



Annual Report for the Period

April 2017 to March 2018

EL15/2009

Hawkes Creek North

Author: Chris Stuart

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ABSTRACT

This report details the work undertaken in relation to licence EL15/2009 Hawkes Creek North during the 12 month period to March 4 2018. No exploration work was undertaken at the licence site. As the resource has higher levels of impurities than hitherto capable of being processed at TAM’s Wynyard factory, during the year installation and testing of an enhanced magnetics removal system was undertaken. The results confirm the resource is now commercially viable and a mining lease application will be submitted in the near future.

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1. INTRODUCTION

Tasmanian Advanced Minerals Pty Ltd (TAM) is actively mining high purity 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 according to chemical impurity profile, and 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 adjoins TAM's currently operating Hawkes Creek mine 27M/2009 to the north and west. The licence is 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 in early 2017 fabrication commenced.

3. EXPLORATION COMPLETED DURING THE REPORTING PERIOD

No exploration work was conducted on the licence itself. Work in relation to the licence focussed installation of the magnet system, followed by testing.

The in-house designed system is known as the FOT magnet system. It was installed in March and April 2017. Commissioning and control system debugging continued through May (ref. Appendix 1, Activity Photograph).

Detailed testing commenced in June and continued throughout the year when production requirements permitted.

4. DISCUSSION OF RESULTS

At TAM, mining samples and plant feed samples are prepared to simulate the removal of impurities by the Wynyard processing plant, by a method known as the standard Cut. In this way, plant feed samples are used to predict the quality of products, so that production meets specification requirements, rather than indicate the total impurities in the plant feed.

Prior to installation of the FOT system, the maximum plant feed level by the standard Cut method that provided the required level of confidence of meeting specification for one particularly challenging product was 1.2ppm of Cr. Following FOT installation that level now exceeds 5ppm of Cr. This increase in the usable level of Cr in the plant feed means that the implementation of the FOT system has resulted in this licence's resource becoming commercially viable.

5. CONCLUSIONS

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.

Chromite impurity problems are not limited to EL15/2009. Significant areas of TAM's mining leases have chromite contamination. So the success of the FOT project has benefits for using lower grade silica from other lease and exploration licences. But, specifically with respect to this particular licence, the resource is now viable so a mining lease over the area will be sought.

6. ENVIRONMENT

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

EXPENDITURE

Expenditure for the exploration (process development) program is given below:

Activity	Expenditure
Purchase fittings, fabrication , installation of FOT	\$ 178,160
Develop control system	\$ 66,608
Install and optimise control system	\$ 83,249
Total	\$328,017

REFERENCES

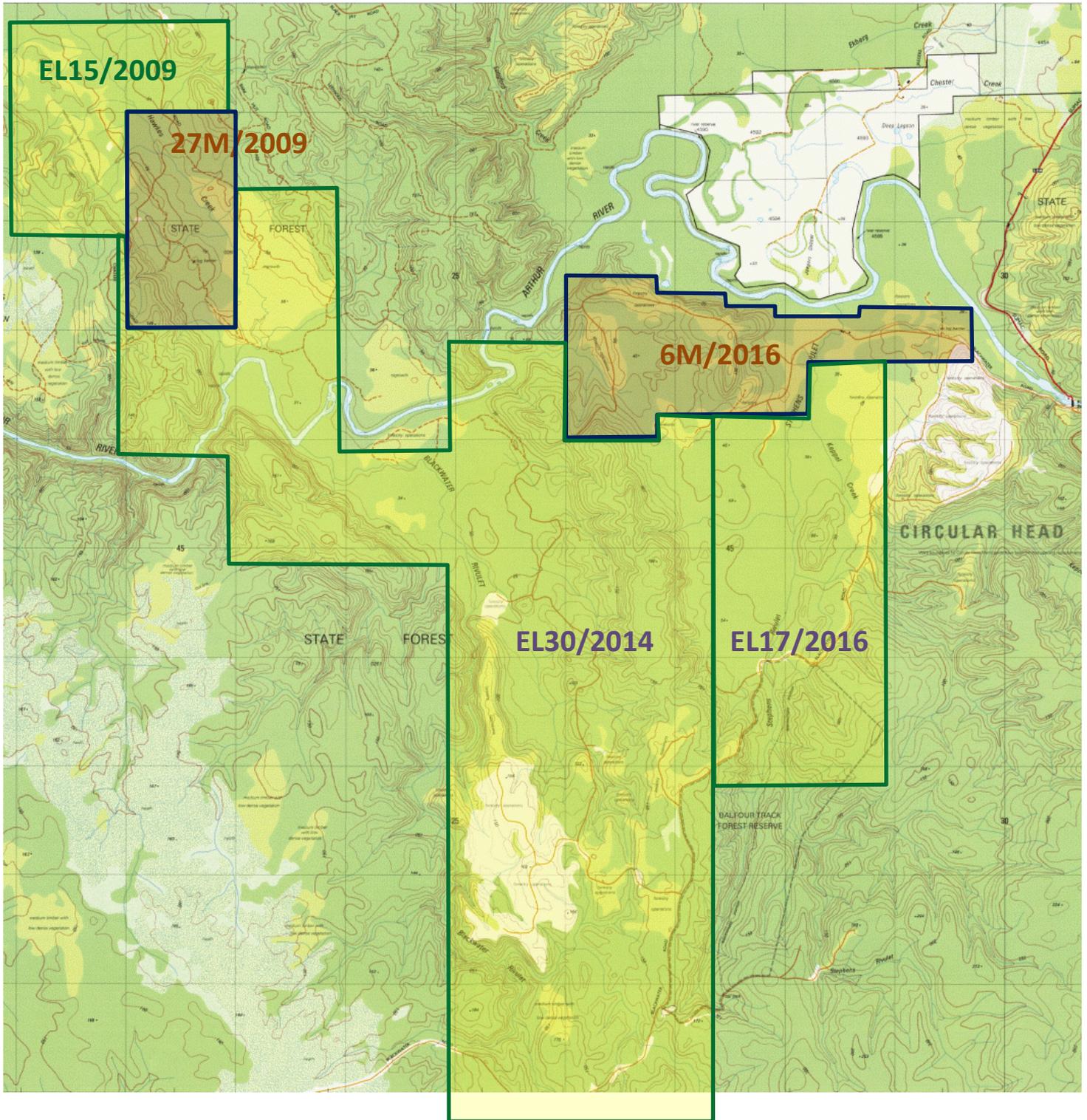
Turner, N. J. 2010. EL15/2009 Hawkes Creek; EL35/2003 Stephens Rivulet and Hawkes Creek; ML 9M2007 Blackwater. Combined interim report on work in February-March, 2010.

