

## ANNUAL REPORT FOR EL 22848 Lake Sarah North 2

for the period  
**19/12/2007 to 18/12/2008**

**McFarlane**  
NORTHERN TERRITORY

Volume **1** of **1**

**1:250,000 SHEET:**      The Granites      SF52-03

**1:100,000 SHEET:**      McFarlane      4757

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**TENEMENT HOLDERS:**      Australian Tenement Holdings Pty Ltd

**DISTRIBUTION:**      ☐ Northern Territory Department of Regional Development,  
Primary Industry, Fisheries and Resources

☐ Newmont Asia Pacific

☐ Central Land Council

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## **SUMMARY**

This is the first annual report on EL 22848 for the period 19 December 2007 to 18 December 2008.

No field exploration was carried out over the area.

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## 1. INTRODUCTION

EL 22848 – Lake Sarah North 2 – as part of the McFarlane Project, was granted to Australian Tenement Holdings Pty Ltd on 19 December 2007. This report is the first annual report on exploration carried out on the tenement.

## 2. TENEMENT DETAILS

Tenement details are listed in Table 1:

**Table 1: Tenement Summary for EL 22848**

Licence	Status	Grant Date	Area/Blocks
EL 22848	Granted	19/12/2007	4

## 3. LOCATION AND ACCESS

EL 22848 is located on The Granites 1:250 000 map sheet (McFarlane 4757), approximately 650 km northwest of Alice Springs. Access is by air or via the Tanami Highway and a network of pre-existing and newly formed tracks and can be limited during the wet season (December to March).

## 4. GEOLOGY

The Granites-Tanami Goldfields lie in the eastern part of the Early Proterozoic Granites-Tanami Inlier, which is part of the Northern Australian Orogenic Province (Plumb, 1990). The Inlier abuts the Arunta Complex to the south and east and is probably a continuation of the Halls Creek Orogen in Western Australia (Hendricks et al., 2000). It underlies younger cover sequences including the extensive Paleozoic Wiso Basin on its northeastern margin, and the Victoria River Basin to the north. To the west clastic sediments of the Middle Proterozoic Birrindudu Basin overlie and separated the Inlier from the similar aged rocks of the Halls Creek Province.

The oldest rocks of the Tanami region belong to the Billabong Complex, a suite of Archean age gneiss and schist. These are unconformably overlain by the Proterozoic MacFarlanes Peak Group (mafic volcanic and volcanoclastic rocks), followed by a thick succession of clastic sediments of the Tanami Group (Hendricks et al., 2000). A suite of syn- to post-deformation dolerites and gabbros are found intruding both the MacFarlane Peak and Tanami Groups.

Complex polyphase deformation during the Barramundi Orogeny (1845-1840Ma) has affected the entire Granites-Tanami Inlier. It appears to have been largely controlled by

two sets of regional scale fundamental crustal fractures that trend NNE and WNW. This is evidenced by the orientation of successive phases of macroscopic folding in the region and the consistent sympathetic trends of late tectonic faults.

Peak metamorphism during the Barramundi Orogeny reached amphibolite facies (Granites Gold Mine), but is more generally greenschist facies through the Inlier (Callie Gold Mine). Contact metamorphic aureoles, commonly identified in polytactic schist units by randomly orientated andalusite porphyroblasts, are well developed at the margins of the syn- and post-orogenic granite plutons.

Localised extension followed, forming small basins, that filled with shallow marine sediments to the west (Pargee Sandstone) and pillow basalts and turbiditic sediments to the east (Mt Charles Formation).

Following the period of extension, widespread granite intrusion and volcanism followed in the period 1830 – 1810 Ma. At least three suites of granitic intrusives and two volcanic complexes are present. The last intrusion of (undeformed) granite occurred at around 1800 – 1795Ma, with the intrusion of The Granites Suite (Hendrickx et al, 2000).

Residual hills of gently folded Carpentarian Gardiner Sandstone unconformably overlie Early Proterozoic lithologies. Younger flatlying Cambrian Antrim Plateau Basalts are also preserved as platform cover in areas protected from erosional stripping.

Tertiary drainage channels, now completely filled with alluvial and lacustrine clays and calcrete are a major feature of the region. Some drainage profiles are 10 km wide and greater than 100m deep.

