

Second Annual Report
on
EL 16/2012 – Reedy Marsh

Reporting Period: 16 June 2014 – 15 June 2015
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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:

Two RC drilling campaigns took place in February and March of 2015. The February drilling campaign was undertaken almost solely within the Reedy Marsh EL 16/2012 tenement and resulted in the drill testing of the Rubble Flats, Blackwood Hill and Blackwood South bauxite targets. The drilling of the latter two deposits was not successful; however, the Rubble Flats drilling was more promising and a resource estimate is currently in progress (Note: this target is also covered by Westbury EL37/2010). Rubble Flats was revisited during the March 2015 drilling campaign in addition to drilling at Egmont Property and Mahoney’s Hill targets in the north-eastern part of the tenement. Significant capital was also spent undertaking field work, surface sampling, data analysis (ongoing) and landholder liaison.

Recommendations for future work:

Recommendation for future work include further:

- Detailed geological mapping, including geomorphological mapping, to define the areas with best potential for bauxite.
- Systematic sampling of natural outcrops and exposures in road cuts of bauxite profile.
- 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.
- 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.
- Systematic drill testing at close spacing's to obtain data for resource estimation in the best target areas defined by programme under 4.
- Mine-ability study of Tasmanian bauxite using a small excavator to dig bauxite and screen test on a larger scale.

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.

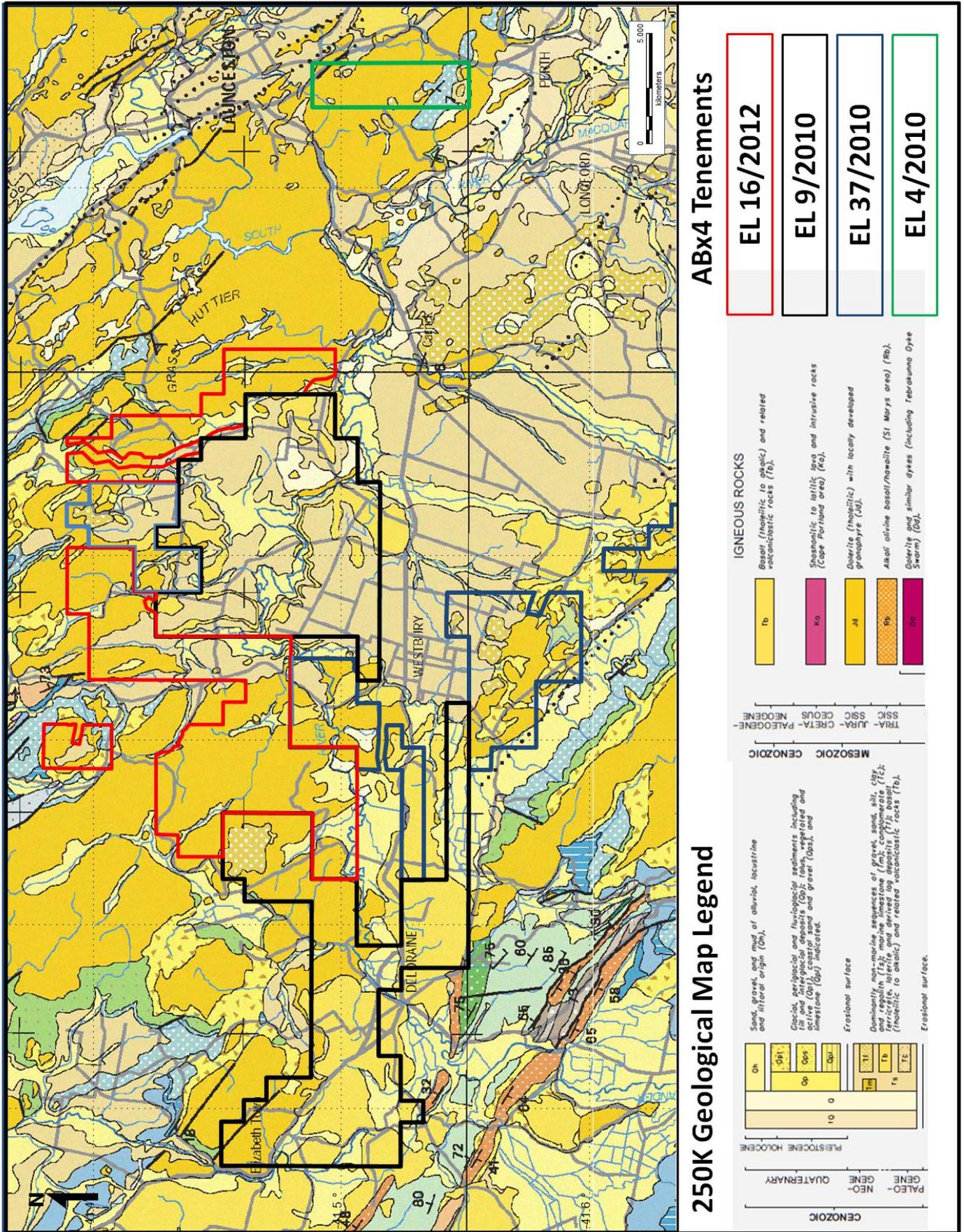
EL 16/2012 “Reedy Marsh” was applied for in order to facilitate an exploration program to discover economically viable deposits of bauxite associated with Tertiary Volcanics and Jurassic Dolerite in an area with old peneplained surfaces preserved as plateaus. The goal of the program was to determine 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 the Reedy Marsh area, most bauxite targets are in areas that have been mapped on MRT Geological Maps as Jurassic Dolerite (See Map 1). However, some Tertiary units are present.

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’.

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.



Map 1. Regional geology and ABx4 tenements including EL16/2012 "Reedy Marsh" (red outline). Geological basemap and legend data is from the 1:250,000 Geological Map of Northeast Tasmania (MRT). Map datum GDA94 – MGA Zone 55.

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 Second Annual Report for the reporting period 16 June 2014 – 15 June 2015 incorporating the results of work completed during the first year of tenure.

The total area of the original licence is 109 sq km and its Mineral Category is 1 – Metallic Minerals and Atomic Substances. The tenement area is made up of three main land parcels. ABx4 plans to retain the full tenement area into the third year of tenure.

