Fourth Annual Report

on

EL 3/2012 – Ross

Reporting Period:	11 September 2015 – 10 September 2016
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1 ABSTRACT

Objective:

Exploration Licence EL3/2012 “Ross” 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 was to determine the location of potential bauxite deposits prior to assessing 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 lateritic weathering profile.
3. Chemical analyses of samples, including specialist analyses to determine total and available alumina, total and reactive quartz, loss on ignition and other analyses as required in bauxite search.
4. Planning of drilling programs on outcrops considered to be of sufficient quality to be quantified.

Results:

The aim of this field work was to assess the potential of bauxite targets in the Macquarie Road area of the Ross Tenement (EL3/2012). These bauxite targets were identified as a priority, as they were mapped as the same geological unit as the Bald Hill Bauxite. These targets are also in very close proximity to the Bald Hill Mine. Bauxite was identified in 3 locations in the Ross Tenement. The outcrops occurred in the low lying areas, derived from dolerite. The grade varies from ferruginous low grade material to pale high grade bauxite, the latter was more common. The three bauxite outcrops identified appear to form in a linear orientation from NW-SE at the base of tertiary laterite capped hills. They occur in the same topographic location and stratigraphy along a line 2.4km long. The outcrops are very small and exposed by small creaks in the low lands.

It is unknown how extensive these deposits are. Doleritic bauxites like Rubble Flats and parts of DL-130 are very small because they follow fault lines and drainage patterns. Deposits like St Leonard's are sheet-like ore bodies which are very extensive. It is not possible to know what type of bauxite this is at this stage.

Recommendations for future work:

Recommendations for future work include:

1. Identify the historical occurrence at Baskerville (may be located north of the Macquarie Road).
2. Complete reconnaissance on other properties between Baskerville and Bald Hill.
3. Detailed geological mapping, including geomorphological mapping and study of satellite images to define the areas with the best potential for bauxite.
4. Systematic sampling of natural outcrops and exposures in road cuts of lateritic weathering profile.

5. Chemical analyses of samples, including specialist analyses to determine total and available alumina, total and reactive quartz, loss on ignition and sieving (+0.26mm) at 260 microns as required in the bauxite search.

6. Drill testing of zones with best potential with an RC drill rig mounted on a light six wheel truck to get samples representing the whole lateritic weathering profile (from upper-most iron rich zone through alumina rich zone down into mottled and pallid saprolite zone).

2 INTRODUCTION

Exploration Rationale

ABx4 Pty Ltd the holder of Category 1 Exploration Licences EL3/2012 wholly owned subsidiary of Australian Bauxite Ltd. Australian Bauxite Limited (ABx) (ASX: ABX) 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.

Land within the tenement consists of freehold agricultural land with some forests and plantations.

EL 3/2012 "Ross" 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 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

In EL3/2012, the majority of bauxite targets are hosted in Tertiary Volcanics, however, some bauxite derived from Jurassic Dolerite is also present.

The historic work done by H.B. Owen ('Bauxite in Australia', 1954) showed that bauxite in Tasmania is formed as either 'grouped remnants of former continuous sheet' or '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.

Tenement Information

EL 3/2012 "Ross" was granted on and from 11 September 2012 for a period of 5 years to ABx4 Pty Ltd (ABx4). This is the Fourth Annual Report for the reporting period 11 September 2015 – 10 September 2016 incorporating the results of work completed during the fourth year of tenure.

The total area of the Mineral Category 1 Exploration Licence was originally174 km^2. However, in late 2013, ~71km^2 of this area was partially relinquished, retaining a total area of 103 km^2 (Map 1). In August 2015 an application to drop a further 10km^2 was submitted and is being processed (Map2). This reduction will bring the total area to 93km^2.

