

Third Annual Report
on
EL 16/2012 – Reedy Marsh

Reporting Period: 16 June 2015 – 15 June 2016
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Date: 9 June 2016

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CONTENTS

1	ABSTRACT	3
2	INTRODUCTION	5
3	REVIEW OF PREVIOUS WORK	8
4	EXPLORATION COMPLETED DURING THE REPORTING PERIOD	9
5	CONCLUSIONS AND RECOMMENDATIONS	16
6	ENVIRONMENT	17
7	EXPENDITURE	18
8	REFERENCES	19

TABLES

Table 1. Exploration Activity and Expenditure Table for reporting period 16 June 2015 – 15 June 2016.....	18
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MAPS

Map 1. Location map of EL 16/2012 “Reedy Marsh”	7
Map 2. Geological map with Tenement outline, relinquished area and target locations identified.	9
Map 3. Bauxite resource outline for Rubble Flat Target.....	10
Map 4. Surface Geology of Rubble Flats Deposit (based off field mapping and Westbury 1:25,000 Geological Map Sheet).....	12
Map 5. Topographic map of Rubble Flats with resource holes Identified.....	13
Map 6. Map of the hard unweathered Dolerite Basement, showing depth of weathering profile.....	14

PHOTOS

Photo 1. Example of Ferruginous Bauxite/Laterite - Upper layer	11
Photo 2. High Quality Bauxite (massive Earthy with sporadic concretionary nodules, is often granular with a strong relic crystalline structure) - lower layer	11

1 ABSTRACT

Objective:

Exploration Licence (EL) 16/2012 “Reedy Marsh” was applied for in order to facilitate an exploration program to discover economically viable deposits of bauxite associated with Tertiary Volcanics and Jurassic Dolerite, in an area with old peneplained surfaces preserved as plateaus. The goal of the program is 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 the 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 Mitsubishi truck to get samples representing the whole bauxite profile.
5. Systematic drill testing at close spacing's to obtain data for resource estimation in the best target areas defined by programme under 4.
6. Mine-ability study of Tasmanian bauxite using a small excavator to dig bauxite and screen test on a larger scale.

Results:

The additional tonnage discovered in the Early 2015 drilling program at the Rubble Flats deposit is quite small but will still be excellent additional tonnage for DL-130 deposit which currently has a JORC resource of 5.7Mt.

Rubble Flats deposit has not been drilled entirely and still requires additional drilling to the East of the deposit (EL37/2010 'Westbury'). This will be completed after the plantation forest has been harvested.

Mapping of the weathering profile at Rubble flats shows only minor correlation between faulting and bauxite thickness but no correlation between bauxite thickness and the thickness of the weathering profile at this stage. In a solely lateritic environment these results would be opposite to expectations. It is predicted that a large proportion of the 'weathering profile' is actually hydrothermal alteration, hence why there is no correlation. There is however a strong correlation between the formation of bauxite and ground water flow funnelled by the dolerite peaks. The bauxite is always thicker where the water flow is greatest without causing erosion.

Recommendations for future work:

Recommendations for future work include further:

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 the 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 Mitsubishi truck to get samples representing the whole bauxite profile.
5. Systematic drill testing at close spacing's to obtain data for resource estimation in the best target areas defined by programme under 4.
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2 INTRODUCTION

Exploration Rationale

ABx4 Pty Ltd - the holder of Category 1 Exploration Licence EL 16/2012 - is the wholly owned subsidiary of Australian Bauxite Ltd. Australian Bauxite Limited (ABx) (ASX: ABZ) is an exploration company that holds the core of the Tasmanian Bauxite Province with all tenements selected on 3 principles:

- Quality – good quality bauxite with potential for significant resource tonnages;
- Proximity – easy access to infrastructure connected to export ports; and
- Accessibility – free of socio-environmental or native title land constraints.

A large portion of the land within the tenement boundary consists of tree plantations owned by the recently-liquidated Gunns Limited.

EL 16/2012 “Reedy Marsh” was applied for in order to facilitate an exploration program to discover economically viable deposits of bauxite associated with Tertiary Volcanics and Jurassic Dolerite in an area with old peneplained surfaces preserved as plateaus.

Geological Setting

In EL16/2012, the majority of bauxite targets are hosted in Jurassic Dolerite, however, some bauxite derived from Tertiary Volcanics could also be present.

The historic work done by H.B. Owen (‘Bauxite in Australia’, 1954) demonstrated that Bauxite in Tasmania are thought to form either as ‘grouped remnants of former continuous sheet’ or ‘formed in lenticular or pod shaped bodies in localised depressions’. This generally occurs in areas with high water flow and low erosion where the old surface has been preserved.