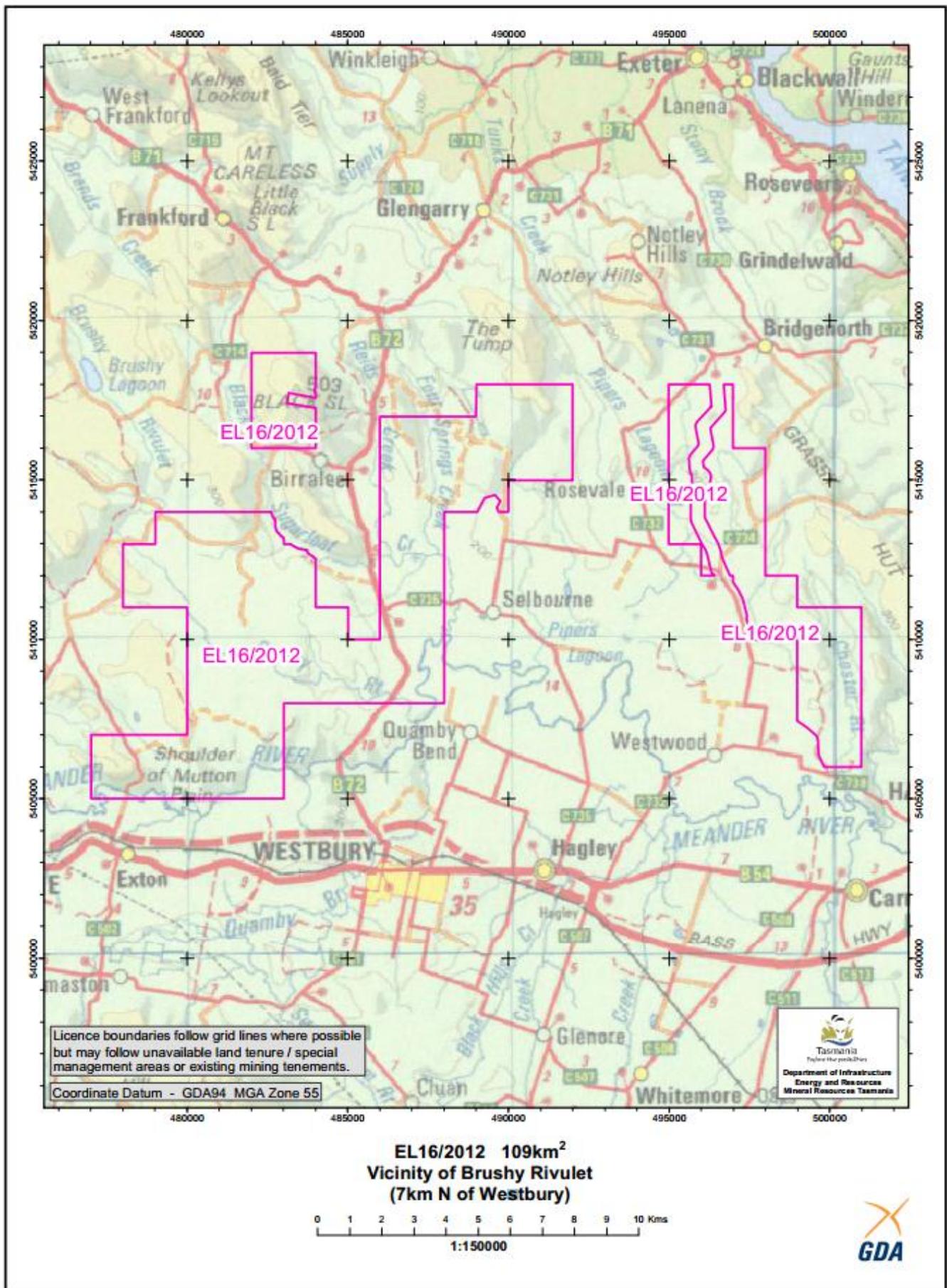
Tenure, including joint venture details and title transfers

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 Birrale along Birrale 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, Forrest Reserves, and Conservation areas.



Map 2. Location map of EL 16/2012 "Reedy Marsh" (pink outline).

3 REVIEW OF PREVIOUS WORK

Prior to Current Tenement

Exploration for Bauxite was conducted by C.R.A Exploration Pty Limited (**CRA**) in the late 1960s and early 1970s. CRA decided to relinquish its tenement in central northern Tasmania as no worthwhile results were obtained. Two reports were composed by CRA:

1. Miss S.E. Close, Feb 1970, Scintillometer Search for Bauxite, Northwest Tasmania, *CRA Exploration Pty Limited*
2. Miss S.E. Close, June 1971, Final Report on Bauxite Search, Devonport E.L. 36/70 Tasmania, *CRA Exploration Pty Limited*

The following is an extract from the second report, summarizing CRA's findings:

Final Report on Bauxite Search, Devonport E.L. 36/70 Tasmania

Final testing of this area in central northern Tasmania was carried out using a Gemco Model 210A auger drill. A total footage of 1148 feet was drilled in 57 holes and 206 samples were sent to Zinc Corporation for Al_2O_3 , SiO_2 and Fe_2O_3 analysis.

Drilling was concentrated on the two most promising areas, near Sassafras and near Deloraine, although all areas of soil over basalt within the E.L. were tested.

CONCLUSION

It is recommended that the E.L. be relinquished before the renewal date of 24th June, 1971. A memo has already been written to this effect.

No worthwhile results were obtained. Most of the 206 samples contained less than 30% total alumina, while 8 contained between 30 and 40% total alumina, but were also high in Fe_2O_3 and SiO_2 . The higher values occurred in holes B20 and B25.

GENERAL DISCUSSION

As stated before, the drilling was carried out on all the areas of soil over basalt within the E.L. These have been described in preceding reports.

4 EXPLORATION COMPLETED DURING THE REPORTING PERIOD

Field Reconnaissance and Surface Sampling

Field work and mapping was conducted by T. Coyte & others throughout June – August 2014. The purpose of this field work was to assess the bauxite potential of targets within Reedy Marsh EL16/2012 and surrounding tenements.

Rubble Flats

The bauxite appears to form in a typical channel type deposit occurs between 3 large dolerite ridges. The bauxite is a approximately 250m wide and 1.2 km long with an additional 400m of bauxite in a 'T' shape. The bauxite channels had a distinct shape and generally dipped to the north. The southern contact graded from dolerite into a kaolin rich zone and then quickly to granular bauxite with micro vughs and relic crystalline structures. Bauxite sampled nearby in the Westbury tenement (RMP007-008) was generally very low in iron. The bauxite grades into classic "DL-130"-type bauxite - red hematitic bauxite with yellow/buff infilling of tubular vughs often with a breccia texture. The upper layer contact of pisolitic bauxite always occurred at the edge of a shallow dip. The bauxite is heavily cemented with black glassy pisolites in classic red hematitic bauxite. At the edge of the small rise the bauxite dips at about 5 degrees in a cemented slab and eventually disappears into pisolites in red soil or dolerite.