Tenure, including joint venture details and title transfers

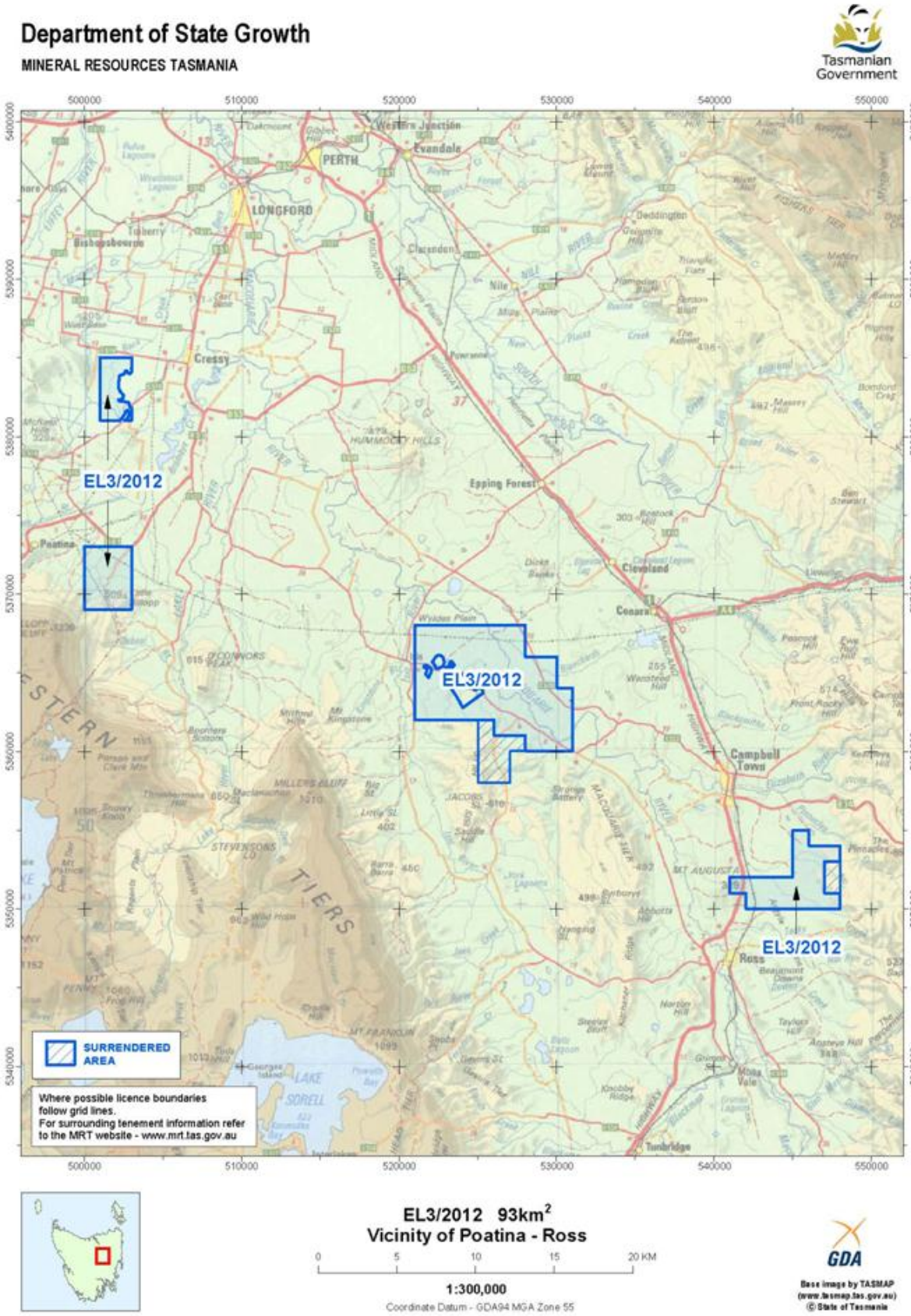
EL 3/2012 "Ross" is 100%-owned by ABx4 Pty Ltd, a 100%-owned subsidiary of Australian Bauxite Limited.

Location

The Ross tenement is comprised of 4 separate parcels of land; the largest being located 10 km to the west of Campbell Town (See
Map 1). The tenement is approximately 90km from the large operating port at Bell Bay and the Midlands highway passes through the centre of the tenement. The Ross tenement is ideally located for both rail and road

transport to the port. EL 3/2012 is close to the city of Launceston which could offer a wide range of services and a skilled work force.

The majority of the land usage in the tenement is agricultural land with land categories 4-6, with some small private reserves and natural forest. Gaining access to farming properties in the past has been very successful, with most landowners contacted by ABx4 allowed the geological assessment team to operate on their property.



Map 1. Location Map of EL 3/2012 “Ross”. Coordinate datum is GDA94 MGA Zone 55.

3 REVIEW OF PREVIOUS WORK

Prior to Current Reporting Period

In the first two years of tenure a combination of field reconnaissance, geological mapping and surface sampling (for chemical analyses) have taken place in order to investigate bauxite targets.

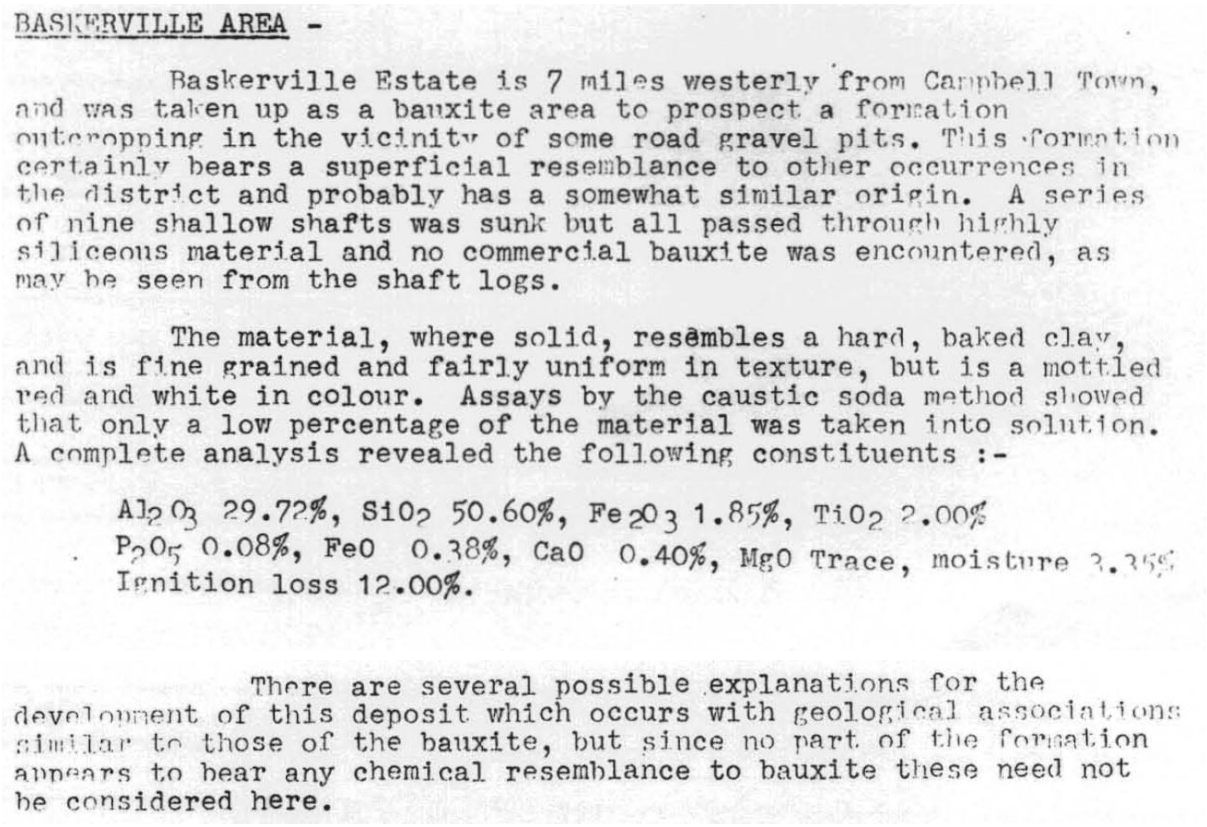
In the third year of tenure 3 reverse circulation (RC) holes were drilled for 36m at the Quorn Hall target following a desktop review of bauxite targets. This exploratory drilling was completed in conjunction with exploratory drilling on other ABx4 tenements, including the adjacent Conara tenement (EL7/2010). A total of 4 drill samples underwent laboratory XRF analysis at ALS Laboratories, Brisbane. All were sieved at +0.26mm before assay. Unfortunately no economic grades of bauxite were intercepted.