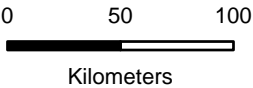
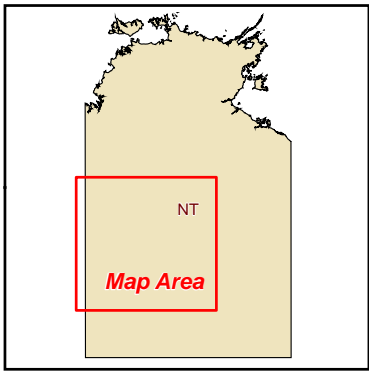
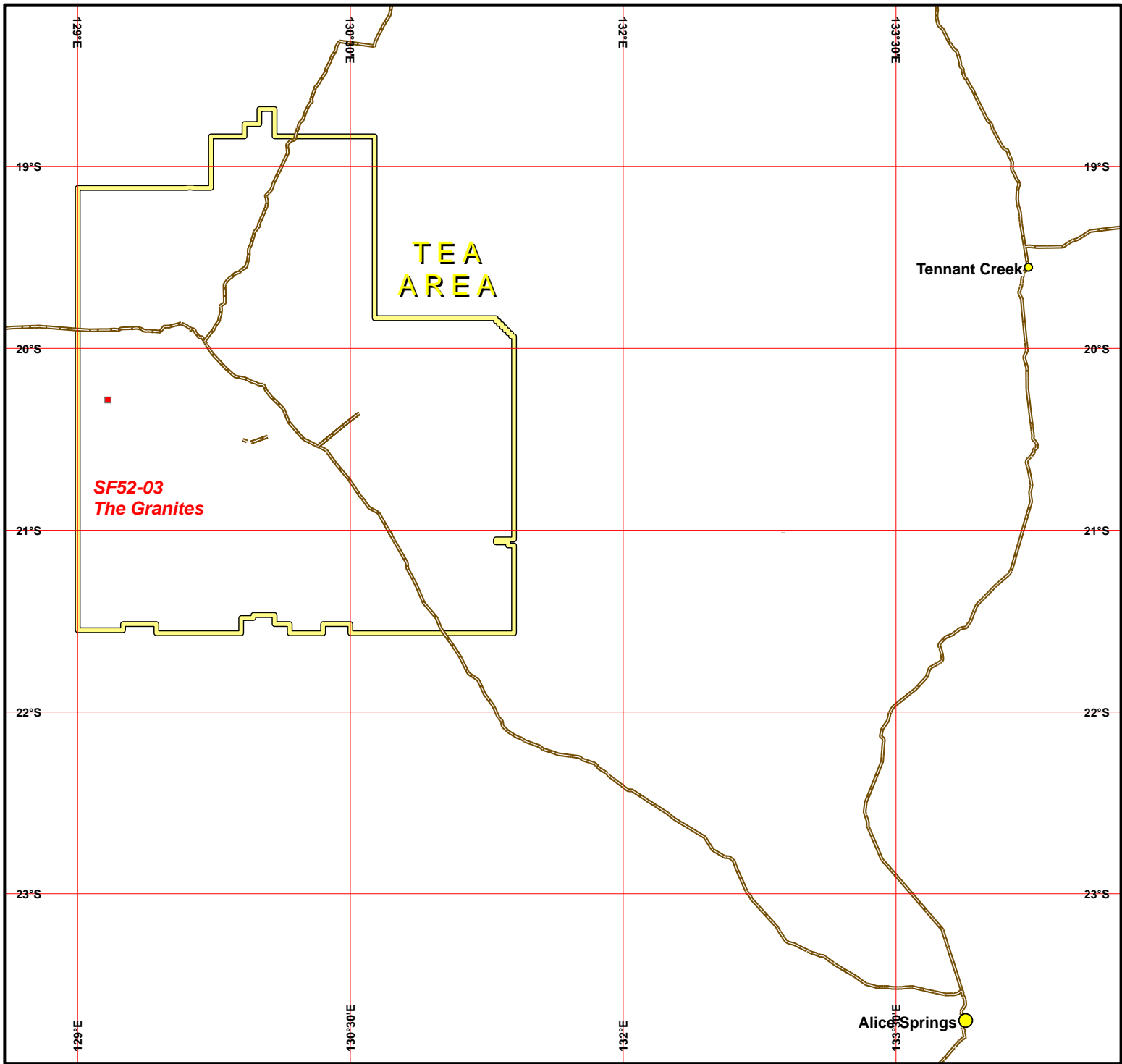
A desert terrain comprising transported and residual colluvial cover sediments and aeolian sand blanket a large portion of the Inlier, with an estimated outcrop exposure of less than 10% of the early Proterozoic lithological units.


Gold mineralisation within the Newmont Tanami tenement holdings is dominantly hosted by the Tanami Group, a sequence of fine to medium-grained turbiditic metagreywackes with lesser amounts of metapelite, carbonaceous siltstone and schist, banded ironformation, chert and calcsilicates. (Hendrickx et al, 2000). Owing to their more resistant nature, only the cherts and iron-formations and associated interbedded graphitic schists tend to outcrop above the sand plain. The interlayered pillow basalts and sediments of the Mt.Charles Formation at the Tanami Mine deposits also host significant gold mineralisation.