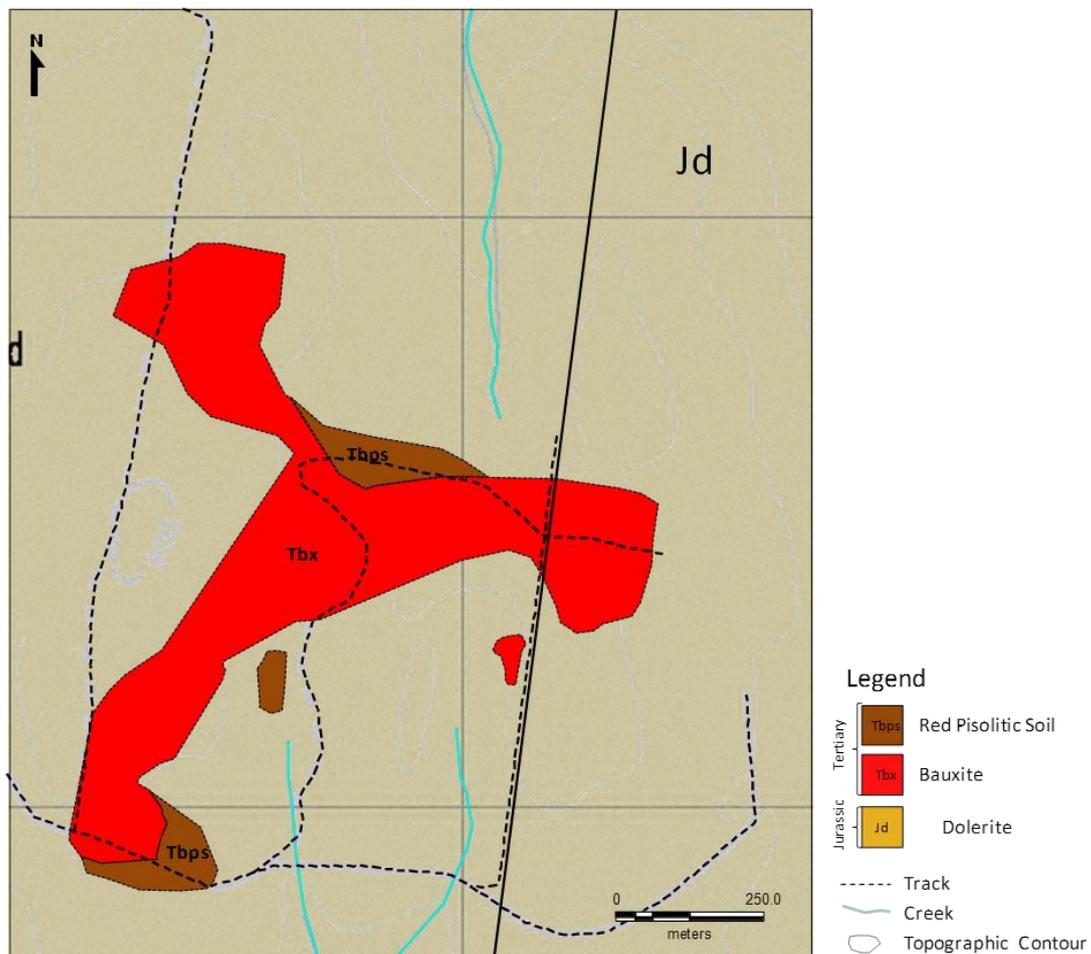


Figure 1. Results of field mapping drawn on top of Westbury 1:25,000 Geological Map Sheet.

Egmont Property

The Egmont property consists mostly of high value agricultural land with large centre pivots for irrigation. There is some natural forest on the property to the west which also contains a small Gunn's plantation. The high value land is located on tertiary volcanics in high contrast to the areas of bush land with steep sided hills consisting mostly dolerite.

Traverses were completed to the east and west of the property focusing on the Jurassic Tertiary contact between the dolerite and volcanics. Semi bauxitized rill and pisolites were identified close to both the east and west contacts; suggesting that bauxite has occurred on both sides of the valley. Samples of this material RMP001-003 were taken. RMP003 tested positive for bauxite

Table 1. Assay results for surface samples RMP001-003.

Sample ID	WP	Available Al ₂ O ₃	Reactive SiO ₂	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	LOI	Description
RMP001	66	3.4	27.5	28.6	40.6	16.75	10.83	Bauxitized Dolerite gravel, Selective sample- only light weight pieces selected
RMP002	70	1.2	17.5	16.85	21.4	50.1	10.64	Partially Bauxitized dolerite- possibly some grade
RMP003	71	21.4	4.6	30.1	6.09	43.9	18.39	Small lumps of bauxite in dam wall; vuggy red hematite rich bauxite. Occurs with Tertiary sediments and volcanics

State Forest Target

Surface samples RMP011-RMP013

The bauxite occurs in a thin layer in contact with dolerite. The bauxite mineralisation is focused on either side of a small dolerite rise in the plateau but is much larger and thicker to the north. It grades from pisolitic bauxite at the top of the profile to fine grained granular bauxite and the entire layer contains up to 10% quartz grit throughout. The pisolitic bauxite indicates the potentially thickest point in the bauxite profile where there has been minimal erosion. The bauxite is primarily composed of gibbsite, kaolin, goethite, hematite, quartz and anatase.

The deposit is borderline economic due to its small size and excess free quartz. There is also very little chance of direct extensions since the deposit is confined to the top of the plateau.

Blackwood Hill

Surface samples RMP014-RMP016

The bauxite occurs on a steep sided ridge, draping the northern side where samples RMP014-016 were taken. The bauxite grades from pisolitic bauxite with shiny black magnetic pisolites to a yellow vuggy granular bauxite. It is comprised mostly of gibbsite, goethite, hematite and kaolin. Much of the surrounding area is hard fresh dolerite with a thin chemically weathered layer as red soil covering most of the area. This thin layer is extensive and a good indicator for bauxite in the immediate vicinity.

Dolerite forms the basement unit for the region. Another ridge occurs to the north at about the same elevation but consisted solely of dolerite and did not contain any bauxite or bauxite indicators.

Brown's Property

This property consisted of two large dolerite ridges making a large valley with a small creek through the center. The soil becomes redder in the valley and contains chemically weathered dolerite (semi bauxitized) with pisolites in soil. This is a strong bauxite indicator. On the western border of the property in Gunns plantation; the dolerite has a thin layer of semi-bauxitized dolerite. No thicker areas of semi-bauxitized material or bauxite have been identified on the property. Thick cover in the valley between the two ridges concealed the geology but the whole property is mostly dolerite. There is a possibility the Mahoney's Hill bauxite extends into the southern boundary of this property, but this has not been explored.

Mahoney's Hill

RMP017-RMP023

The Mahoney's Hill property encompasses a valley between two large dolerite ridges which create a large catchment area. A small creek flows through the valley from Mr Browns and into the Brushy Rivulet. The rivulet is a permanent water source and feeds into the Meander River nearby. The water, streams and recent flooding in the area has made the area very marshy. Normal Tertiary laterites are observed in the Eastern side of the valley.

Bauxite has formed between the Tertiary Laterites and the Jurassic Dolerite in the key contact zone. A very small amount of bauxite was observed on the property to the south in this zone but had no outcrop. The bauxite has formed at the base of the dolerite ridge where the topography levels out and is in direct contact with dolerite and no transitional zone was identified. The bauxite layer is dipping east into the valley and is promptly concealed by volcanic derived soil. The eastern extent of the layer is unknown but it is very likely the bauxite occurs below Tertiary and Quaternary cover.

The bauxite appears to be derived from dolerite and has very similar texture to the Rosevale deposit (9km NE). The bauxite is Gibbsite often with a granular macro-crystalline texture which usually indicates high grade ore. The bauxite also contains zones of earthy texture-less bauxite with round inclusions of granular bauxite in limonitic crusts. These inclusions have white re-crystallized gibbsite in the vughs. The white gibbsite also occurs in zones throughout the granular bauxite which is also a strong indicator for high grade ore. Closer to the centre of the valley the bauxite is distinctly yellow. This could be because the bauxite layer is more saturated in the centre of the valley and the hematite has been altered to goethite and limonite. Random zones of heavy iron rich bauxite also occur in a few locations across the outcrops.

Table 2. Assay results for surface samples RMP011-RMP023.