4 EXPLORATION COMPLETED DURING THE REPORTING PERIOD

Field Reconnaissance of Historical Baskerville Bauxite Occurrence

In report 'Bauxite in Tasmania' by H.B. Owen there was a brief mention of a bauxite occurrence on the Baskerville Property in Tasmania (see Figure 1). Owen investigated the area and did not discover bauxite at this location. ABx decided this area was worth a second look because of its proximity to the current Bald Hill mine in Campbell Town.

Figure 1. Extract from 'Bauxite in Tasmania' by H. B. Owen, Description of the Baskerville Bauxite Occurrence



BASKERVILLE AREA -

Baskerville Estate is 7 miles westerly from Campbell Town, and was taken up as a bauxite area to prospect a formation outcropping in the vicinity of some road gravel pits. This formation certainly bears a superficial resemblance to other occurrences in the district and probably has a somewhat similar origin. A series of nine shallow shafts was sunk but all passed through highly siliceous material and no commercial bauxite was encountered, as may be seen from the shaft logs.

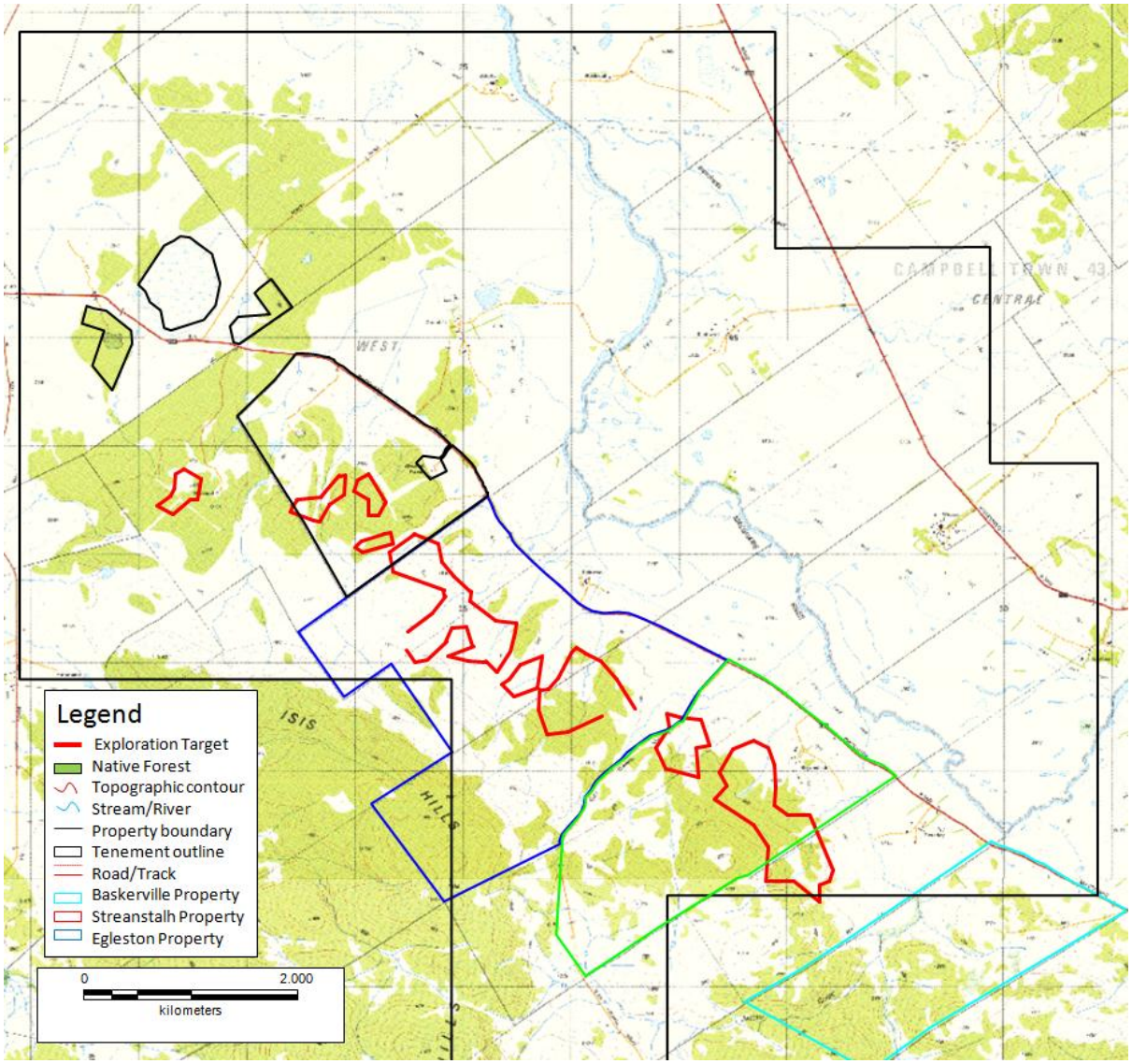
The material, where solid, resembles a hard, baked clay, and is fine grained and fairly uniform in texture, but is a mottled red and white in colour. Assays by the caustic soda method showed that only a low percentage of the material was taken into solution. A complete analysis revealed the following constituents :-