The Reedy Marsh tenement borders the ABx4 Pty Ltd “Deloraine” (EL 9/2010) tenement where recent exploration at the “DL-130” target has led to intersections of thick and high grade bauxite.

Tenement Information

EL 16/2012 “Reedy Marsh” was granted to ABx4 Pty Ltd (ABx4) on 16 June 2013 for a period of 5 years. This is the Third Annual Report for the reporting period 16 June 2015 – 15 June 2016 incorporating the results of work completed during the first 3 years of tenure.

Total area of the original licence is 109 sq km. The tenement area is made up of three main land parcels. ABx4 however is relinquishing approximately 14sq km to bring the total remaining area to 95 sq km. The Mineral Category of EL 9/2010 is 1 – Metallic Minerals and Atomic Substances.

Datum

UTM GDA94 Zone 55

Tenure, including joint venture details and title transfers

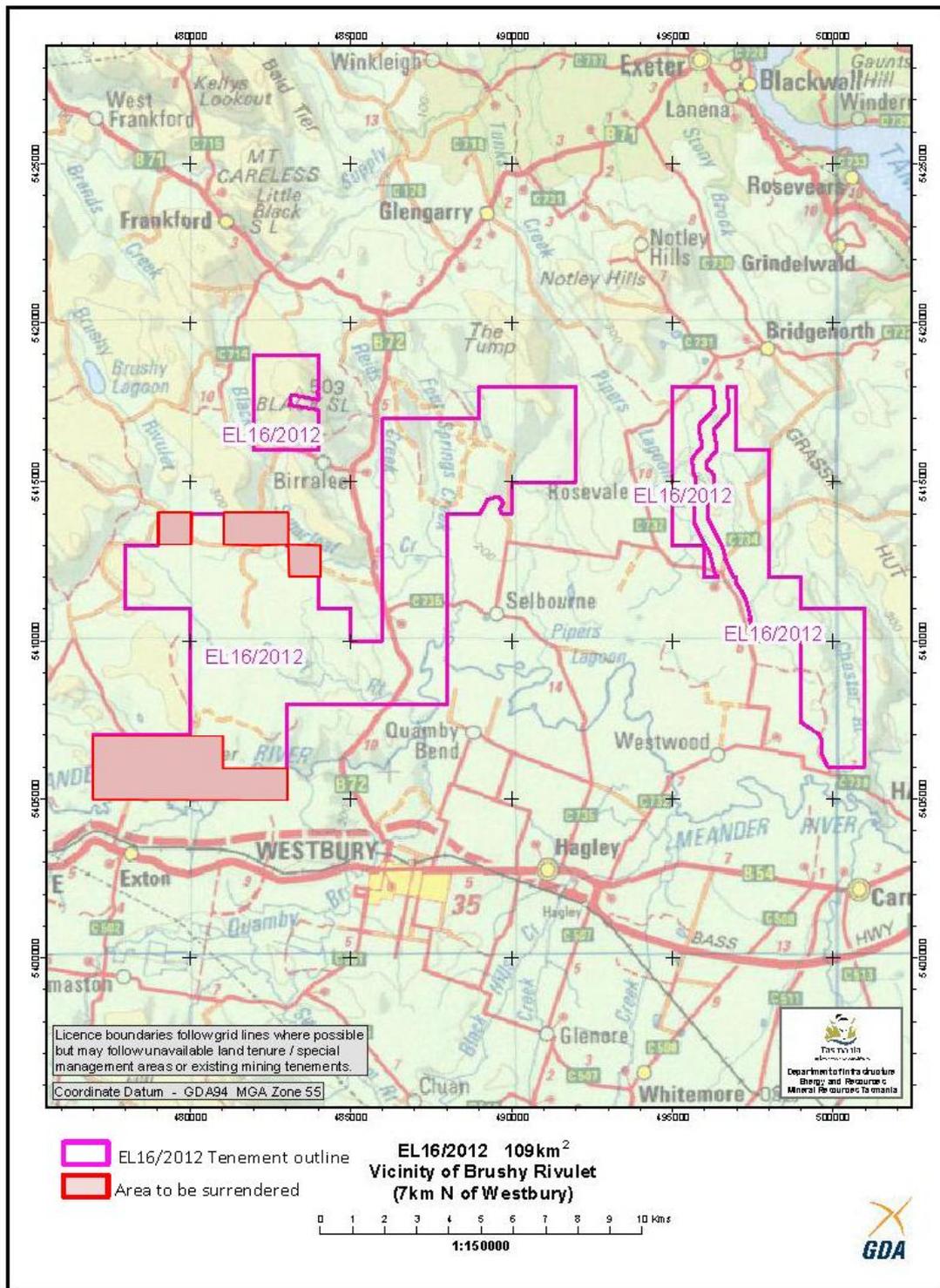
EL16/2012 “Reedy Marsh” is 100% owned by ABx4, a 100% owned subsidiary of Australian Bauxite Limited.