Sample ID	Al ₂ O ₃ avl	Rx SiO ₂	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	TiO ₂	LOI
	%	%	%	%	%	%	%
RMP011	32.3	2.8	39.5	10.7	25.1	1.52	22.52
RMP012	13.8	3.9	21.2	17.85	44.4	2.12	13.84
RMP013	19.7	4.2	28.5	14.2	36.9	1.8	17.75
RMP014	32.4	2.4	41	3.35	28.8	1.16	25.2
RMP015	15.3	6.4	24.7	7.56	52.2	1.5	13.57
RMP016	17.8	3.8	25.9	5.08	48.8	2.23	17.5
RMP017	40.9	2.7	46.4	3.02	21.6	2.25	26.26
RMP018	38.3	3.7	45.2	4.11	23	2.84	24.37
RMP019	34.5	3.6	41.7	4.1	28.1	1.84	23.78
RMP020	37.1	1.3	40.9	2.02	35.6	1.37	19.71
RMP021	36.7	2.8	44.4	3.98	26.9	1.48	22.44
RMP022	37.8	1.3	41.9	1.77	28.4	2.17	25.31
RMP023	22.2	5.8	32.1	7.08	37.4	1.67	21.12

WP	Sample ID	Comment	North	East	Elevation	Date
4	RMP011	RMP011 - Yellow Vuggy Fine Grained Bauxite with Relic Volcanic Textures	5411918	480970	257	5/08/2014
7	RMP012	RMP012 - Vuggy Red hematitic bauxite with semi-angular quartz grains and large tubular vughs, some filled with clay.	5411861	481049	259	5/08/2014
9	RMP013	RMP013 - Red Vuggy hematitic bauxite with large tubular vughs filled with gibbsite and clay, fine quartz grains and super fine piso's throughout.	5411801	481080	260	5/08/2014
99	RMP014	RMP014 - Yellow Sugary vuggy gibbsitic bauxite with strong volcanic textures.	5408274	480925	301	7/08/2014
100	RMP015-016	RMP015- Pisolitic bauxite with cores of weathered/fully bauxitized dolerite? Vuggy. RMP016 - Red Hematitic Matte bauxite with zones of vuggy yellow bauxite.	5408254	480930	303	7/08/2014
103	RMP017-18	RMP017- Vuggy Brecciated Bauxite zones of high grade bauxite with strong macro-crystalline texture and zones of earthy matte very fine grained bauxite. RMP018 - Red Sugary and grainy, vuggy bauxite with marco-crystilline textures. Rosevale type bauxite.	5409070	483822	205	21/08/2014
104	RMP019-20	RPM019- Yellow/Red fine grained brecciated bauxite, with vuggy lumps in a matrix of fine granular bauxite with strong macro-crystalline textures. RMP020 - Red vuggy hematitic bauxite with re-crystallised white gibbsite in vughs.	5409047	483869	205	21/08/2014
122	RMP021-22	RMP021 - Light weight granular red and black bauxite with strong relic textures. RMP022 - Yellow and Red granular bauxite with macro-crystalline textures.	5409257	483838	213	21/08/2014
128	RMP023	RMP023 - Yellow/ Brown brecciated Rosevale type bauxite nodules of solid bauxite with matrix. Yellow colour from oxidation of hematite into goethite and limonite.	5409461	483865		21/08/2014

Drilling Activities

Drilling undertaken within the Reedy Marsh tenement are detailed under subheadings by prospect:

- (1) Rubble Flats
- (2) Blackwood Hill
- (3) Blackwood South
- (4) Mahoney's Hill
- (5) Egmont Property

A list of RC holes drilled within Reedy Marsh tenement is as follows:

	# of Holes	Total Metres	Hole IDs
February, 2015			
Rubble Flats	163	1169m	RM001-RM157,RM177-RM182
Blackwood Hill	6	41m	RM158-RM163
Blackwood South	13	151m	RM164-RM176
Sub-total	182	1361m	
March, 2015			
Rubble Flats	22	108m	RM183 – RMRM204
Egmont Property	1	7m	RM205
Mahoney's Hill	9	100m	RM206-RM214
Sub-total	32	215m	
TOTAL	214	1576m	

A few notes on drilling sampling protocol:

RC drillholes sampled sub-surface material at 1m intervals. A small representative mass from each 1m interval of each drillhole is collected and carefully placed in a chip tray. Each metre of each drillhole is then logged by the geologist using the chip tray which then informs which samples will undergo chemical analysis at an accredited laboratory (ABx uses ALS Laboratories, Virginia, Brisbane QLD).

Sample IDs are a combination of the Hole ID and bottom of 1m sampling interval e.g. sample RM01604 is the material sourced from 3-4m of hole RM016.

Rubble Flats

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 drillholes within the Reedy Marsh and Westbury tenements carry the prefixes 'RM' and 'WB', respectively.

Prior to the commencement of drilling, a local landowner was contracted to clear tracks within Allen's Bush with an excavator. This made the majority of the deposit accessible by vehicle; however further clearing is warranted for additional holes to be drilled to completely delineate the deposit.

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 – chiefly by Tamara Coyte

– 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 (following the bauxite – dolerite contact at surface) which was provided by Tamara Coyte. Additional field work by Thomas Grieve and Tom Battaglia on the northern side of the deposit resulted in an extension of this northern boundary.

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).

Drilling Results

Where intersected, bauxite was located in the hard (“cemented”) upper layer of the weathering profile which was generally quite iron-rich in appearance and occasionally contained magnetic fragments (possibly maghemite). Assay results revealed that much this hard upper layer – though often logged as bauxite - was often Fe-rich rock (i.e. “Ironstone”) which diluted the Avl Al₂O₃ content such that it was not always of bauxite grade.

Below this hard upper Fe- and/or Al-enriched layer was generally (from top to bottom) a “plastic” clay zone (sometimes mottled) and a “semi-hard/semi-friable” mottled dolerite material sitting above the hard dolerite basement. Drilling of almost every hole concluded after hitting the hard Dolerite basement.

Data analysis is ongoing for the Rubble Flats deposit. Initial impression of results was disappointing as much of the hard upper layer of the weathering profile thought to be bauxite did not make grade. Thus, potential tonnages are lower than first hoped.

The bauxite resource of this deposit has been roughly estimated as 0.5 Mt; however, more drilling and data analysis is required to constrain this.

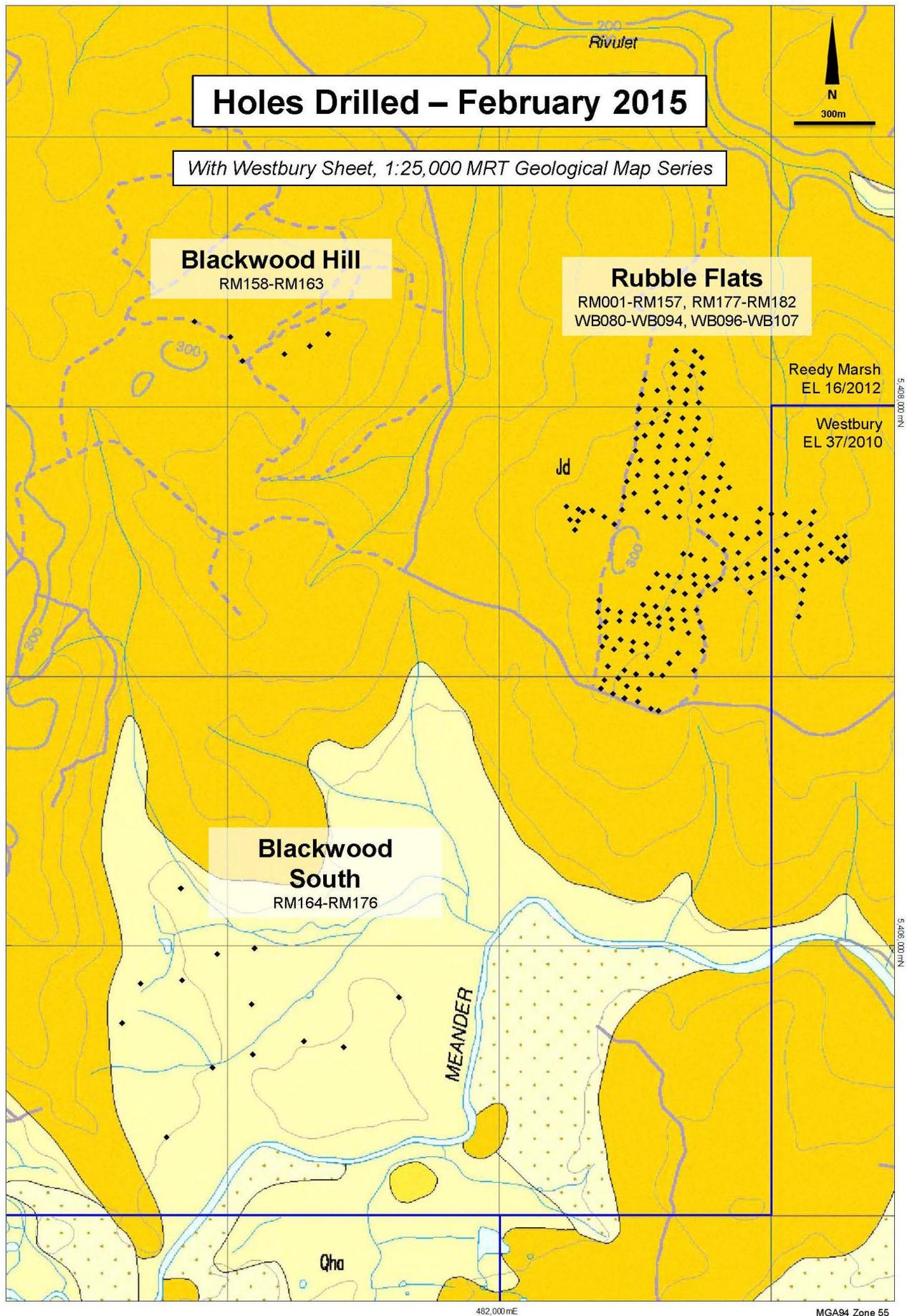
Maps produced from T. Coyte’s analysis of drillhole data are in the Appendix.

