017, incorporating all exploration works that occurred during the full term of tenure.

The Mineral Category of EL 12/2012 is 1 – Metallic Minerals and Atomic Substances.

Total area of the original licence was 128 km<sup>2</sup>. Through a series of voluntary partial relinquishments this area has been reduced to 46km<sup>2</sup>.

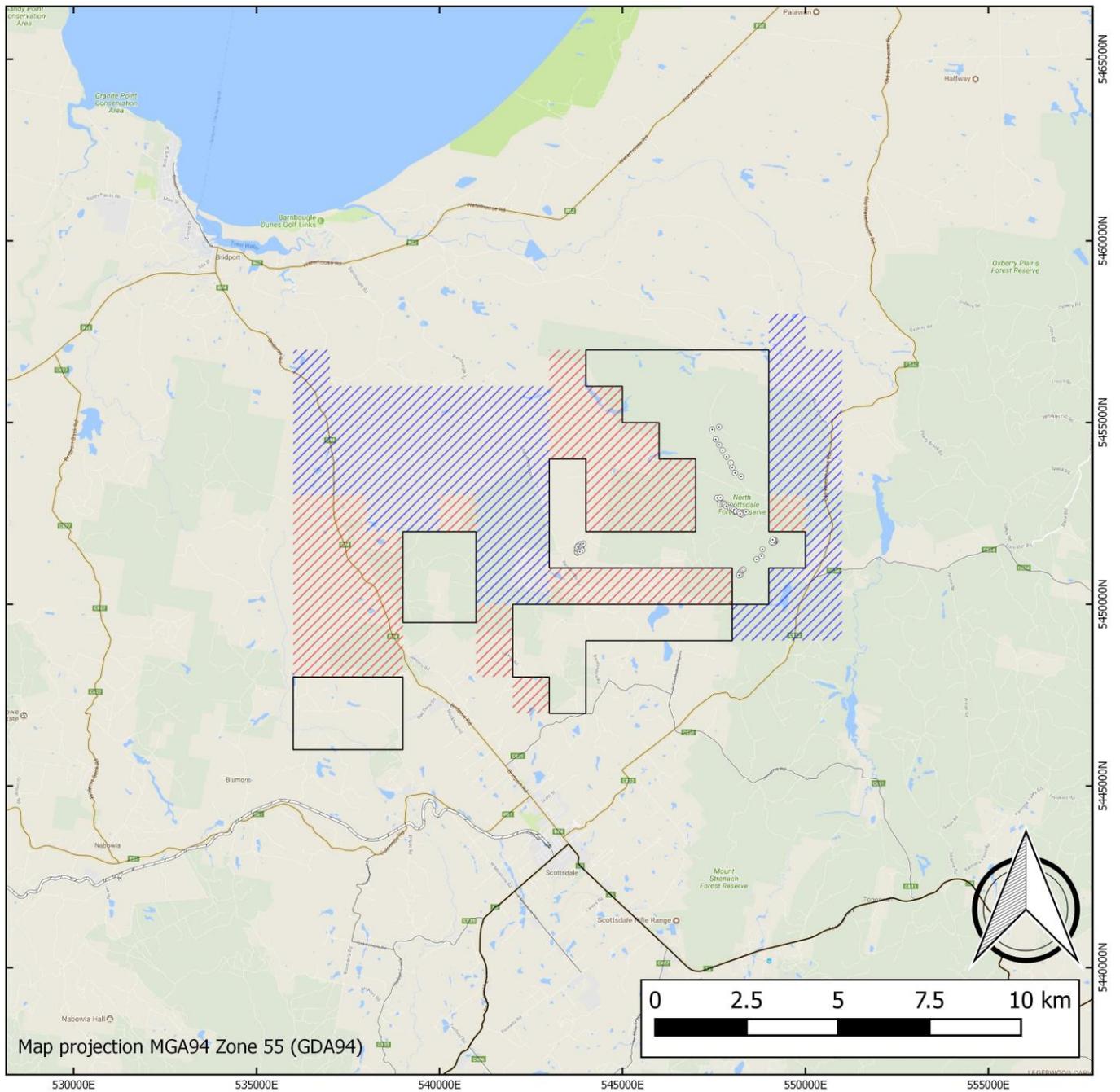
### Tenure, including joint venture details and title transfers

EL 12/2012 “Scottsdale” is 100% owned by ABx4 which is a fully owned subsidiary of Australian Bauxite Limited.