Location

The Reedy Marsh tenement area is composed of three main land parcels. The large southwest parcel is located just to the North of the Bass Highway connecting Exton and Hagley. The eastern parcel (dissected by a north-south-running Gas Pipeline Corridor) is located 1.3 km east of Rosevale and extends to the south-east towards Westwood. The small north-east parcel is located ~2km NW of Birralee along Birralee Rd. The tenement area is only located approximately 35 km south of the large operating port at Bell Bay.

The main land category in the tenement area is private land (incl. forestry operations), with other land categories including National Parks, Forest Reserves, and Conservation areas.

Map 1. Location map of EL 16/2012 "Reedy Marsh"



3 REVIEW OF PREVIOUS WORK

Summary of Exploration Completed during Tenure

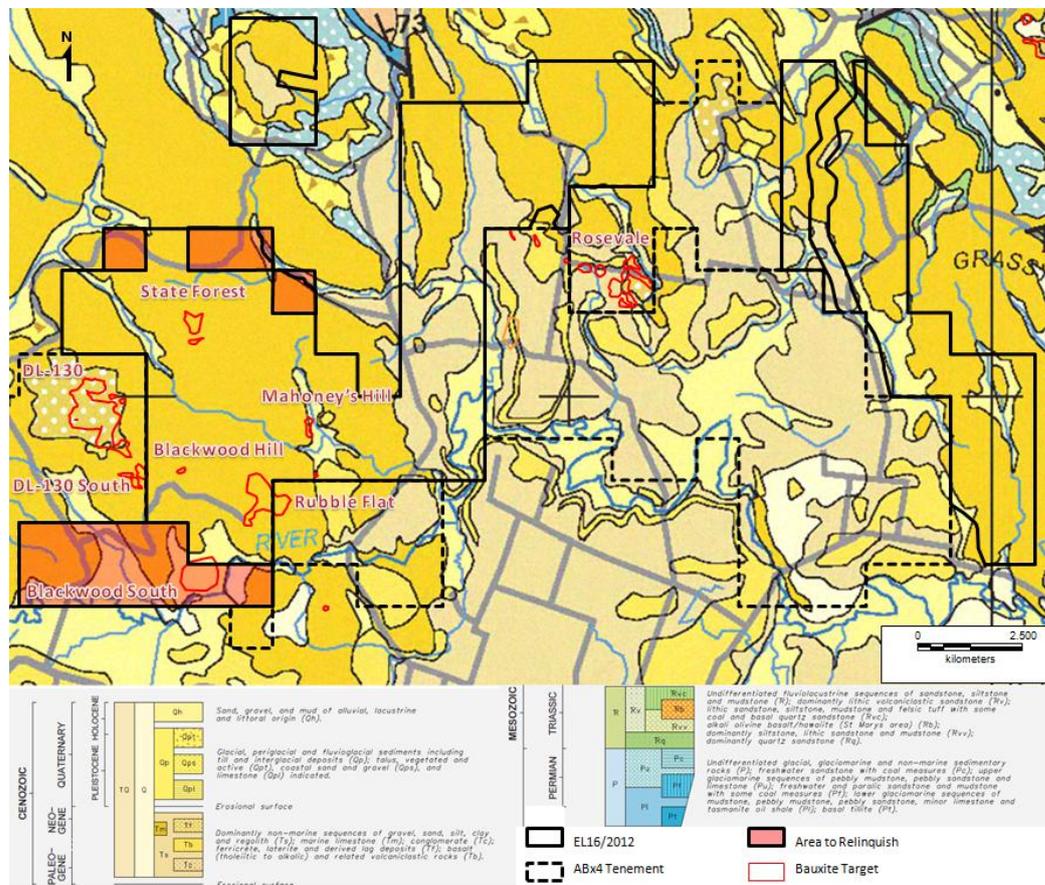
During the initial 2 years of Tenure, field reconnaissance was completed over much of the Reedy Marsh area in preparation for drilling programs to prove up bauxite resources.

Field Exploration identified a number of prospective targets, with surface samples positive for high quality bauxite.

