



**Annual Report  
to 3<sup>rd</sup> April 2019**

**EL17/2016**

**Tasmanian Advanced Minerals Pty Ltd**

**Prepared by: Chris Stuart**  
**Date: 8 May 2019**

## **ABSTRACT**

- This report covers the second year of exploration.
- Three 3 auger holes originally drilled in 2017 holes, and which had not reached the bottom of the deposit, were drilled to extend their depth.
- To quantify the extent of a commercial resource, further investigation is being undertaken on commercial-scale titanium impurity removal techniques.
- The licence has other silica targets that are not yet investigated.

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EL172016-2019-Filelisting

EL172016-2019-01-SL\_1

EL172016-2019-02-DL\_1

EL172016-2019-03-DG\_1

## **1. INTRODUCTION**

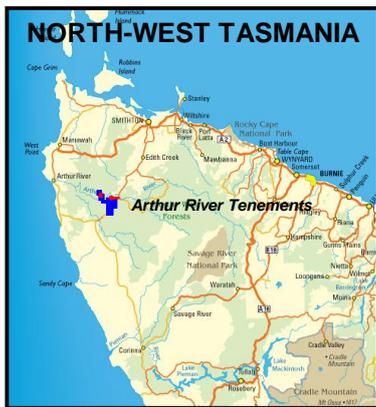
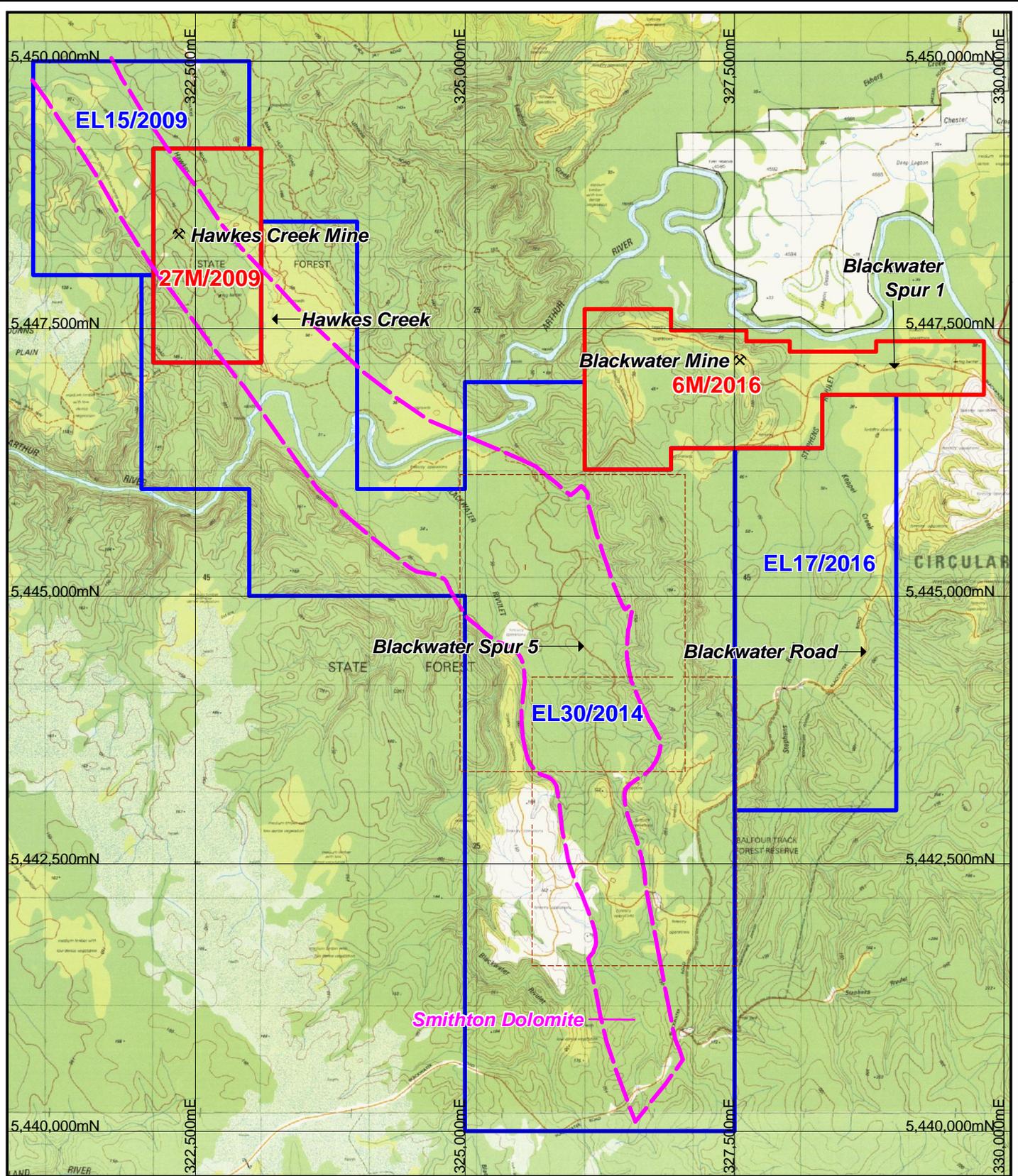
EL 17/2016 is held by Tasmanian Advanced Minerals Pty Ltd (TAM) and is located approximately 40km south-southwest of Smithton (refer to Figure 1, Location Map). The Licence was granted on 3 April 2017. This is the second annual report for the period up to 3 April 2019.