### Location

The Scottsdale tenement is centred on the Scottsdale State forest and is approximately 4km north of the town of Scottsdale. The tenement is only 60km by road to the port of Bell Bay, a large operating port north of Launceston. There is also a railway through Scottsdale which is currently decommissioned. The Scottsdale tenement is ideally located for both rail and road transport to the port.

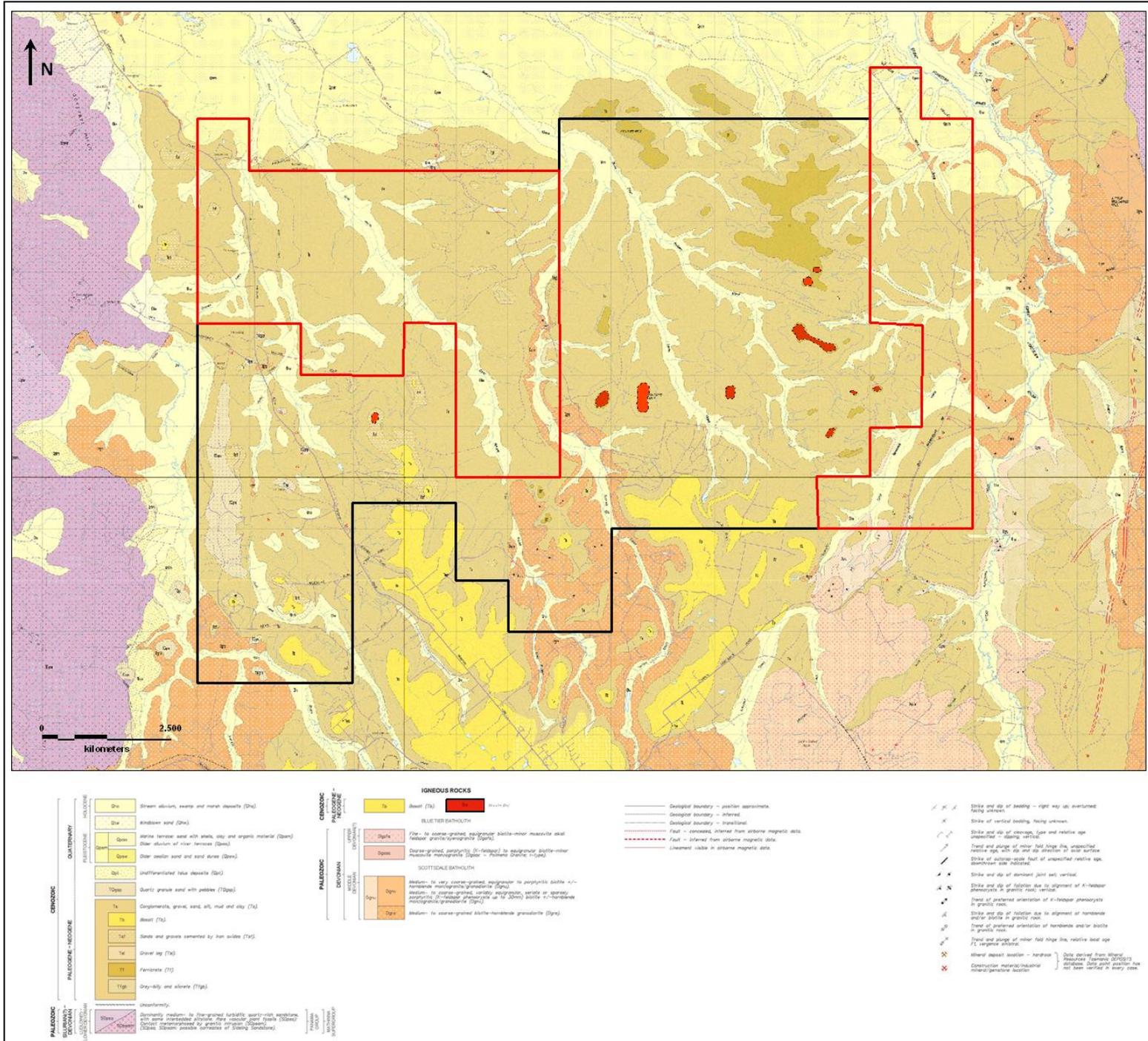
The majority of the land usage is plantation, State Forest and agricultural land. Gaining access to farming properties has been very successful; with all landowners contacted by ABx4 allowing exploration on their land.