In February and March of 2015 the Rubble Flats, Blackwood South, Blackwood Hill, Mahoney's Hill and Egmont Property bauxite targets were drilled to identify bauxite resources. These were also targeted for additional tonnage for the DL-130 prospect in EL9/2010 which EL16/2012 largely encompasses. A bauxite resource has already been proved up for ABx4's "DL-130" deposit within the 'Deloraine' tenement where thick intersects of high-grade bauxite have been found, and an inferred JORC estimate of 5.7Mt. EL16/2012, along with neighbouring tenements EL 9/2010 and EL 37/2010, are well located in terms of distance from Bell Bay Port. The general region covered by ABx4 tenements appears prospective for future exploration.

Drilling of prospects showed that only Rubble Flats/Egmont property contained significant quantities of bauxite. Mahoney's hill and Blackwood Hill require more drilling to determine viability and Blackwood south failed to identify significant quantities of bauxite.

4 EXPLORATION COMPLETED DURING THE REPORTING PERIOD



Map 2. Geological map with Tenement outline, relinquished area and target locations identified.

Assessment of Rubble Flat's Deposit

The Rubble Flats bauxite deposit falls predominantly within the 'Reedy Marsh' EL 16/2012 tenement. This part of the deposit sits within the recently-harvested Eucalypt plantation area of “Allen’s Bush” [managed by ‘Forico’ (parent company ‘New Forests’); formerly owned by ‘Gunns Limited’].

The boundary of 'Reedy Marsh' with neighbouring ABX4 exploration licence “Westbury” (EL 37/2010) truncates the far-eastern side of the deposit where the ore zone extends from Allen’s Bush into the Egmont Property. For reporting purposes, the drill holes within the 'Reedy Marsh' and 'Westbury' tenements carry the prefixes ‘RM’ and ‘WB’, respectively.

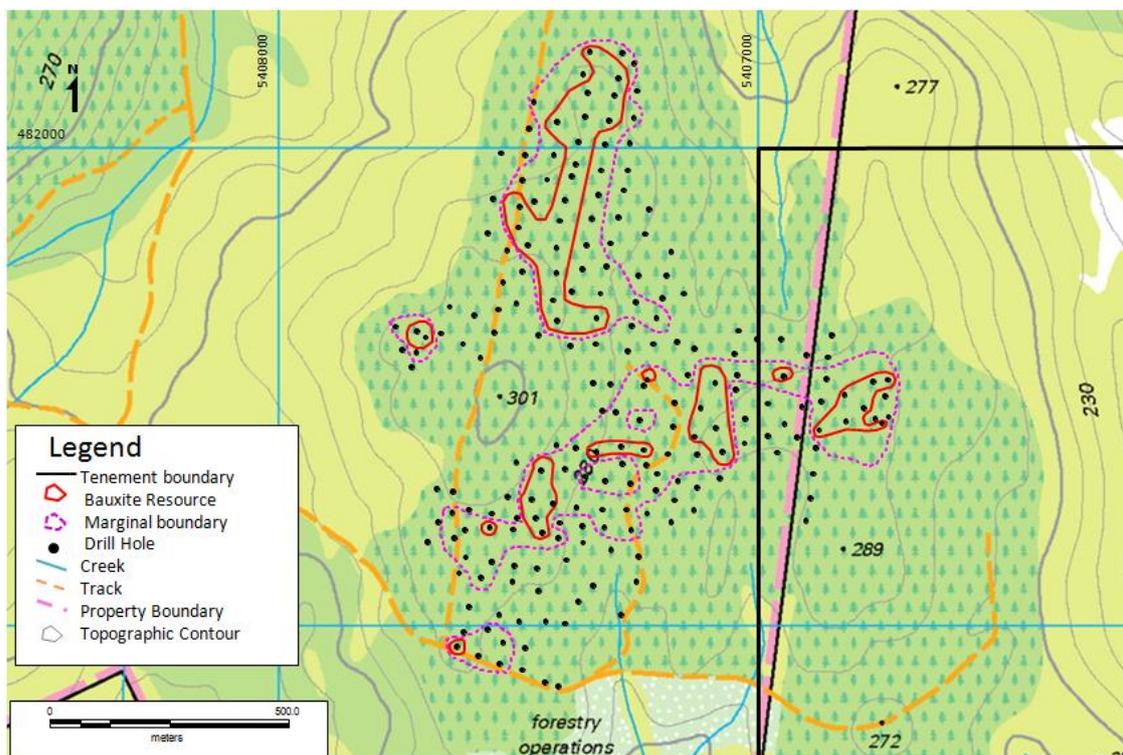
The entire Rubble Flats deposit area is mapped as Jurassic Dolerite on the Westbury Sheet of the Mineral Resources Tasmania (MRT), 1:25,000 Map Series. Prior field work showed that bauxite was exposed at surface over much of the deposit and is stratigraphically placed above the Jurassic Dolerite. This work resulted in an approximate deposit outline and the surface geology map for the deposit (following the bauxite – dolerite contact at surface, see Map 5).

