

# **Final Report**

**April 2018 to May 2019**

**EL15/2009**

**Hawkes Creek North**

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**Date: October 2020**

## **ABSTRACT**

This report covers the period from April 2018 until the surrender of the lease which was approved on 23 May 2019. No exploration work was undertaken at the licence site. Following completion of process development at the company's Wynyard factory in 2018, approval to obtain a mining lease over the land was sought, and was granted on 8 March 2019.

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## **1. INTRODUCTION**

Tasmanian Advanced Minerals Pty Ltd (TAM) is actively mining silica from three locations in Tasmania, one near Corinna and two areas near the Arthur River in northwest Tasmania. The Blackwater mine is on the south side of the river two to four kilometres west of Kanunnah Bridge and the Hawkes Creek mine is a further five kilometres to the west, but on the north side of the river. All mined silica is screened on each site, segregated in piles according to chemical impurity profile, and then trucked to TAM's processing facility at Wynyard. Processing involves blending the feed to predetermined chemical impurity levels, removal of discrete particle impurities, drying, and particle size control and separation.

TAM's tenements in the area are shown in Figure 1. EL15/2009 adjoined TAM's currently operating Hawkes Creek mine 27M/2009 to the north and west. The licence was held by TAM.

The silica resource on the EL15/2009 is present as a ridge intersected by three gullies, and designated First Hill Northwest through to Fourth Hill Northwest.

Datum used in this report is GDA94.

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

Previous work on the licence comprises two small test pitting programs, in 2010 and 2011. The results were reported in Turner 2010 and Turner 2012 respectively. In 2014 a bulk test pit program was undertaken, reported in Stuart 2015. The locations of the small test pits, and the three bulk test pits are shown in Figures 2 and 3 respectively.

The previous work indicated the presence of silica flour, tightly packed silica lump, and rocky agate in a series of four hills along a north-west alignment.

The silica flour deposit on Second Hill NW is thin and narrow. Assuming a width of 15m and an average depth of 3.5m a very speculative resource estimate for the deposit was given as 34,125 tonnes.

On Third and Fourth Hills Northwest a 3m thickness isopach was interpolated from the test pit data. The combined area enclosed by the 3m isopach at Third and Fourth Hills NW is substantial and 16 test pits with an average thickness of silica flour of 4.9 m fall inside the isopach. Assuming an overall average thickness of 4m of silica flour within the 3m isopach allows the following speculative resource estimate to be made 64,400 tonnes.

The bulk testing program revealed the quality of the silica to be extremely variable. In particular chromium impurity, which is an intense glass colourant, has been a limiting parameter in this resource.

Whereas in other extractive operations of TAM, poor quality silica can be separated

from good quality by selective mining techniques and quality control procedures, the proportion of high impurity silica in the bulk test pits was too high, and the variability too great to permit commercially viable selective mining.

In 2015 and 2016 laboratory and small scale testing was undertaken to determine the ability of high intensity magnets to remove chromite impurities. This was followed by design optimisation work for a commercial scale system, control system design, and then installation of the new "FOT" magnet system in 2017.

Development and implementation of the FOT system has improved the ability of TAM's processing facility to remove magnetic and para magnetic minerals such as chromite even when particles consist of minor chromite on silica.

This processing improvement resulted in the silica on the licence becoming technically suitable and therefore commercially viable as a feed component at TAM's Wynyard factory, so a mining lease application was made.

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

No exploration work was conducted. All exploration and process development work was completed in the previous reporting period.

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

Not applicable.

### **5. CONCLUSIONS**

The processing improvement resulted in the silica on the licence becoming commercially and technically viable as a feed component at TAM's Wynyard factory, so a mining lease application over the licence area was made.

### **6. ENVIRONMENT**

Not applicable, no work on the licence itself was undertaken.

### **EXPENDITURE**

No exploration expenditure was incurred during the reporting period.

## **REFERENCES**

Turner, N. J. 2010. EL15/2009 Hawkes Creek; EL35/2003 Stephens Rivulet and Hawkes Creek; ML 9M2007 Blackwater. Combined interim report on work in February-March, 2010.