Al_2O_3 29.72%, SiO_2 50.60%, Fe_2O_3 1.85%, TiO_2 2.00%
P_2O_5 0.08%, FeO 0.38%, CaO 0.40%, MgO Trace, moisture 3.36%
Ignition loss 12.00%.

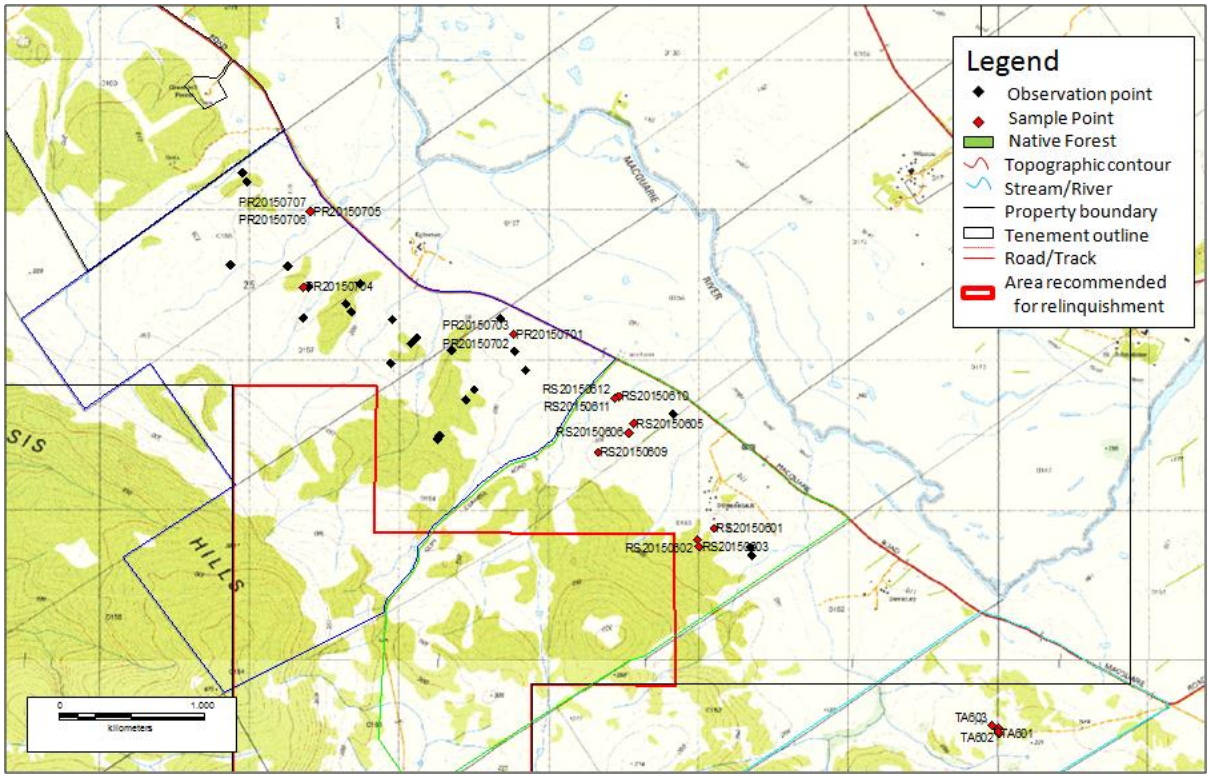
There are several possible explanations for the development of this deposit which occurs with geological associations similar to those of the bauxite, but since no part of the formation appears to bear any chemical resemblance to bauxite these need not be considered here.

ABx Identified exploration targets in the Macquarie Road area by analysing historical geological maps. Areas which fit some, or all of the geological conditions require to form bauxite were noted. The targets identified are mapped as ferricrete (Tf) in geological maps and Bald Hill is mapped as the same unit on the same geological map.