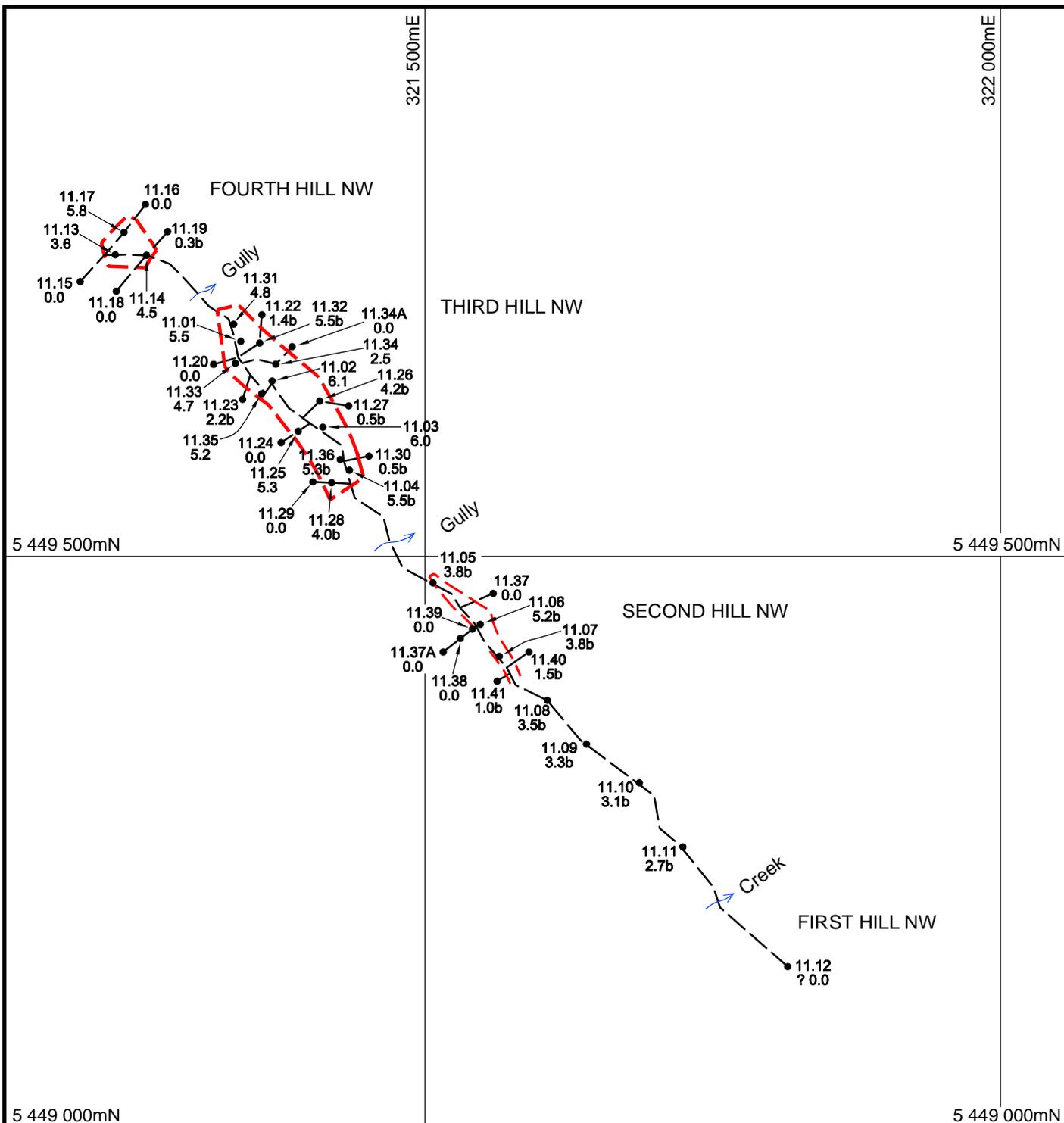
Turner, N.J. 2012. EL15/2009 Hawes Creek; ML 27M/2009 Hawkes Creek. Combined report November, 2011 – March, 2012

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.