Geological Discussion & Conclusions

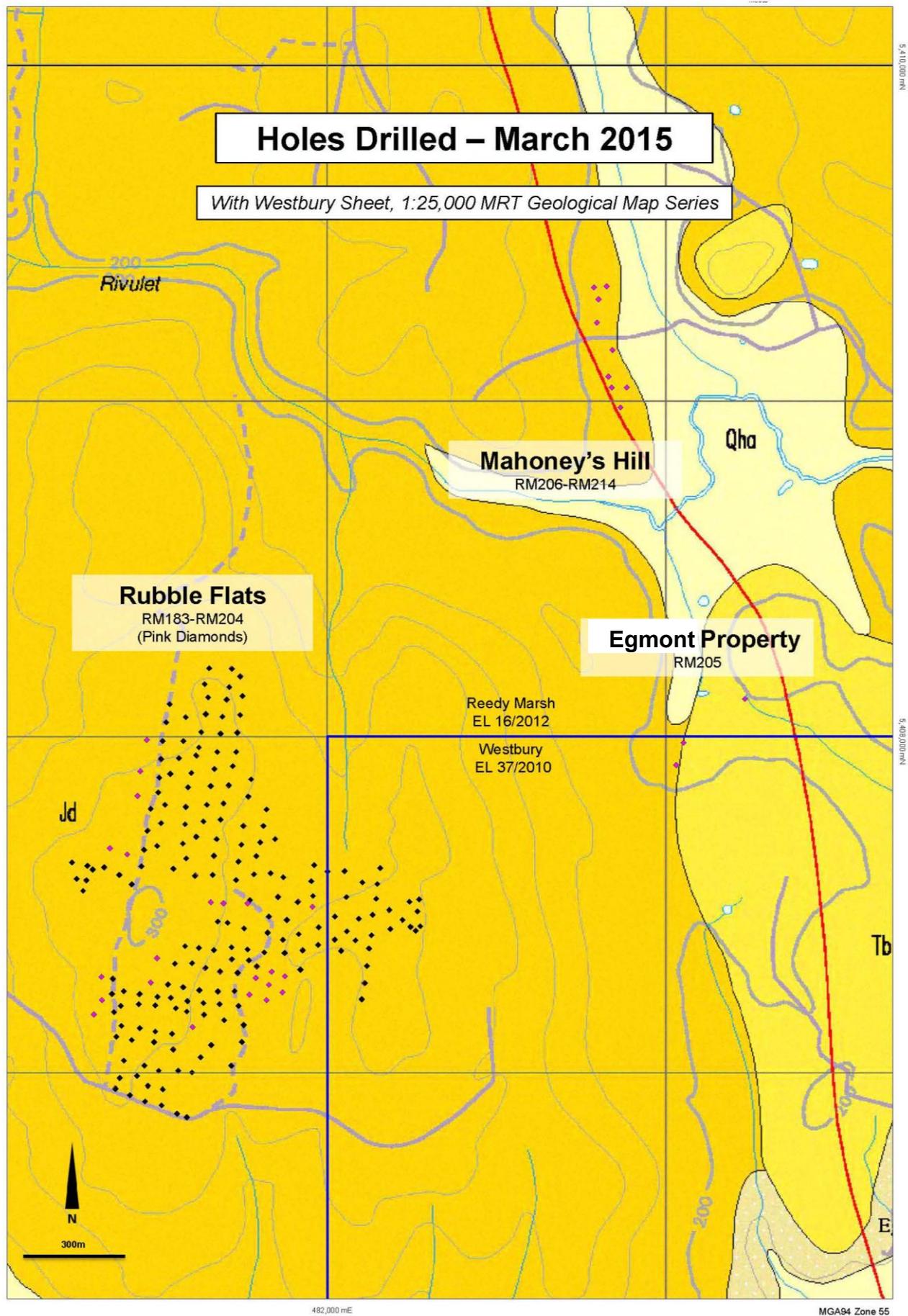
The bauxite at Rubble Flats is almost certainly derived from the underlying dolerite and is likely to have been formed either by preferential weathering by acid rich ground water or has been hydrothermally altered. Given the large amount of ground water found during drilling in the lower areas of the deposit it is likely that ground water has played some role in the mobility of elements within the bauxite mineralised zones. This may have had more of an impact in the more Fe rich zone given this Fe is often more mobile in the weathering profile.

Although sampling was quite thorough, many metres at the base of the bauxite layer were missed (assay results helped give light to this) but will be collected and sent to ALS Brisbane for analysis. Any additional metres of bauxite will improve resource tonnage.

Furthermore, more narrow-spaced drilling may be warranted to further delineate the ore zones (a map of proposed drilling locations is shown amongst the Rubble Flats maps in the Appendix).



Map 4. Holes drilled in February 2015 overlying the Westbury sheet of the 1:25,000 MRT Geological Map Series.



Map 5. Holes drilled in March 2015 overlying the Westbury sheet of the 1:25,000 MRT Geological Map Series.

Blackwood Hill

Blackwood Hill is a small bauxite target lying between DL-130 and Rubble Flats. This target area lies entirely within the Reedy Marsh (EL16/2012) tenement.

Drilling at the Blackwood Hill target occurred in February 2015. Unfortunately the main part of the Blackwood Hill target (the hill itself) was inaccessible due to thick scrub (clearing is required for this to occur). However, six scout drill holes were drilled along the adjacent tracks to the north and northeast.

Geological Setting

The entire Blackwood Hill area is mapped as 'Jurassic Dolerite' on the Westbury Sheet of the Mineral Resources Tasmania (MRT) 1:25,000 Map Series.

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).