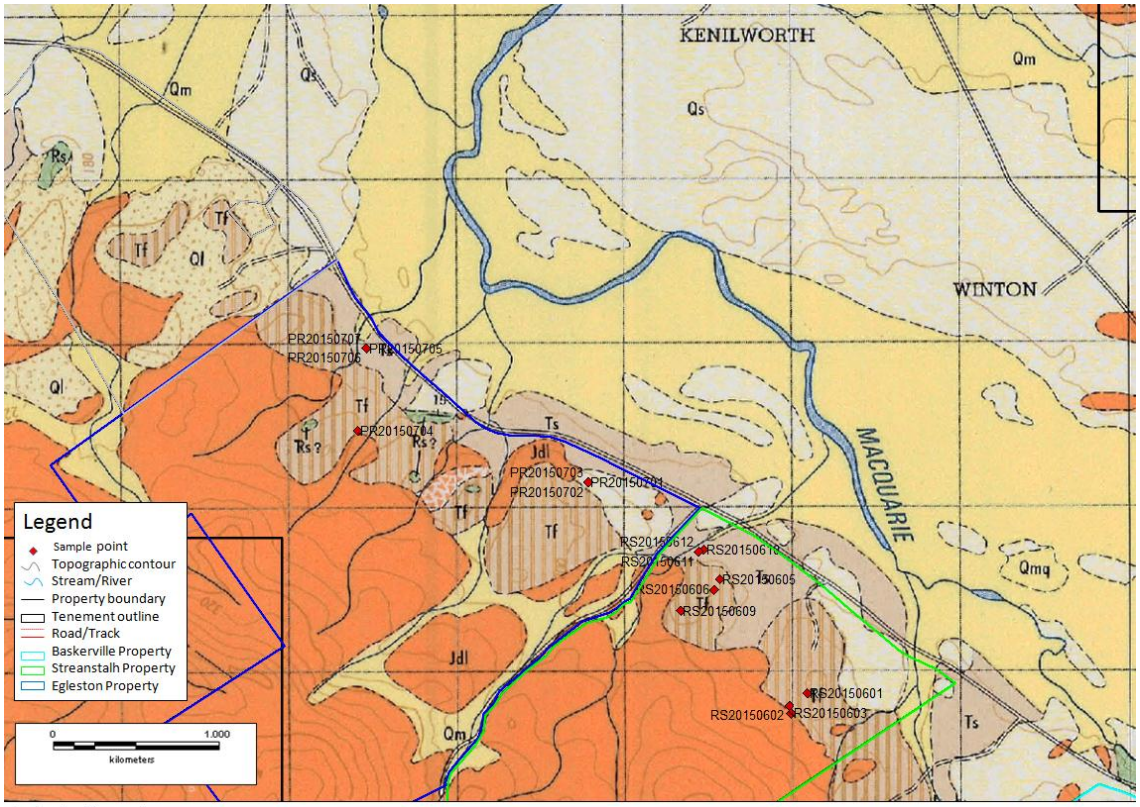
Map 2. Map of Bauxite Targets Identified for reconnaissance



Map 3. Map of Sample points and Property boundaries from field reconnaissance



Map 4. Sample Points overlying Geological Map from field reconnaissance. Background geology: W.L. Matthews 1974. Geological Atlas 1:50, 000 series 8314S Lake River. Department of Mines, Hobart.



Geological Legend

Qmq,Qm- Holocene deposits
Ql – Lag Deposits
Tf – Ferricrete, including laterite with minor alumina rich areas.
Ts – Clay sandy clay, unconsolidated and poorly consolidated sand
Jd – Jurassic Dolerite
Rs - Dominantly quartz sandstone sequences, minor shale horizons

Baskerville Property

The Baskerville property is owned by the same land owner who owns Rosedale which is part of the Bald Hill mining lease. ABx was invited to investigate the Baskerville property where there is a historical occurrence of bauxite.

The southern part of the property was investigated which occurs south of the Macquarie Road. The property consisted of sandy sediments on the slopes with mottled zone exposed on a mid-tier hill to the south. The hill drops away slightly before encountering the edge of the midlands basin. The edge of the midlands basin is delineated by a large dolerite plateau. Samples were taken from the mid-level hill (TA601-604) from hard cemented outcrops of mottled material. The samples were mostly soft claystone and had a TiO2/V2O5 ratio similar to dolerite, which it may have been derived from.

Streanstalh Property

The property covered a significant area of the targets identified using geological maps. The targets are centered around the mid-level hills found on the edge of the midlands basin. These hills consisted primarily of ferruginous laterites (RS20150601-RS20150604); the strong relic macro crystalline textures suggested dolerite was the host unit. Laterite caps the mid-tier hills and is in direct contact with dolerite to the south and also sometimes to the north. The laterites consistently had no gibbsite in the samples and were not bauxite. To the north-east of the laterite hills there were frequent outcrops of sediments, mottled zone and some bauxite.

The bauxite outcrop occurred lower in elevation than the mottled zone exposure. The first outcrop was exposed below the mid-tier laterite hills (and the corresponding saprolite). The outcrop was highly irregular with iron zonation, relic macro crystal structures and the exposure appeared to be low in the bauxite profile (1-2m thick?), sample RS20150610-RS20150613 were taken from this outcrop. There were zones of pisolitic/nodular bauxite with zones of very high grade vuggy macro-crystalline bauxite. The bauxite was quartz rich in some areas. Very quickly to the south there is an outcrop of what appears to be granodiorite or unusually quartz rich dolerite.

The mottled zone was also sampled (RS20150605-RS20150609) and failed to meet bauxite grades.