The area is also categorised as Class 6 (‘severely restricted agricultural use’) on the ‘Tamar’ sheet of the Land Capability Survey of Tasmania (note: bauxite at surface makes for limited agricultural production).

The bauxite at Rubble Flats deposit appears to form in a channel type deposit which occurs between 3 large dolerite ridges. These peaks funnel the catchment and underground water flow towards certain areas of the plateau. The bauxite forms preferentially along the base of the Dolerite ridges with the Dolerite as the host for the bauxite mineralisation (this is supported by trace element ratios). The water flow appears to be essential for the formation and upgrading of this type of bauxite deposit. The bauxite will always be larger and thicker where the water flow is greatest without causing erosion.

The bauxite forms sporadic pockets along the base of the dolerite ridge where there is possible faulting. The potential fault zones in the area can be identified at surface by red kaolinised dolerite soil next to hard dolerite rock with a sharp linear contact. The faulting theoretically could have allowed hydrothermal alteration of the dolerite which would have increased the porosity of the fairly impervious rock allowing bauxite to form at a later stage.

Dolerite hosted bauxites tend to have zones of Iron-enrichment (Ferruginous Laterite/Iron-rich Bauxite), generally with Iron minerals migrating towards the surface and higher quality Gibbsite bauxite occurring below this layer. Rubble Flat is a perfect example of this type of formation. Unfortunately the total area of good quality bauxite has been reduced by dilution of Iron minerals in both thickness and distribution. The Iron minerals has lowered the expected Grade of the deposit/decrease the tonnage.



Map 3. Bauxite resource outline for Rubble Flat Target

Using the information gathered from the early 2015 drilling program; a brief non-JORC compliant resource was completed to gain an approximate estimate of the tonnage found at Rubble Flats, the preliminary estimate suggested there was roughly 0.5 Mt.

Assaying Strategy- Much of the bauxite layer has been under assayed to conserve funds and the number of intervals assayed needs to be increase. The most common error is assaying the ferruginous top bauxite layer while missing the light coloured soft bauxite layer underneath which is more difficult

to identify. Additional samples will need to be assayed below the Ferruginous layer when more funds are available.

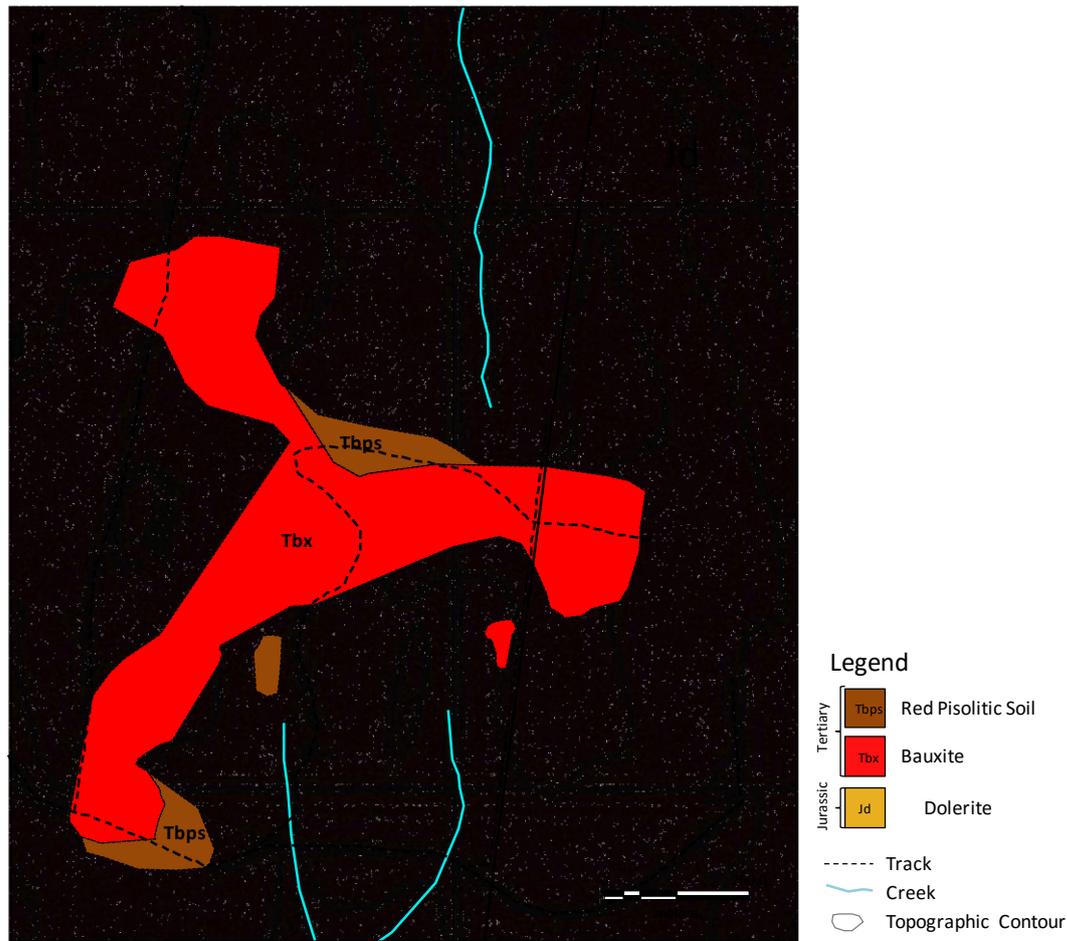
The upper bauxite layer is red vuggy pisolitic bauxite containing a large amount of iron in the form of hematite, magnetite and goethite. The black shiny pisolites are very magnetic and are comprised of magnetite, hematite, and a poorly formed alumina spinel.