Drillhole Results

A total of 6 holes for 41m were drilled at the Blackwood Hill target. All but one of these holes was stopped when hard Dolerite was intersected. The weathering profile was generally very thin with Dolerite outcropping intermittently.

Unfortunately the sieved assay results indicate that no bauxite was intersected in any of these holes.

The best Avl Al₂O₃ values were between 11.8-15.7% and indicate that some parts of the weathering profile were partially "bauxitised", however, not enough to produce anything of ore grade. The Rx SiO₂ (=clay content) levels were also far too high.

Geological Discussion

The regolith profile on the northern/north-eastern tracks of the Blackwood Hill target area consisted of 1-2m of "semi-bauxitised" rock at surface, followed by - from top down - a clay zone, a mottled dolerite zone and then the hard dolerite basement. This is very similar to the profile at Rubble Flats.

The regolith profile (referring to any unconsolidated/semi-consolidated material sitting above the hard Dolerite basement) was very thin in most places and seemed to occur only in small "ponds" or "depressions" between the Dolerite outcrops that occurred along most of the tracks.

The track to the southeast was almost entirely outcropping Dolerite so no holes were drilled in this area.

Conclusions and Recommendations

The scout drilling undertaken along the tracks to the north/northeast of the target area was unsuccessful at intersecting any bauxite. This finding, though unfortunate, was not completely surprising as the main area of interest at Blackwood Hill is the hill itself.

No further drilling along the tracks to the north/northeast of the hill is recommended as the likelihood of intercepting bauxite of economic grade in any significant volume appears very low. However, the hill itself remains to be drill-tested (subject to clearing of scrub).

Table 3. Blackwood Hill drillholes and total depths.

Hole ID	Hole Depth (m)
RM158	14
RM159	4
RM160	6
RM161	7
RM162	4
RM163	6
Total	41 metres



Figure 2. 3D Terrain Image from Google Earth Pro showing the Blackwood Hill target and holes drilled.

Table 4. Sieved assay results of Blackwood Hill samples.

Sample No.	Avl Al ₂ O ₃	Rx SiO ₂	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	TiO ₂	LOI	+0.26mm Sieved Recovery
	%	%	%	%	%	%	%	%
RM15801	15.7	19.2	36.73	23.2	19.9	0.85	18.79	43.2
RM15802	12.7	20.8	35.3	25.6	19.05	0.76	18.59	47.8
RM15901	3.7	20.8	23.72	26.6	33.3	0.91	14.68	27.4
RM16001	13.2	11.3	26.9	14.8	39.9	3.05	14.82	69.2
RM16002	9	15.2	25.6	19.1	36.2	3.23	15.06	79.1
RM16003	2.8	29	30.29	35.6	17.8	1.7	14.08	66.4
RM16101	11.8	20.4	32.84	24.7	23.8	1.2	16.8	25.8
RM16201	2.6	25.1	26.31	32	26.4	1.22	13.37	15.2
RM16202	4	23.7	27.06	33.5	24	1.26	13.44	37.4
RM16301	8.3	20.9	29.33	33	20.4	1.47	15.13	52.7
RM16302	5.2	25.2	30.27	32.7	20.7	0.93	14.75	48.8

Blackwood South

Blackwood South is a bauxite target located on a large cleared farming property located approximately 2km southwest of the Rubble Flats bauxite deposit. The target area lies entirely within the Reedy Marsh EL16/2012 tenement. A day and a half was spent on the target (22-23 Feb), drilling 13 holes for 151 metres. The farmland – a recently-cleared immature hardwood plantation now used for livestock grazing – occupies a low-lying floodplain area adjacent to the Meander River on the south.

Prior to drilling, field observations of bauxitised rock exposed along some small creeks led geologists to believe there was potential for bauxite discovery underneath the thin topsoil that covers most of the farming property.

Geological Setting

The Blackwood South target is a flat-lying floodplain area mapped as Quaternary ‘Stream alluvium, swamp and marsh deposits’ (Qha) on the Westbury Sheet of the MRT 1:25,000 Geological Map Series.

The majority of the land is covered by grass growing in a thin layer of soil and/or river sediments (to the south). Bauxite is observed in some small creeks and on surface as loose rocks in a few areas.

Jurassic Dolerite (Jd) outcrops were observed on the western and northern sides of the property (as shown on the MRT geological maps) and is thought to form the steep hills to the northwest, north and northeast.

Most of the target area is 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), Some Class 4 land exists in the southwest part of the property.

Drilling Results

A total of 13 holes for 151m were drilled at the Blackwood South target.

Only RM166 intersected bauxite (1m with 31.9 Avl Al_2O_3 and 5.4% Rx SiO_2).

Geological Discussion

Drilling results indicate that the Blackwood South geological profile is very clay-rich, with small quantities of hard Fe-rich material existing near surface within a clay matrix.

There appears to be lateral zonation of the weathering profile which can be generalised as (from top down):

- (1) *Hard, Fe-rich material in Clay Matrix*
- (2) *Mottled Clay*
- (3) *Mottled/Weathered Dolerite*
- (4) *(Hard Dolerite Basement)*

RM16607, the only sample that proved to be bauxite, occurs near the bottom of a 9m-deep “Fe-rich material” zone. Why bauxite has mineralised in this particular location, but nowhere else, is not fully understood.

Some of the drillholes located closer to the Meander River contained river sediments (with rounded pebbles) either as overburden or interburden. For example, RM171 had such river sediments from 5-7m below surface which represents an unconformity. Interestingly, RM175 was logged as bearing

volcanics and RM173 was logged as penetrating Quartzite in the final metre. If these observations are true then there must have been a complicated array of processes to form the current regolith (weathering) profile.

Conclusion and Recommendations

The scout drilling undertaken at the Blackwood South target was largely unsuccessful with only one metre of one drillhole intersecting bauxite. Thus, the potential for any significant quantities of bauxite to be found at this target appears to be very low.

No further drilling is recommended at this location.

Table 5. Blackwood South drillholes and total depths.