Egleston Property

The bauxite was also identified occurrence was across the Glen Connell road at the same elevation. The bauxite was piled up in the middle of a paddock and no outcrop was identified. RS20150701-RS20150703 were taken from the locality, these were low quality ferruginous bauxite.

An additional bauxite outcrop was in the low ground and was only exposed because a small creek had cut into the deposit. The visible outcrop was very small but strongly suggested that the area could easily host more bauxite. The bauxite appears to be quite thin but this is very difficult to determine from the very small exposure. The bauxite was pale and cemented with tiny vughs. This is a strong indicator of high grade bauxite.

The targets outlined in the target map were Conara type laterites (Sandy and ferruginous pisolitic laterites). The laterites were quite extensive along the hill line, the bauxite formed at a lower elevation than this.

Table 1- Assay Results completed at ALS Brisbane for TA601-TA604, RS20150601 to RS20150613 and RS20150701-RS20150707

Sample ID	Al2O3avl	Rx SiO2	Al2O3	SiO2	Fe2O3	TiO2	LOI
	%	%	%	%	%	%	%
TA601	0.6	33.9	22.15	37.8	27.3	2.36	9.64
TA602	0.5	33.7	24.21	37.9	24.6	1.4	11.05
TA603	0.7	30.4	20.82	54.5	13.1	1.16	9.79
TA604	0.5	33.8	23.18	37.3	26.4	1.37	10.77
RS20150601	0.4	8	5.67	34.8	56.8	1.25	0.71
RS20150602	0.8	14.7	14.62	21.5	49.7	0.5	12.9
RS20150603	<0.1	23.1	15.76	31.9	40.3	0.59	10.45
RS20150604	0.8	7.1	6.21	12.3	68.2	0.33	12.1
RS20150605	1.7	38.6	35.56	41.5	5.62	2.18	14.57
RS20150606	1.4	36.8	34.02	39.4	8.89	1.66	15.37
RS20150607	1.4	38.4	34.62	41.2	5.91	2.73	14.72
RS20150608	1.6	36.6	33.06	45	4.5	3.25	13.59
RS20150609	0.8	17.1	16.23	34.2	36.7	2.01	10.04
RS20150610	45.7	5.8	52.27	14.85	2.51	1.25	28.61
RS20150611	36.5	5.1	44.02	7.59	19.5	1.44	26.03
RS20150612	38.2	2.7	42.91	4.01	23.1	1.2	27.08
RS20150613	29.6	2.6	35.05	3.83	31.7	2.66	23.71
RS20150701	20.2	10.3	33.21	12.1	31	1.8	21.02
RS20150702	8	11.9	20.11	13.3	53.9	1.37	10.08
RS20150703	27	8.4	37.09	9.3	27.7	1.4	23.63
RS20150704	0.2	15.2	11.32	42.8	33.8	2.85	8.76
RS20150705	37.8	8	46.75	8.93	14.9	1.9	26.85
RS20150706	17.5	2.3	21.59	3.61	55.6	1.9	16.36
RS20150707	36.7	7.8	45.91	8.79	15.8	1.6	27

Table 2- Sample locations (projection GDA94) and Descriptions

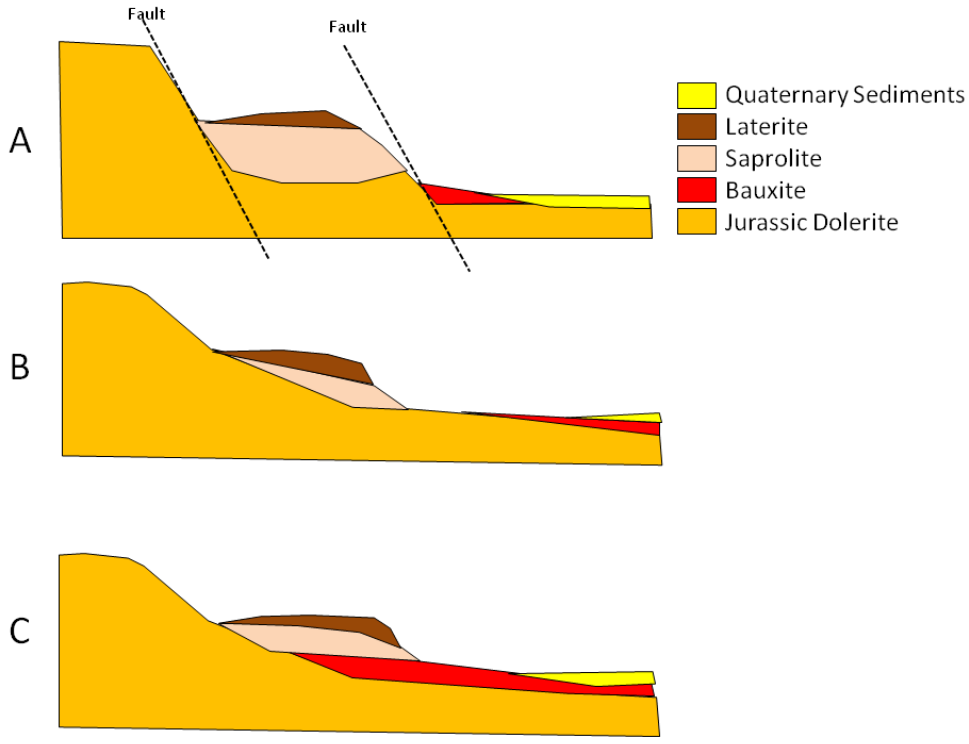
Sample ID	North	East	Description
TA601	5359676	530123	Red earthy monochromatic material with large blebs of white clay
TA602	5359710	530117	Grey clay with red bands of slightly cemented Iron rich clay
TA603	5359731	530072	Grey clay with red bands of slightly cemented Iron rich clay
TA604	5359688	530116	Red earthy monochromatic material with large blebs of white clay
RS20150601	5361045	528215	Conara laterite, red and beige sandy ferruginous laterite
RS20150602	5360968	528104	Laterized dolerite? Yellow vuggy brown ferruginous laterite
RS20150603	5360925	528115	Red ferruginous crust with vuggy yellow and white material derived from Dolerite
RS20150604	5360925	528115	Yellow vuggy macrocrystaline doleritic laterite with ferruginous crust
RS20150605	5361743	527681	Vuggy, mottled red and white, with small patches of macrocrystalline kaolin
RS20150606	5361682	527645	Vuggy pink/white macro crystalline doleritic laterite (very light)
RS20150607	5361682	527645	Vuggy pink/white granular doleritic laterite with some macrocrystalline textures and pisolites/nodules starting to form
RS20150608	5361682	527645	Blue/grey and beige cemented and vuggy material
RS20150609	5361554	527441	Typical matt red laterite.
RS20150610	5361928	527582	Very cemented very vuggy, appears to have relic doleritic crystal structures, doleritic bauxite.
RS20150611	5361916	527553	Yellow vuggy laterite with minor quartz, looks derived from dolerite
RS20150612	5361916	527553	Red pisolitic concretionary with relic crystal structures some quartz
RS20150613	5361916	527553	Ferruginous nodule vuggy, relic crystal structure, quartz nodule from cemented conglomerate of nodules
PR20150701	5362338	526877	Yellow vuggy cemented, macrocrystalline bauxite
PR20150702	5362338	526877	Red massive, layered with white spots laterite- some shiny crystals
PR20150703	5362338	526877	Speckled and vuggy white, brown and beige strongly macro crystalline doleritic bauxite
PR20150704	5362656	525469	Matt slightly vuggy red clay rich laterite
PR20150705	5363162	525518	Vuggy pink/yellow clay rich laterite derived from dolerite
PR20150706	5363162	525518	Black/red and yellow vuggy zoned ferruginous doleritic laterite
PR20150707	5363162	525518	Vuggy pale beige and brown doleritic laterite