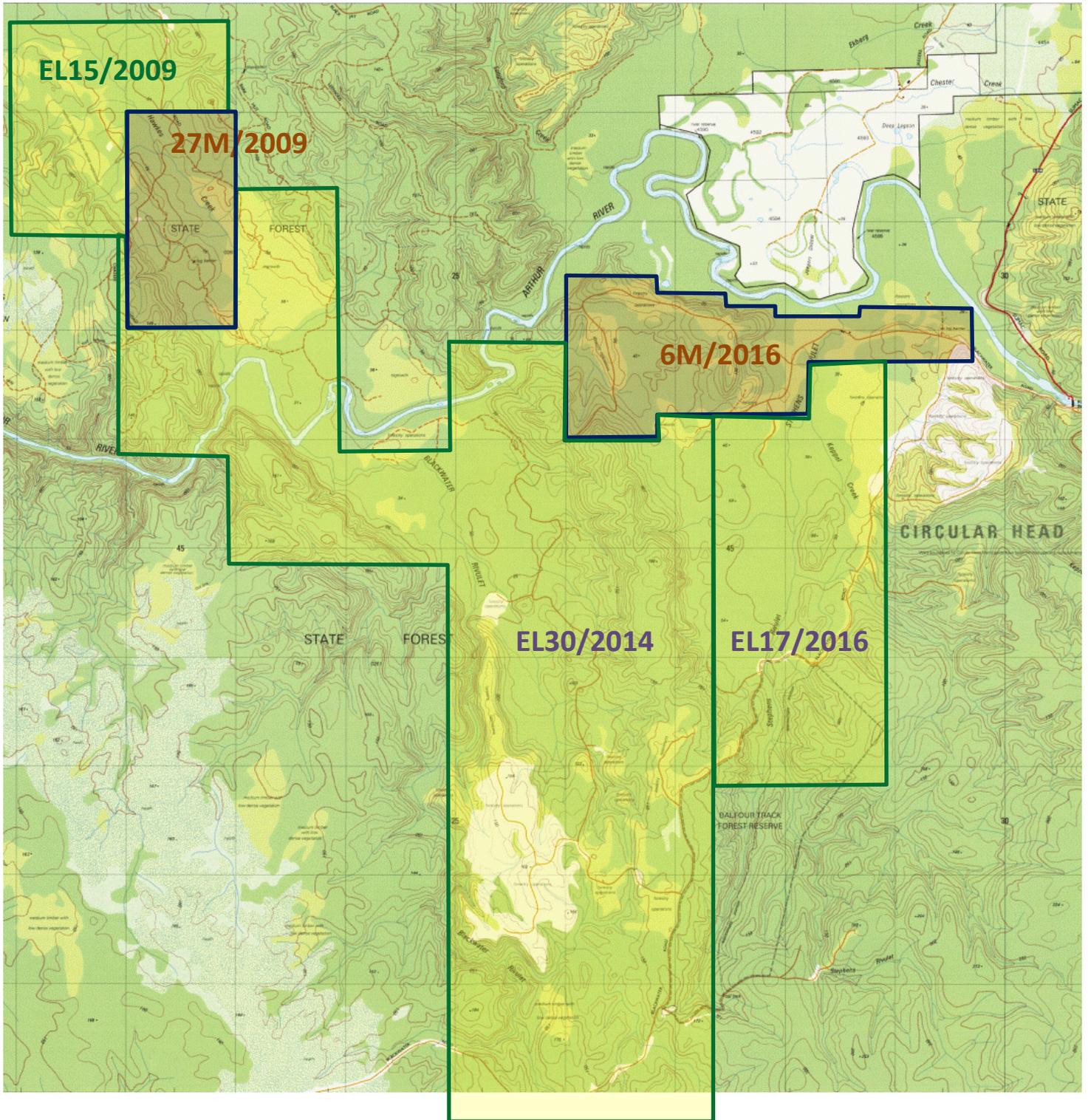
Turner, N.J. 2012. EL15/2009 Hawes Creek; ML 27M/2009 Hawkes Creek. Combined report November, 2011 – March, 2012

Stuart, C.C. 2015. Annual Report for the Period April 2014 to March 2015 EL15/2009 Hawkes Creek North.

Stuart C.C. 2017 Annual Report for the Period April 2016 to March 2017 EL15/2009 Hawkes Creek North.

Stuart C.C. 2018 Annual Report for the Period April 2017 to March 2018 EL15/2009 Hawkes Creek North.