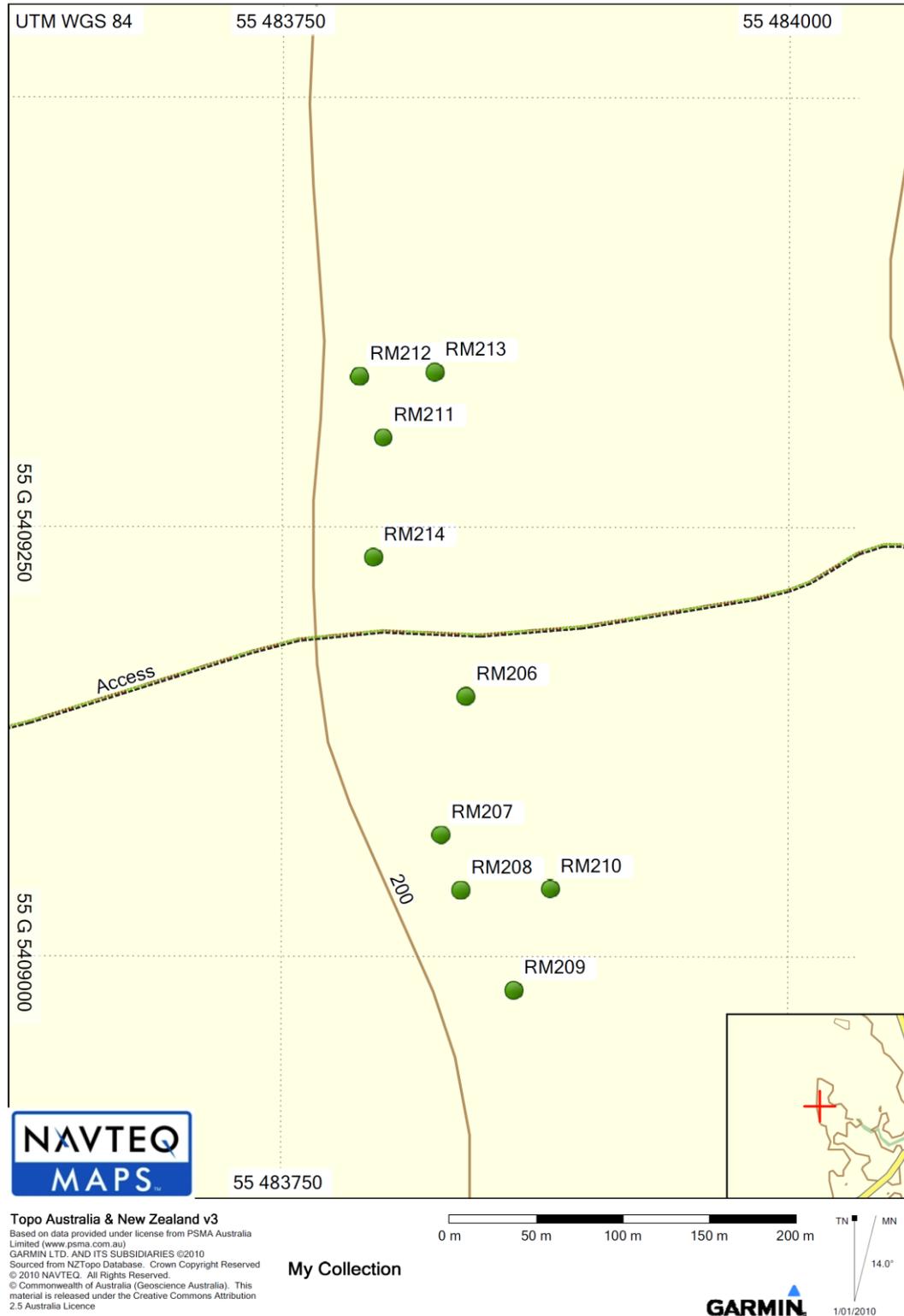
Hole ID	Hole Depth (m)
RM164	4
RM165	4
RM166	22
RM167	26
RM168	8
RM169	8
RM170	12
RM171	14
RM172	9
RM173	7
RM174	18
RM175	10
RM176	9
Total	151 metres

Table 6. Sieved assay results of Blackwood South samples.

Sample No.	Avl Al ₂ O ₃	Rx SiO ₂	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	TiO ₂	LOI	+0.26mm Sieved Recovery
	%	%	%	%	%	%	%	%
RM16401	0.5	13.8	11.24	37.7	41.1	1.42	6.83	27
RM16402	0.5	27.4	23.5	37.1	23.2	0.98	13.18	11.1
RM16501	0.6	10.2	9.37	46.9	23.1	0.71	3.4	37.6
RM16601	5.1	15.8	22.23	20.5	43.1	1.21	11.12	24.4
RM16602	0.4	27.2	20.32	31.2	33.1	2.48	11.05	10.5
RM16603	1	18.9	16.9	21.1	48.3	1.5	11.38	27.4
RM16604	1.2	27.2	23.99	29.7	31.2	1.94	12.33	20.5
RM16605	0.9	24.8	21.52	27.4	37	1.15	12.01	42.7
RM16606	1.7	17.2	17	19.7	49.6	1.16	11.39	31.3
RM16607	31.9	5.4	39.3	7.33	27.6	1.42	23.5	59.3
RM16608	12.2	18.6	31	21.8	27.5	1.48	16.88	27.9
RM16609	2.2	25.9	25.85	29.7	27.9	1.94	13.31	16.4
RM16610	3.1	21.5	23.93	25.7	33.3	2.15	13.74	12.9
RM16701	2.1	14.7	17.42	21	49.4	0.57	10.57	25.2
RM16702	1.5	16.2	16.66	22.1	49.5	0.57	10.47	28.9
RM16703	1.1	27.6	24.62	33.6	28.5	0.97	11.66	33.3
RM16801	3.2	13.4	18.44	21.1	49.3	0.83	9.62	19.2
RM16901	0.3	21.4	3.23	75.6	16.6	0.46	3.61	16.8
RM17003	1	14.6	15.14	19.35	50.7	1.77	12.22	35.2
RM17102	2.5	9.9	14.3	28.2	46.6	0.89	9.14	16.4
RM17103	1	15.9	15.04	32.4	41.3	0.84	9.49	16.6
RM17104	1.2	11.6	12.65	21.8	53	1.2	10.36	40.4
RM17204	1.1	15.6	16	18.35	48.2	1.64	14.24	22.9
RM17301	0.3	18.5	7.96	65.6	17.25	0.75	5.27	14.8
RM17401	3.8	14.5	20.11	22.1	43.7	1.86	11.22	34.9
RM17402	1.9	21.7	23.13	24.5	36.1	1.96	13.16	34.8
RM17403	2.3	17.4	20.49	19	41.7	3.13	13.79	34.1
RM17404	2.2	24.2	25.2	26	30	2.9	14.08	38.8
RM17405	1.8	26	26.3	28.7	25.7	3.26	13.54	27.8
RM17503	0.3	20.5	13.08	67.3	8.6	0.78	5.48	8.5
RM17601	0.7	8.6	7.55	49.6	36.4	0.85	4.79	35.3
RM17602	1.3	15.2	17.27	18.95	47.4	1.71	13.33	20.1
RM17603	1.3	14.3	16.3	18.65	48.3	2.01	13.21	21.4

Mahoney's Hill

Small isolated bauxite outcrops occur to the North-West of Rubble flats deposit and drilling was completed to test the lateral extent of these deposits. The results (Table 7) show that much of the target is characterised by iron rich residual lateritic material and its extent is limited.