5 DISCUSSION OF RESULTS

High grade bauxite was identified in outcrops in numerous locations on the explored properties. The bauxite samples were typically high grade but bauxite exposures were very small. According to textures and the trace element ratios the bauxite is derived from Jurassic Dolerite. There appears to be some significant variation in the quartz content of the dolerite throughout the area which gives variation in the quartz content of the bauxite.

The 3 bauxite outcrops identified in field work occur in a linear trend which follows a specific stratigraphic layer and elevation. The bauxite forms between the Jurassic Dolerite, and Tertiary units. Triassic Sediments are uncertainly mapped in the area as well; it is possible that these are not Triassic Sediments but Tertiary sediment which has become the host unit for some of the sandy and ferruginous laterites. The bauxite occurs well below the elevation of the laterites mapped as 'Tf', meaning it could form beneath the lateritic layer. It is also possible the layer is mutually exclusive and both could technically be derived from Dolerite (see figure 2). It is highly likely that the Quaternary sediments in the area have buried the bauxite to some degree. The extent of this burial is critical for the tonnage potential of the area and for determining future exploration targets. The extent of bauxite below the laterites is also important but less likely to result in minable tons due to the potential for a large amount of overburden unless the bauxite has a steep dip.

Figure 2. Potential Stratigraphy of Baskerville Bauxite, any combination of the below diagrams are possible. A) Fault zones provide ideal location for bauxite formation. This zone would have the NW-SE fault with a smaller SW-NE fault intersecting at the point of bauxite mineralisation. B) Example of bauxite and laterite both being derived from Dolerite. C) Laterites derived from Tertiary sediments post-bauxitisation. Bauxite underlay's all younger sediments.



Doleritic bauxites are known to preferentially occur in fault zones and in areas with favourable drainage. It is unknown if this bauxite is outcropping in creeks and valleys because it's the only exposures available or the bauxite only occurs at these points in small amounts because creeks and valleys are often related to faulting and always related to drainage. The very specific stratigraphy with a NW-SE trend is encouraging.

The bauxite in the Ross Tenement is pale and granular with no visible nodular zone or Iron enrichment at surface. This indicates the bauxite is probably from the lower half of the bauxite layer and may be only 1-2 meters thick. There is also significant variation in grade across the 3 outcrops.

Figure 3 outlines a bauxite occurrence which is noted in H.B. Owen's Book 'Bauxite in Australia' which occurs in the center of the midlands basin. This is encouraging because it suggests the doleritic bauxite may have a subtle dip in the area and that it maybe continuous. .

Figure 3. Extact from 'Bauxite in Australia' description of the Lake River and Epping Bauxite Deposits.

Lake River and Epping.

Lake River.—A small deposit of doleritic bauxite occurs about 200 yards south of the road from Cressy to Campbell Town 11½ miles south-east from Cressy. The outcrop trends north-westerly and is about 400 feet in length by a maximum width of about 40 feet. To the south-west the bauxite is flanked by fresh dolerite, and on the opposite side by grey sandy clay.

Extension beyond the visible outcrop is considered unlikely.