TAM is actively mining high purity silica from three locations in Tasmania, from one near Corinna, and from two areas near the Arthur River in northwest Tasmania, Blackwater (6M/2016) and Hawkes Creek (27M/2009). TAM also holds other exploration licences in the vicinity, EL15/2009 and EL30/2014. EL17/2016 borders 6M/2016 to the south, and EL30/2014 to the east. There is a line of strike of small hills in EL17/2017 which runs NNE-SSW adjacent to the Roger River Fault, commencing in the north with the Blackwater East deposit that lies within 6M/2016. Those hills are a target of exploration in this licence.

There are potentially other targets on the western side of the licence that are yet to be investigated.

The company has several exploration licences. Exploration is being undertaken to increase resource available for processing at TAM's Wynyard factory.

Datum used in this report is GDA94.



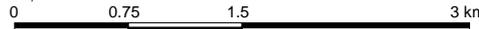
**LEGEND**

 Geological boundary inferred from MRT's Sumac 1:25,000 map

**TASMANIAN ADVANCED MINERALS P/L**  
**ARTHUR RIVER TENEMENTS AT 01.06.17**

**ML 27M/2009 and EL 15/2009 - HAWKES CREEK**  
**ML 6M/2016 - BLACKWATER**  
**EL 30/2014 - BLACKWATER RIVULET**  
**EL 17/2016 STEPHENS RIVULET**  
**LOCATION PLAN**

Compiled : Chris Stuart/Nic Turner	Drawn : DraftingWorks	Date : 01/06/2017	File : TAM-Tenements.wor
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Scale: 1:50,000	Projection: MGA Zone 55 (GDA94)	Figure No
		1

**N. J. Turner, Geologist**

## **2. REVIEW OF PREVIOUS WORK**

Turner (Turner, 2000) identified two samples of “angular silica rock fragments with silica flour matrix” on the Keppel Creek Hill, and had three samples analysed that were taken from cuttings further south along Blackwater Road. Those occurrences along the road are probably too small to be commercially viable.

TAM conducted the first year of exploration for this licence in 2017 and 2018. The program involved auger drilling and test pitting on a hill between 328200 and 328600 Easting, and 5444950 and 5445550 Northing (the Keppel Creek Hill). The Auger holes were drilled to a depth of 12m with a Dando Terrier and the pits dug with a 14t Doosan excavator. In total, 18 test pits and 64 auger holes were dug/drilled.

Laboratory analysis of the impurities found that titanium impurities are present especially on the eastern side of the Keppel Creek Hill. Most of these impurities were not able to be removed by laboratory scale magnetic separation processes.

The first year exploration and associated laboratory investigation indicates the presence of a potentially large volume resource at Keppel Creek hill, but with concerns about the portion which will be commercially exploitable due to the presence of the titanium mineral impurities.

## **3. EXPLORATION COMPLETED DURING THE REPORTING PERIOD**

An Exploration Works Program (ref. WPA17/11) was approved on May 17 2017. The drilling completed this year continued to follow that original works program.

The first annual report drilling was limited to a depth of 12m. At three drill holes the bottom of the resource was not reached. Additional drill rods were purchased to allow drilling down 18m. The three holes bottomed the resource at 13m, 13m and 14m.

Titanium minerals are deleterious impurities in silica used to make glass for LCD and OLED display devices. If the levels are too high the silica cannot be used for this application. These types of impurities not only occur on EL17/2016 but also licence EL30/2014 and in some areas of the Blackwater mine 6M/2016, both held by TAM. Some titanium impurities can be removed by processing. Non-magnetic titanium impurities which are close in specific gravity to silica are difficult to remove. TAM engaged UTAS to identify the form of the impurities, and engaged Mineral Technologies Pty Ltd to work jointly with TAM on potential processing techniques. The Mineral Technologies co-work is on-going.

#### **4. DISCUSSION OF RESULTS**

The drilling only marginally increase the hole depth in the three auger holes.

The impurities in the Keppel Creek hill deposit were identified and reported in the previous year's report. TAM's processing facility at Wynyard is able to remove a large amount of these impurities. Although Fe<sub>2</sub>O<sub>3</sub> and Cr impurities are present at high levels throughout much of the resource, particular on the eastern edge of the identified resource, recent improvements in magnetic impurity removal at Wynyard means that the extent of those impurities found in the present exploration work, will not constrain its use as a substantial portion of future feed blends to the processing facility.

Of more concern are titanium mineral impurities, some of which appear to be both non-magnetic and to have a specific gravity of 2.6 (i.e. close to silica), which makes it very difficult to remove by current processes.

#### **5. CONCLUSIONS**

Investigations, jointly with Mineral Technologies, into potential processing techniques to reduce titanium impurities, are on-going. No conclusions have yet been reached.

Additional resource targets within the licence will be investigated.

#### **6. ENVIRONMENT**

Test holes were covered. Tracks remain open for further exploration work.

## **EXPENDITURE**

Expenditure for the period April 2018 to March 2019 is listed below.

Geochemistry/Laboratory	\$	6,076.94
Drilling	\$	2,671.98
Other	\$	88.29
Administration	\$	883.72
Total Costs	\$	9,720.93

## **REFERENCES**

Turner, N.J. 2000, EL61/94 Arthur River Interim Report to 31<sup>st</sup> May 2000.