The lower bauxite layer is more yellow than red and contains additional gibbsite and kaolin with less iron minerals. The bauxite has macro-crystalline textures where the original feldspar crystals of the host unit have been replaced by micro-crystalline gibbsite.

Photo 1. Example of Ferruginous Bauxite/Laterite - Upper layer



Photo 2. High Quality Bauxite (massive Earthy with sporadic concretionary nodules, is often granular with a strong relic crystalline structure) - lower layer



Map 4. Surface Geology of Rubble Flats Deposit (based off field mapping and Westbury 1:25,000 Geological Map Sheet).

Rubble Flats Basement Depth Study

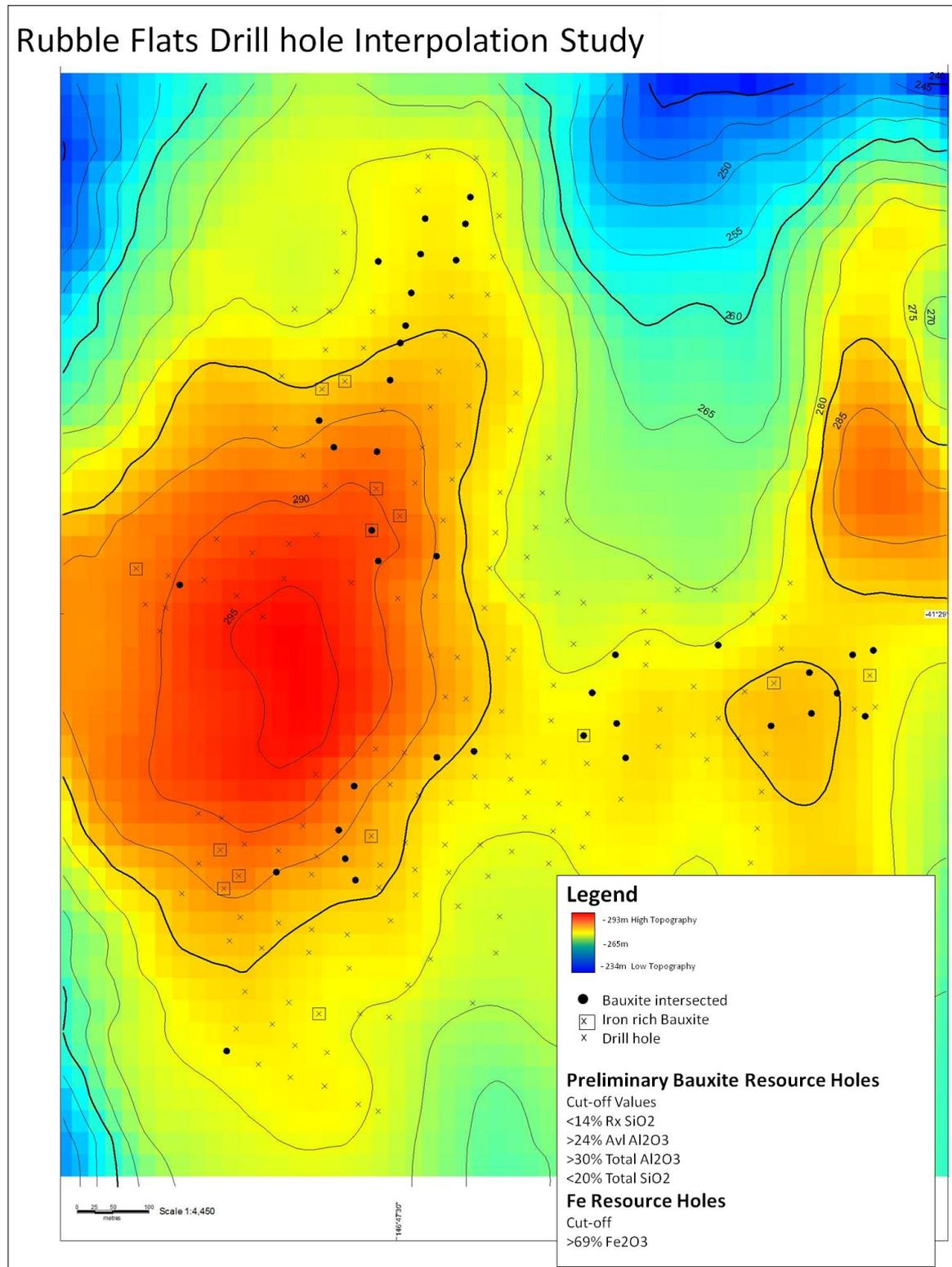
The aim of this study was to use available datasets to gain an understanding of the basement structure at Rubble Flats. The basement structure could provide hints as to how/why areas enriched in Aluminium (and other major elements Fe, Si & Ti) are distributed where they are.