**Figure 1**  
**TAM's Tenements in the Arthur River Region**



321 500mE

322 000mE

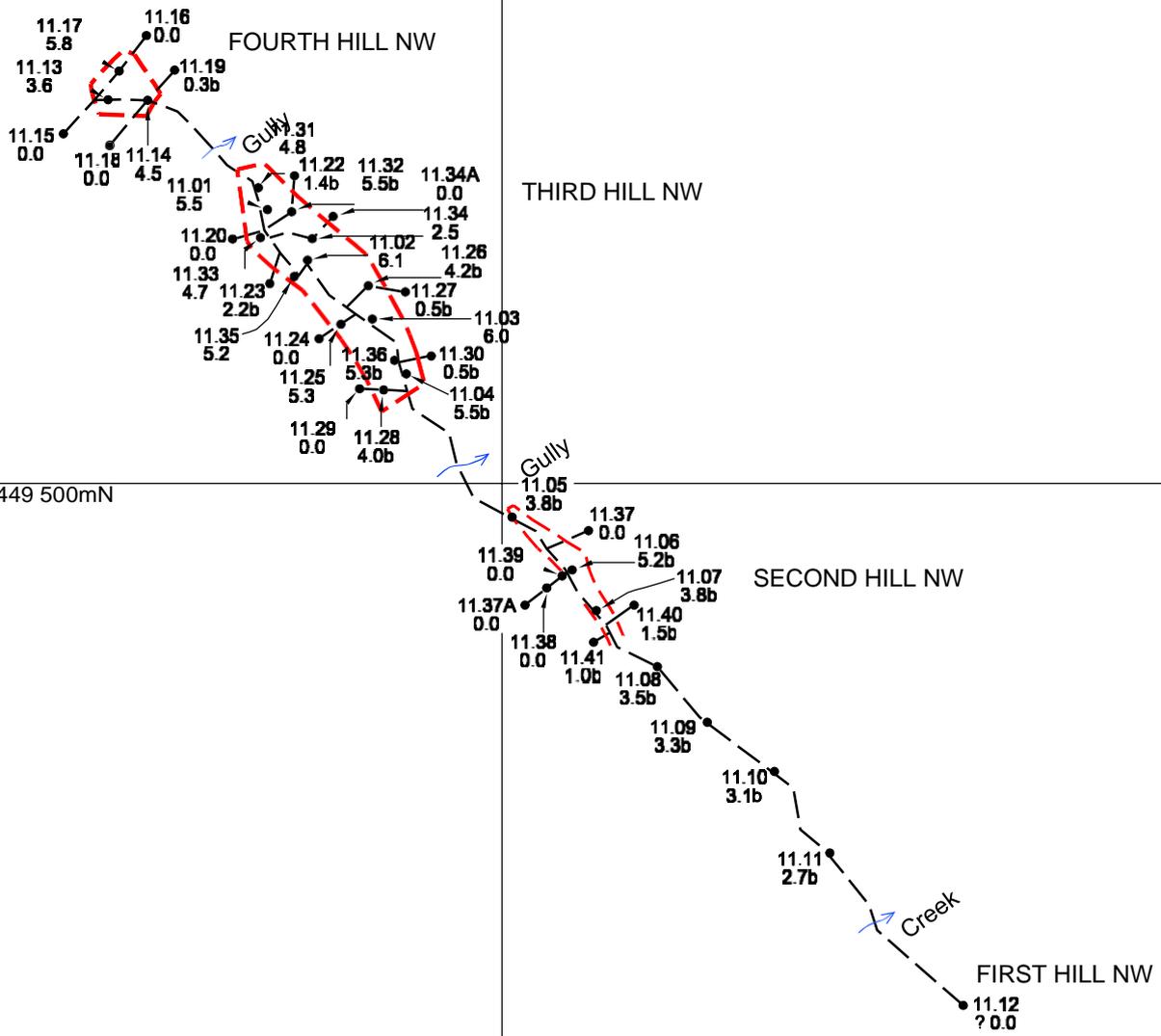
5 449 500mN

5 449 500mN

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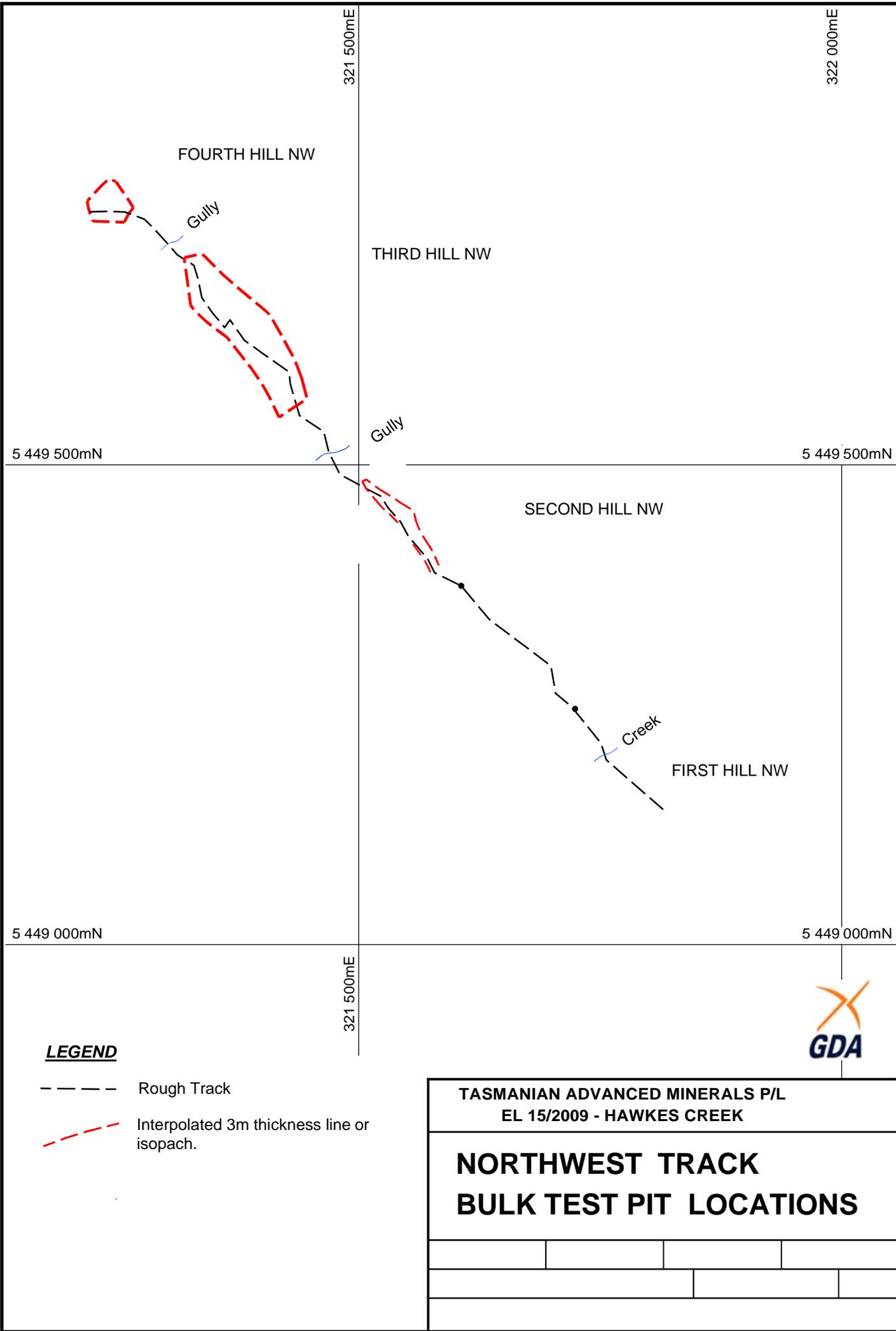
321 500mE



**LEGEND**

-  Rough Track
-  11.33  
4.7 Test pit with the number (11.33) and thickness (4.7m) of pale silica flour and lump silica.
-  Interpolated 3m thickness line or isopach.
-  Indicates that the bottom of the pale silica was reached.

<b>TASMANIAN ADVANCED MINERALS P/L</b>			
<b>EL 15/2009 - HAWKES CREEK</b>			
<b>TEST PITS ALONG THE NORTHWEST TRACK</b>			
Compiled :	Drawn :	Date :	Scale :
Nic Turner	Gillian Bennett	23/03/12	1:5000
Survey :	Hand held GPS, Tape and Compass	File :	HC-TP-NWTrack.dwg
			<b>Figure : 2</b>
<b>N. J. Turner Geological Services Pty Ltd</b>			



**LEGEND**

- Rough Track
- - - Interpolated 3m thickness line or isopach.



<b>TASMANIAN ADVANCED MINERALS P/L</b> <b>EL 15/2009 - HAWKES CREEK</b>			
<b>NORTHWEST TRACK</b> <b>BULK TEST PIT LOCATIONS</b>			