**Legend**

- ⊙ ABx4 RC Drillholes
- ▨ Areas Relinquished at end of 1st Yr
- ▨ Areas Relinquished at end of 3rd Yr
- Tasmanian National/State Highways
- Railway (Decommissioned)
- Secondary Roads
- Google Maps (Basemap)

Map 1. Current tenement outline of EL12/2012 "Scottsdale", previously relinquished areas and drilling locations.



Map 2. Previous tenement outlines overlaying the MRT Geological Map (Pearly Brook Sheet, 1:25 000 series) of the EL12/2012 area, modified to show mapped bauxite occurrences.

## REVIEW OF PREVIOUS WORK

### Prior to Current Tenement

No historical references for bauxite have been identified for the Scottsdale Tenement.

Geological Maps composed by Mineral Resources Tasmania:

- McClenaghan, M.P., Vicary, M.J. 2010. Digital Geological Atlas 1:25000 Scale Series, Sheet 5445. Pearly Brook. Mineral resources Tasmania.

### Within Current Term of Tenure

#### Summary

- 68 Reverse Circulation holes were drilled for 640m in the first year of tenure.
- Reconnaissance and more detailed field works began approx. two months prior to drilling.

Surface reconnaissance commenced in January 2013 and focused on exploring targets identified during desktop analysis of geomorphology, geology and remote sensing data. Detailed geological mapping, including geomorphological mapping, was complete for each of the target areas to define the area with best potential for bauxite. Numerous bauxite ore bodies were identified, mapped and sampled and two key locations were identified for drill testing which contained the best areas for bauxite tonnage potential.

In March 2013 ABx4 completed drill testing of the Scottsdale bauxite targets in EL12/2012. The drilling was proposed to determine the grade and extent of bauxite in the area. Drilling was undertaken using the contracting company Underdale Drillers who provided Air core rig mounted on a light Mitsubishi 12 tonne truck with a driller and offsider. Drilling was carried out in a semi-random pattern. All drill hole locations were surveyed at the time of drilling using hand held GPS, with accuracy of  $\pm 5$ m. A total of 68 holes were drilled for 640m. All drill sites were rehabilitated on completion.

Samples were collected at one metre intervals. All samples were analysed via Hand held Niton XRF on-site. 104 samples which had positive Niton XRF results were submitted to ALS Minerals, Brisbane, for whole analysis and an additional 14 samples were submitted for sieved analysis.

All works occurring since the end of the first year of tenure have been of a desktop nature.

## **EXPLORATION COMPLETED DURING THE CURRENT ANNUAL REPORTING PERIOD**

A brief desktop review was undertaken in the current year of tenure. The review confirmed the previously held conclusion that EL12/2012 area has a low tonnage potential and would not - currently or in the foreseeable future - be economic to mine.

