

ABx4 Pty Ltd

Partial Relinquishment Report

for

EL18/2014 – Prossers Road

Reporting Period: 2 December 2014 – 1 December 2019

Project Operator: ABx4 Pty Ltd

Address: Level 2, 131 Macquarie Street, Sydney, NSW, 2000

Authors: Mike Smith, Adviser to Australian Bauxite Limited

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ABSTRACT

Exploration Licence No. 18/2014 “Prossers Road” was applied for by ABx4 Pty Ltd (**ABx4**) to facilitate an exploration program to discover economically viable deposits of bauxite associated with Jurassic Dolerite and Tertiary Volcanics.

The goal of the program is to determine the quality and quantity of bauxite in the area using an RC drill rig mounted on a light 12 tonne truck.

This report is the Partial Relinquishment Report pertaining to the 23km² of EL 18/2014 which was surrendered in 2019

INTRODUCTION TO PARTIAL RELINQUISHMENT REPORT

Exploration Rationale

ABx4 Pty Ltd - the holder of Category 1 Exploration Licence EL 18/2014 is the wholly owned subsidiary of Australian Bauxite Ltd.

EL 18/2014 “Prossers Road” 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.

ABx4 is Tasmania’s only bauxite company, operating at the Bald Hill mine near Campbell Town, employing only Tasmanian sub-contractors and employees, reaching a peak employment of 35 direct jobs, and an estimated 90 indirect roles. ABx4’s Bald Hill mine commenced in December 2014 and was Australia’s first new bauxite mine in over 35 years. In April 2016, the Bald Hill Mine secured new sales contracts with the fertiliser and cement industries with 5 large shipments out of Bell Bay Port and many sales to Impact Fertiliser in Risdon, Hobart.

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 18/2014 “Prossers Road” was granted on and from 2 December 2014 for a period of 5 years to ABx4 Pty Ltd, a wholly-owned subsidiary of Australian Bauxite Limited. The original area of EL 18/2014 is shown in Map 1.

ABx4 applied to relinquish 21km² of the original 135km² of tenement area at the end of the first year of tenure, a further 58km² at the end of the third year and another 23km² in 2019. The areas relinquished are shown in Map 1. ABx4 has applied for an extension of term for the remaining 33km² of EL 18/2014.

This report is a Partial Relinquishment Report for the 23km² surrendered in 2019 which is shown in red cross hatching in Map 1.

The mineral category of EL 18/2014 is; ‘Mineral Category is 1 – Metallic Minerals and Atomic Substances’.

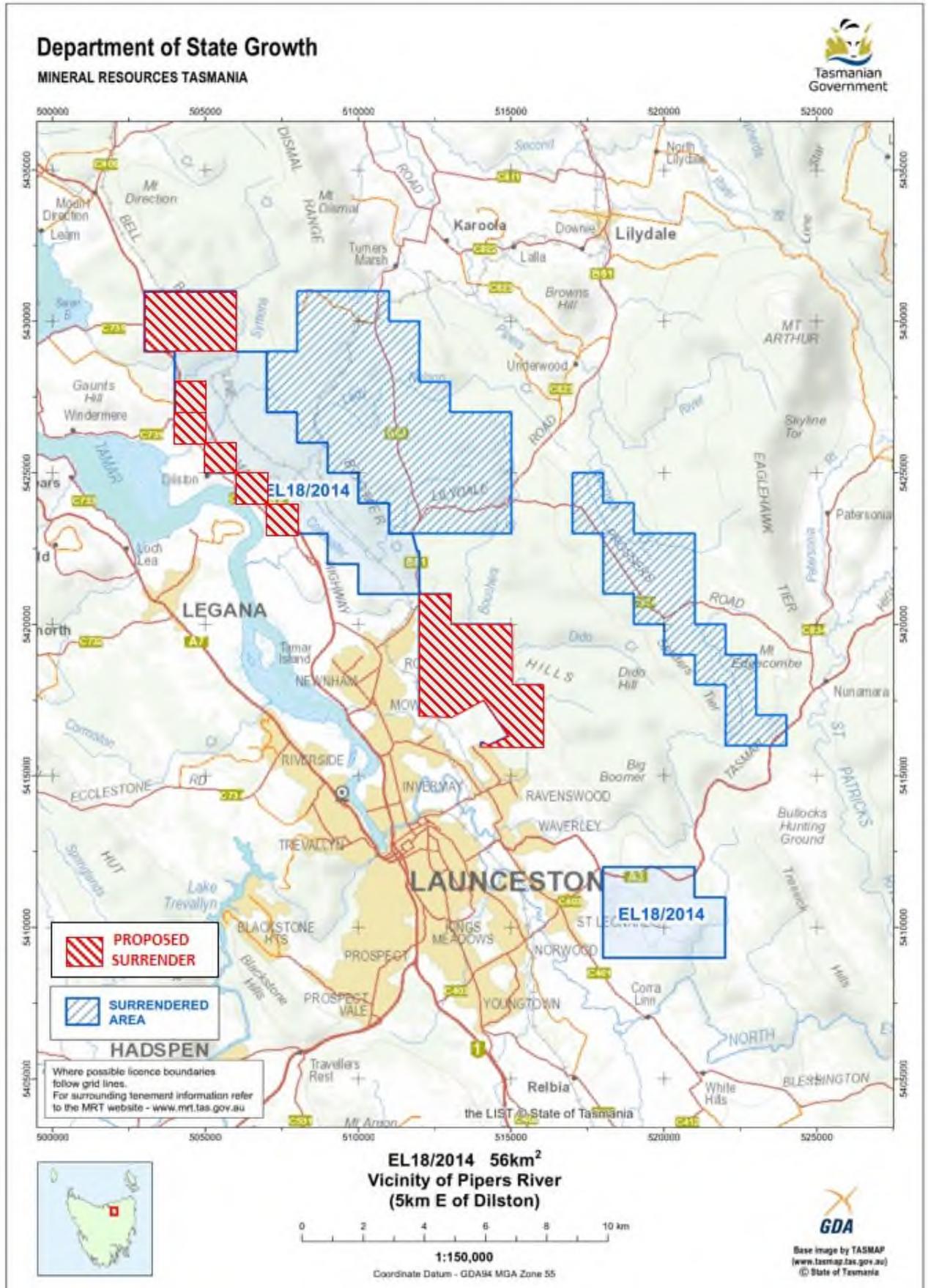
Location

The Prossers Road tenement extends from directly east of Launceston in the St Leonards area along the eastern hills and extending north around Dilston and Turner’s Marsh.