Data from the Feb/March drilling campaigns (hole depth, assay data, etc.) and 1 arc second (~30m) resolution SRTM smoothed digital elevation model (DEM-S) was used.

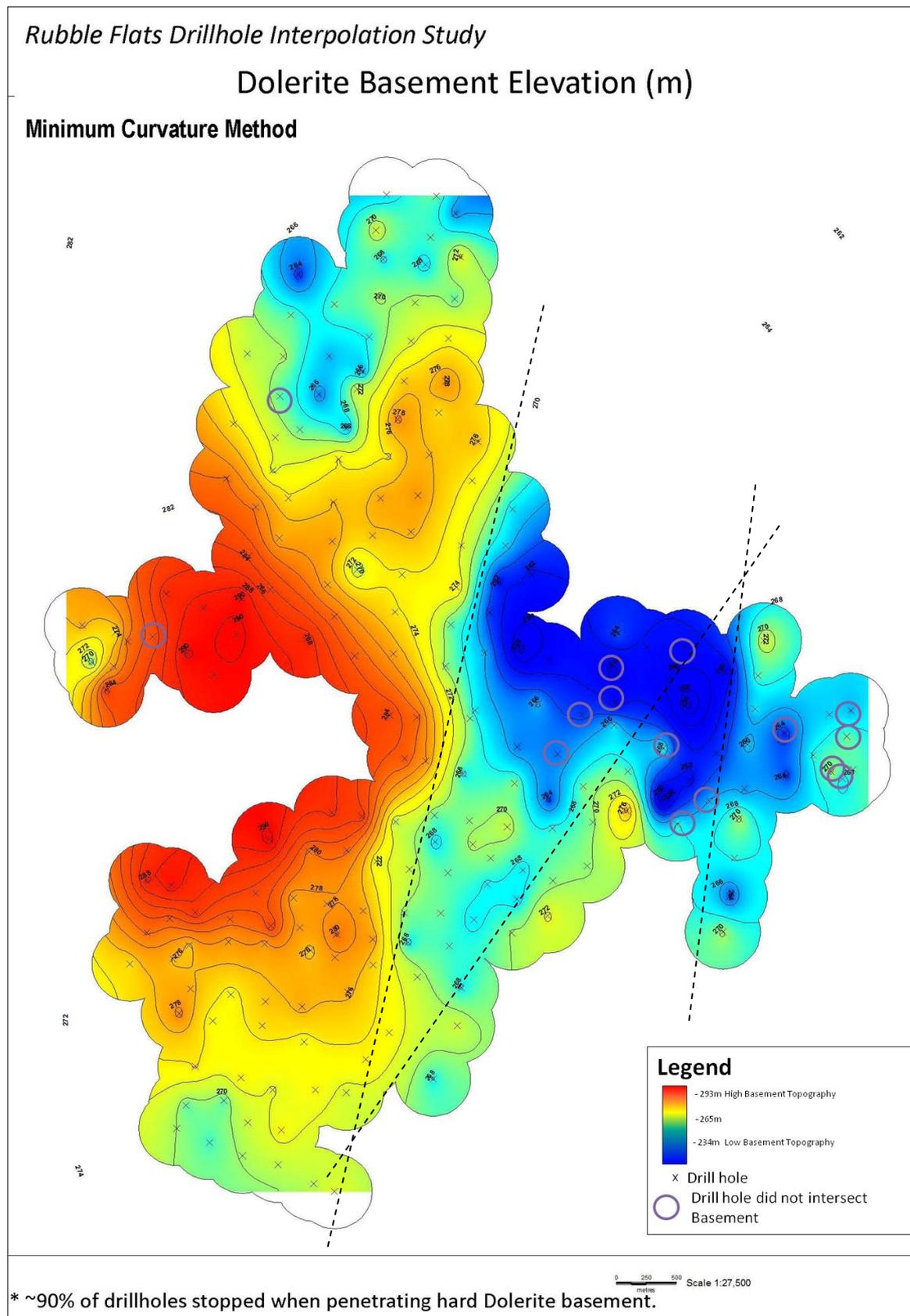
Hole depths were sourced from drill hole data and using the assumption that because most drill holes ended by hitting hard basement layer (Jurassic Dolerite) these hole depths are a proxy for the weathering profile (regolith) thickness. The stratigraphy for the Rubble Flats bauxite is as follows: From top down: Ironstone/Bx Zone – Clay Zone – Saprolitic Dolerite (- Hard Dolerite Basement). This also means we can infer the shape of the Dolerite basement. The MapInfo Discover Grid Interpolation tool was used to create 2D grids of this data.