No on-site work occurred during the current year of tenure.

## DISCUSSION OF RESULTS

A brief desktop review was undertaken in the current year of tenure. The review confirmed the previously held conclusion that EL12/2012 area has a low tonnage potential and would not - currently or in the foreseeable future - be economic to mine.

### Geology

The bauxite mineralization in the Scottsdale Tenement is hosted in Tertiary volcanics. The mineralisation occurs as sheets of bauxitised volcanoclastic, which drape the paleo topography. The bauxite occurs at the tops of highly elevated hills which are capped with bauxite mineralisation. The volcanic host has overlain soft tertiary quartz gravels which are heavily eroded and often undercut the bauxite causing it to slump down the hill sides in some locations. The two key targets 'Plantation target' and 'Glennon's target' consisted of small zones of bauxite within the larger target area. Debris was scattered over the plateau via erosion of small hills of bauxite which may have been more extensive in the tertiary period.

The bauxite is predominantly composed of red volcanogenic haematitic vuggy bauxite, which often contains pink gibbsite and infrequent mag-hematite pisolites. It is a gibbsite-rich bauxite mostly in an amorphous phase which is often vuggy with iron depletion around the rims of the vughs and enrichment of iron in zones between vughs. The bauxite contains an increase amount of quartz grains but is usually less than 5%. Quartz is an inert mineral in the processing of bauxite at low temperature, and the only deleterious trait is it dilutes the ore slightly.

## **CONCLUSIONS AND RECOMMENDATIONS**

The tonnage in the Scottsdale tenement has a total of less than 50,000 Tonnes of low-sub grade bauxite. These deposits are not economically viable on their own and were much less than initially expected.

## **ENVIRONMENT**

### **Surface Disturbing Operations:**

Surface disturbing activities over the full term were limited to the drilling of 68 Reverse Circulation (RC) holes within the first year of tenure.

Existing tracks were used when available. Minor track clearing may have occurred in places but this was subject to landholder permission and professional advice.

### **Surveys (archaeological, botanical):**

A botanical survey was undertaken Philip Milner Consultant Pty Ltd prior to drilling in all areas drilled. The botanical report was submitted in the first year of tenure. No archaeological or botanical surveys have taken place since.

### **Rehabilitation:**

All drillholes were capped and backfilled immediately after completion as per normal ABx operating procedures.

All landholders are consulted at the completion of each program confirming their satisfaction with the rehabilitation completed.

## EXPENDITURE

Table 1. Exploration expenditure over the 5<sup>th</sup> and final year of tenure.

EL 12/2012 Scottsdale - Expenditure over 5 <sup>th</sup> Year of Tenure	
1. Geoscientific costs	
Geology	\$1,625
Geochemistry	
Geophysics	
Remote sensing	
2. Drilling and Gridding Costs	
Gridding	
Drilling	
Holes/metres	
3. Land Access Costs	
4. Rehabilitation Costs	
5. Feasibility Study Costs	
6. Other Costs	
7. Administration Costs (< 10%)	
8. Total Costs	\$1,625

Note 1: Office Administration was met by parent company – Australian Bauxite Limited.

## REFERENCES

### Key References

H.B. Owen, 1954, *Bauxite in Australia*, Bulletin 24.

McClenaghan, M.P., Vicary, M.J. 2010. *Digital Geological Atlas 1:25000 Scale Series, Sheet 5445. Pearly Brook*. Mineral Resources Tasmania.

T. Coyte, *First Annual Report for EL12/2012 Scottsdale*, December 2013, ABx4 Pty Ltd.

### Reports on Surrendered Areas

T. Coyte, Partial Relinquishment Report on *EL12/2012 Scottsdale*, November 2013, ABx4 Pty Ltd.

T. Coyte, Partial Relinquishment Report on *EL12/2012 Scottsdale*, December 2015, ABx4 Pty Ltd.

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