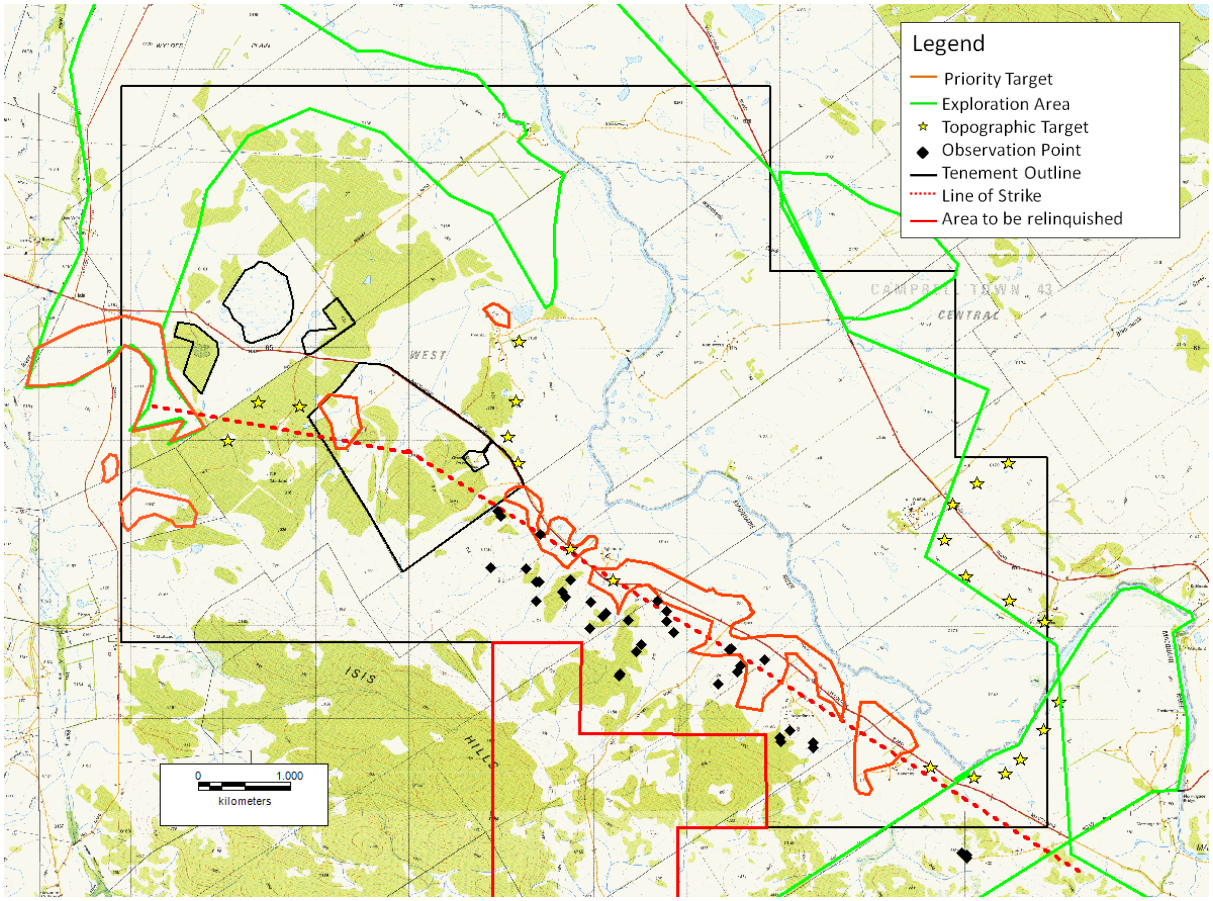
6 CONCLUSIONS AND RECOMMENDATIONS

Bauxite in EL3/2012 has been discovered in low lying areas, derived from dolerite. The grade varies from ferruginous low grade material to pale high grade bauxite, the latter was more common. The three bauxite outcrops identified appear to form in a linear orientation from NW-SE at the base of tertiary laterite capped hills. They occur in the same topographic location and stratigraphy along a line 2.4km long. The outcrops are very small and exposed by small creaks in the low lands.

It is unknown how extensive these deposits are. Doleritic bauxites like Rubble Flats and parts of DL-130 are very small because they follow fault lines and drainage patterns. Deposits like St Leonard's are sheet-like ore bodies which are very extensive. To determine the bauxite mineralisation style al 3-5 day drilling program is recommended with importance placed on finding bauxite under thin quaternary cover.

Future work in this area needs to focus on finding more bauxite outcrops. The historical occurrence at Baskerville has not yet been identified and may be located north of the Macquarie Road.

Map 5. Map of area with bauxite potential in EL3/2012



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6. Drill testing of zones with best potential with an RC drill rig mounted on a light six wheel truck to get samples representing the whole lateritic weathering profile (from upper-most iron rich zone through alumina rich zone down into mottled and pallid saprolite zone).

7 ENVIRONMENT

Surface Disturbing Operations:

No surface disturbing operations took place during the current reporting period.

Surveys (archaeological, botanical):

No archaeological or botanical surveys were conducted in the current year of tenure.

Rehabilitation:

No rehabilitation was required during the current reporting period.

8 EXPENDITURE

Table 3. Exploration expenditure for EL3/2012 over the annual reporting period 11 Sep 2015 – 10 Sep 2016.

EL 3/2012 Ross - Expenditure over 4th Year of Tenure		
1. Geoscientific costs		
	Geology	$9,907
	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		$9,907

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

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