Prossers Road is ideally located close to Bell Bay Port – only 24km by road from the northernmost part of the tenement – as well as the city of Launceston which offers a skilled work force and a wide variety of services.

Summary of Exploration 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 the 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 using an RC drill rig mounted on a light 12 tonne truck to get samples representing the bauxite profile.



Map 1. Location of EL 18/2014 “Prossers Road” showing the most recent area relinquishment in red cross-hatching which is the subject of this report

REVIEW OF PREVIOUS WORK

Initial work was completed by the Australian Bureau of Mineral Resources in conjunction with the Tasmanian Mines Department on the bauxite deposits in the St Leonards area in the mid-to-late 1940s. This work is reported in the BMR Bulletin No. 24 “*Bauxite in Australia*” by H.B. Owen (1954).

Owen describes a total of seven separate bauxite bodies developed upon Dolerite in the St. Leonards area, though noting that only Deposit No. 1 and No. 3 contain “appreciable quantities of economic bauxite”. The total tonnages at St. Leonards was noted by H.B. Owen as being relatively small but having the advantage of being in close proximity to Launceston and only 38 miles from the Bell Bay alumina plant.

Owen describes the general geology of the deposits as follows:

“No. 1 Deposit crops out as a narrow bench following the contours along the western slopes of a valley trending south. The bauxite outcrop is continuous for 2,900 ft [~883m] on the valley side and also appears in small exposures at the head of the valley. The several small discontinuous outcrops which constitute Nos. 3 and 4 Deposits lie on the opposite side of the valley at a similar general elevation. It is probable that these bodies mark the outer edges of a once continuous sheet of laterite which lay on a surface dipping gently to the south-west.”

Proved resources were calculated by Owen for Deposit No. 1 and No. 3 though these estimates **are not** considered “JORC-compliant”. The “Summary of Reserves” has been reproduced in the table below.

Table 1. Historical (non-JORC compliant) resources calculated for St Leonards bauxite deposits.

Deposit No.	Tonnes	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	Available Al ₂ O ₃
		%	%	%	%	%
No. 1	112,300	5.6	41.7	25.7	2.2	37.7
No. 3	30,200	7.1	40.9	25.8	2.2	36.5
Total	142,500	5.9	41.5	25.7	2.2	37.4

A reference to a small bauxite deposit north of Dilston (referred to as “Thorp”) was also made in Owen’s *Bauxite in Australia*. The single paragraph written on the deposit is as follows:

“Doleritic bauxite of granular texture outcrops on a farm named Thorp at about 1.5 miles north-west of Dilston Post Office and 0.5 mile east of the Georgetown road. The bauxite, which is believed to be thin, wedges out against dolerite to the north, east and south, but may continue to the west where a small exposure is visible in highly improved land adjacent to the farmstead. The deposit is not sufficiently large to warrant interference with the farm.”

EXPLORATION COMPLETED IN THE RELINQUISHED AREA

During the tenure of this EL, ABx4 conducted the following activities within the area relinquished:

Geoscience Studies

- conducted a review of existing MRT data, and of BMR studies in the mid-to-late 1940s of the bauxite deposits in the district
- Undertook geological mapping of road cuttings and generated cross-sections

Geochemistry

- Retrieved drillhole geochemical data from the ABacus database

Remote Sensing

- Assembly and interpretation of ABx exploration techniques
- Ground-truthing the areas identified as prospective for bauxite

Results

No sampling was conducted within the relinquished area because the bauxite horizon is missing

Drilling of RC holes was completed in the portion of the EL which has been retained by ABx. A number of holes intersected bauxite of good quality.

No drilling was conducted within the relinquished area

Certain parts of the drilled deposit were determined to have relatively large stripping ratios, as high as 9:1, which would not be economic to mine under prevailing costs and product prices.

The areas selected for the 2nd relinquishment are located higher up on the densely-vegetated ridgeline that forms the eastern edge of the Tamar Valley. In 2019, a further surrender of 23 sq kms resulted in a residual area of 33 sq kms,

The areas selected for the current relinquishment are shown in Map 1 and are considered to be unprospective for bauxite.

They are being surrendered because ABx has decided it will not commit exploration expenditure on those blocks in the future.

Environmental Matters

No surface-disturbing activities took place during the current year of tenure.

No archaeological or botanical surveys took place during the current year of tenure.

No rehabilitation activities took place or were required within the relinquished areas.

References

Bardenhagen, F. (1981). *Bauxite in Laterite in the Launceston Area*, Bardenhagen Enterprises.

Forsyth, S.M. and Calver, C.R. (compilers) (2005). Digital Geological Atlas 1:25 000 Scale Series. Sheet 5041. Launceston. Mineral Resources Tasmania.

Owen, H.B. (1954). *Bauxite in Australia*, Bureau of Mineral Resources, Geology & Geophysics, Bulletin 24, Geology and Geophysics.