Figure 1
TAM's Tenements in the Arthur River Region





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.
- b Indicates that the bottom of the pale silica was reached.



TASMANIAN ADVANCED MINERALS P/L
EL 15/2009 - HAWKES CREEK

**TEST PITS ALONG THE
NORTHWEST TRACK**

Compiled : Nic Turner	Drawn : Gillian Bennett	Date : 23/03/12	Scale : 1:5000
Survey : Hand held GPS, Tape and Compass		File : HC-TP-NWTrack.dwg	Figure : 2

N. J. Turner Geological Services Pty Ltd

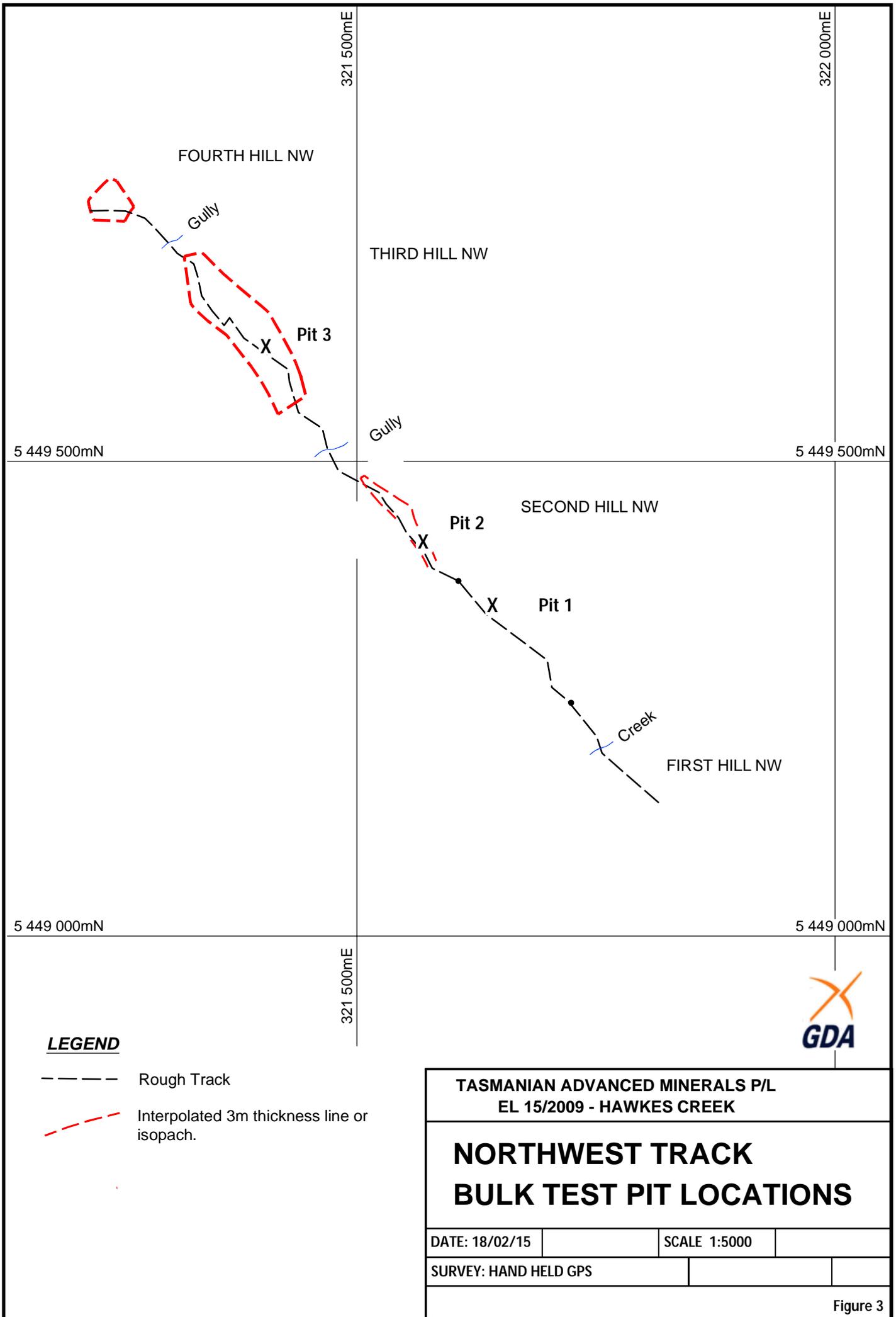


Figure 3

Appendix 1: Activity Photograph
FOT system installed - May 2017