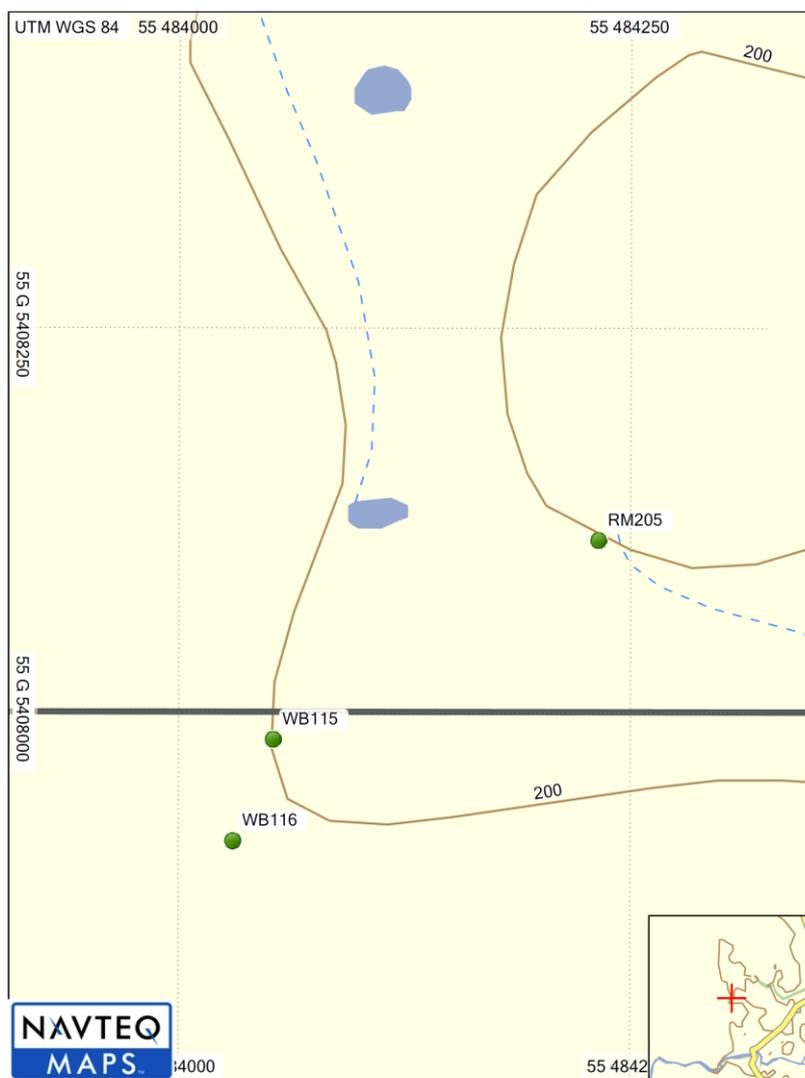


Map 6. Holes drilled at the Mahoney's Hill target.

Table 7. Sieved assay results of Mahoney's Hill samples.

Sample No.	Al ₂ O ₃ avl	Rx SiO ₂	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	TiO ₂	LOI	+0.26mm Sieved Recovery
	%	%	%	%	%	%	%	%
RM20701	10.4	8.3	21.64	11.75	51	1.74	13.37	33.9
RM20702	1.8	16.8	17.91	19.85	49.7	1.38	10.66	32.8
RM20703	1	19.4	18.07	22.3	47.6	0.87	10.59	32.7
RM20704	1	19.2	18	22.4	47.5	1.04	10.46	32.5
RM20903	0.2	26.2	17.48	34.8	33.9	1.46	11.19	17.8
RM20904	0.2	28.7	19.3	37.5	29.3	1.22	11.3	12
RM20905	0.2	25.7	18.5	34.7	29.6	1.16	11.64	6.7
RM21001	5.3	12.8	20.43	16.15	48.9	1.38	12.52	37.2
RM21002	2	15.4	18.15	18.4	48.7	0.93	13.18	16.7

Egmont Property



Remanent bauxite chips were found in this area during reconnaissance and a limited drill programme was planned. Only three drill holes were completed; one in the Reedy Marsh tenement and the other two in the neighbouring Westbury tenement. Hole RM205 bottomed out in weathered basement rocks. Due to poor results no further drilling is planned in this area. No bauxite was encountered in any of the holes.

Map 7. Holes drilled at the Egmont Property Target. Only one of these holes (RM205) was inside the Reedy Marsh tenement.

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5 CONCLUSIONS AND RECOMMENDATIONS

In mid-to-late 2014, field reconnaissance was completed over much of the Reedy Marsh area in preparation for future drilling programs to prove up bauxite resources.

In February and March of 2015 the Rubble Flats, Blackwood South, Blackwood Hill, Mahoney's Hill and Egmont Property bauxite targets were drilled.

The Reedy Marsh tenement, along with neighbouring tenements Deloraine EL 9/2010 and Westbury EL 37/2010, are well located in terms of distance from Bell Bay Port. 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 the general region covered by ABx4 tenements appears prospective for future exploration.

A decision has been made by ABx4 to hold on to 100% of the EL 16/2012 tenement area continuing into the third year of tenure as of 16 June 2015. However, there remains scope to relinquish large areas confirmed to be less prospective by field work and drilling. A review of such areas will likely occur during the third year of tenure and an application for partial relinquishment will be made.

Geological Discussions

The bauxite deposits discovered around DL-130 all occur on high terrain created by large dolerite plateaus. The bauxite normally forms on the second highest point in the terrain and has no overburden. The bauxite is at a slightly lower elevation than the small dolerite peaks which occur in the plateau. These small peaks funnel the catchment and underground water flow towards certain areas of the plateau. This is preferentially where the bauxite occurs. 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. There is little or no transitional material at the bauxite/dolerite contact.

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.

Coarse quartz grit is also present in the bauxite target in the state forest and to a lesser extent in the deposit between DL-130 and Blackwood east. The bauxite contains 8-15% and 2-5% free quartz respectively. The quartz is not an issue for processing but does significantly dilute the grade.

The bauxite contains very little Anatase (TiO₂), which is quite unique and could give the product special characteristics that maybe marketed differently. The ratio is very low indicating the bauxite is derived from dolerite. This is supported by all field observations.

The state forest bauxite deposit contains approximately 0.3-0.8Mt of low grade material. The deposit by itself is not economic but could provide extra tones for DL-130. The bauxite is also very thin in most locations; this will increase costs of mining.

The small deposit between DL-130 and Blackwood east contains some good grade material but is very small. Mapping has not yet been completed but the bauxite is unlikely to be any more extensive than

outlined in Map 5. The tonnage is estimated at 0.1Mt and will provide a small amount of extra saleable bauxite to the DL-130 area. The bauxite occurs in a small patch of natural forest on the edge of the plantation. This may increase costs of mining but will not be a significant issue.

Reactive silica content of in-situ Doleritic bauxite is usually higher than volcanogenic deposits hence screening will probably be required.

6 ENVIRONMENT

Surface Disturbing Operations:

Two types of surface disturbing activities were undertaken during the reporting period:

1. RC drilling. Drilling of an RC hole results in a ~90mm-diameter hole in the ground. ABx4 has a policy of rehabilitating all drillholes immediately after they are drilled. The method of rehabilitation is to push an OctoPlug down to 1.5m depth and to fill the remaining hole space with drillhole material and any excess topsoil. All drillholes were completely and properly rehabilitated.
2. Surface sampling. Surface sampling involves a small volume of rock being removed by hand from an exposed bauxite outcrop. This results in very negligible (= null) disturbance of the surface such that no rehabilitation is required.

No further rehabilitation is required within EL 16/2012.

7 EXPENDITURE

Table 8. Exploration Activity and Expenditure Table for reporting period 16 June 2014 – 15 June 2015.

Exploration Category	Description of Activity	Quantity	Expenditure
Office Administration			\$900
Authority Management	Tenement Management		\$274
	Land Holders Compensation		\$375
Office Activities	Data Processing & Interpretation		\$6,000
	Report Preparation		\$4,000
Field Activities	Geological Mapping	Days or Ha	
	Sampling		
	Equipment Hire	Vehicle Hire & Petrol	\$5,311
	Accommodation/Field Camp	Days	\$22,968
	Travel		
	Land Holder Liaison		
	Field Supplies		\$24,986
	Other	Sample Freight	\$4,246
	Geophysics		
	Airborne		
	Type	Line kms	
	Ground		
	Type	Line kms	
	Drilling (program cost)		
	RAB/AC	Holes/total metres	
	RC	214 Holes for 1576m	\$83,724
	Diamond	Holes/total metres	
	Surface Samples	Holes/total metres	
Laboratory	ME-XRF 13B, Reactive Silica & Available Alumina	Surface and Drilling Samples	\$60,787
Salaries / Wages	Contractors - Geologists		\$103,311
	Contractors - Field Assistance		\$34,789
	Contractors - Other Technical		\$39,882
		Grand Total	\$391,552

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

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