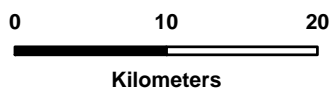
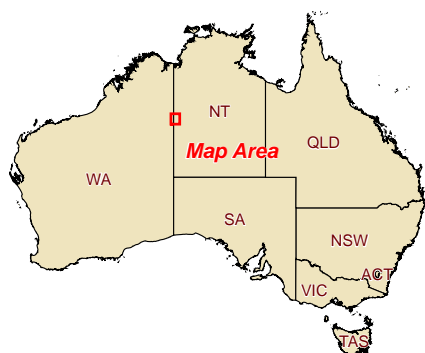
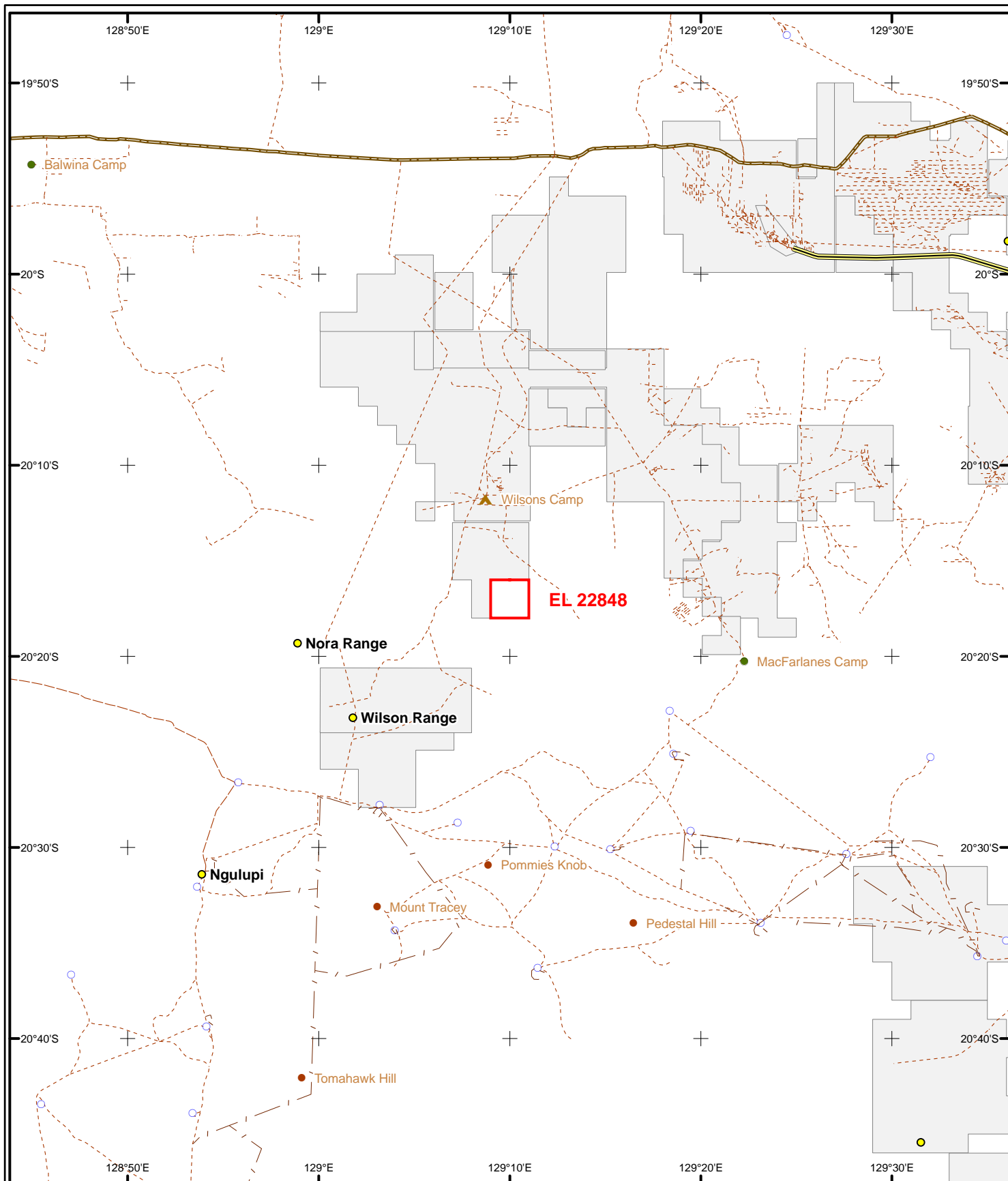
## **5. EXPLORATION DURING THE PERIOD 19 DECEMBER 2007 TO 18 DECEMBER 2008**

No field exploration has been carried out over the tenement area as Newmont is compiling a saleable tenement package and is anticipating the divestment of the ATH exploration tenements in the near future subject to an improvement in market conditions.

### **Figure 1 Tenement Location**



 <b>NEWMONT EXPLORATION PTY LTD</b>	
<b>Tanami Project</b>	
<b>EL 22848</b>	
<b>TENEMENT LOCATION</b>	
Author: M. Eisenlohr	Scale: 1:3 500 000
Drawn: V. Preedy	Date: Jan 2009
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**NEWMONT** **NEWMONT EXPLORATION PTY LTD**

**Tanami Project**

**EL 22848**

**LOCATION AND ACCESS**

Author: M. Eisenlohr

Scale: 1:500 000

Drawn: V. Preedy

Date: Jan 2009

File: TAN\_Lnd\_Ten\_A4\_EL22848Access.mxd Projection: Lat/Long (GDA 94)  
 \AUS\NT\Tanami\_Tenements\MXD\Reports\TAN\_Lnd\_Ten\_EL22848\

## Figure 2      Access

### 6.      REFERENCE LIST

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