Note: Elevation data sourced from the Garmin GPS used during drilling resulted in large topography artefacts that didn't exist; this data is considered unreliable and was not used.

Rubble Flats Drill hole Interpolation Study



Map 5. Topographic map of Rubble Flats with resource holes Identified



Map 6. Map of the hard unweathered Dolerite Basement, showing depth of weathering profile

Basement maps show linear zones of high relief which may be long faults occurring in the Dolerite basement. There is not a strong spatial link between these possible fault zones and the holes with good grade bauxite. However, many of these holes are located near local groundwater drainage pathways which may have promoted silica migration away from these sites.

The northern ore body shows a linear trend, this trend is the same as one of the potential fault zones identified. The bauxite follows a small ridge line north; the dolerite contact is close to surface.

Another observation was that there is no direct correlation between thickness of the weathering profile and the thickness of the bauxite. This is the opposite of what would be expected in a solely lateritic formation.

There is strong correlation between bauxite formation and the flow of ground water. The bauxite is thickest where water flow is greatest, and predominantly forms at the base or in the saddle of the dolerite ridges.

Logging of drill holes did not identify hydrothermal alteration in the Dolerite at depth, most holes which were drilled to a significant depth showed fine grained wet material which had no distinguishable features and could not be identified as either lateritic or hydrothermal.

More detail in surface mapping of possible fault zones will help with this analysis in the future. More robust spatial analysis of drill hole assay data may provide a better understanding of major element distribution at Rubble Flats and the processes involved.

5 CONCLUSIONS AND RECOMMENDATIONS

The additional tonnage discovered in the Early 2015 drilling program at the Rubble Flats deposit is quite small but will still be excellent additional tonnage for DL-130 deposit which currently has a JORC resource of 5.7Mt.

Rubble Flats deposit has not been drilled entirely and still requires additional drilling to the East of the deposit (EL37/2010 'Westbury'). This will be completed after the plantation forest has been harvested.

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6 ENVIRONMENT

Surface Disturbing Operations:

No surface disturbing activities were completed during the report period.

7 EXPENDITURE

Table 1. Exploration Activity and Expenditure Table for reporting period 16 June 2015 – 15 June 2016.

Exploration Category	Description of Activity	Quantity	Expenditure
Office Administration			
Authority Management	Tenement Management		\$ 159
	Land Holders Compensation		
Office Activities	Data Processing & Interpretation		
	Report Preparation		
Field Activities	Geological Mapping	Days or Ha	
	Sampling		\$ 6,724
	Equipment Hire	Vehicle Hire & Petrol	\$ 879
	Accommodation/Field Camp	Days	\$ 3,419
	Travel		
	Land Holder Liaison		
	Field Supplies		\$ 5,888
	Other	Sample Freight	\$ 1,894
	Geophysics		
	Airborne		
	Type	Line kms	
	Ground		
	Type	Line kms	
	Drilling (program cost)		
	RAB/AC	Holes/total metres	
	RC	214 Holes for 1576m	
	Diamond	Holes/total metres	
	Surface Samples	Holes/total metres	
Laboratory	ME-XRF 13B, Reactive Silica & Available Alumina	Surface and Drilling Samples	
Salaries / Wages	Contractors - Geologists		\$ 23,270
	Contractors - Field Assistance		\$ 3,136
	Contractors - Other Technical		\$ 20,538
		Grand Total	\$ 65,907

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

8 REFERENCES

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