

## PARTIAL RELINQUISHMENT REPORT FOR EL 23886 (RAWLINS SOUTH)

for the period  
**10 October 2005 to 9 October 2008**

**Lander River JV**  
**NORTHERN TERRITORY**

Volume 1 of 1

<b>1:250,000 SHEET:</b>	Lander River Mt Peake	SF53-01 SF53-05
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<b>1:100,000 SHEET:</b>	Jarrah Jarrah Winnal Willowrah Conical Hill	5556 5456 5455 5555
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**TENEMENT HOLDER:** Newmont Tanami Pty Ltd

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## SUMMARY

This report is the partial relinquishment report for EL 23886 – Rawlins South - and as such describes all exploration activity on the relinquished part of licence from the 10th of October 2006 to the 9th of October 2008. The tenement is part of an area covered by the Lander River Joint Venture (LRJV) between Newmont Tanami Pty Ltd (Newmont) who are managers of the Joint Venture and Yuendumu Mining Company NL (YMC). The tenement is located approximately 350km NNW of Alice Springs and is being explored for economic gold mineralisation.

The first two years of exploration comprised largely reconnaissance work such as wide spaced RAB holes along access tracks, regolith mapping, surface sampling, gravity and aerial magnetic surveys. The focus of this work has been the TAN16 Target in the northwest identified during the Tanami Regional Framework study. More detailed exploration was conducted around Waldrons Hill following up on historical rock chip results and old diggings.

The tenement was included in Newmont's Tanami Regional Framework study which highlighted the prospectivity of the area. A detailed helicopter borne gravity survey was conducted in late 2006 and a 100m line spacing airmag survey was completed over portions of the area in July 2007. Extensive reconnaissance surface sampling has been conducted over much of the tenement. There has been Reconnaissance RAB drilling in May 2007 and prospect scale RAB drilling in May 2007 and October 2008. The new geophysics field data has been used in a new geological interpretation of the area and remote sensing data has been used for regolith mapping.

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## 1. INTRODUCTION

This report is the partial relinquishment report for EL 23886 and describes all exploration activities within the surrendered portion for the period 10 October 2006 to 9 October 2008.

## 2. TENEMENT DETAILS

A summary of the tenement details is listed in Table 1. As the licence falls within the Lander River JV Area of Interest, EL 23886 has been included under the Joint Venture Agreement. It is 100% held by Newmont Tanami Pty Ltd.

**Table 1      Tenement Summary**

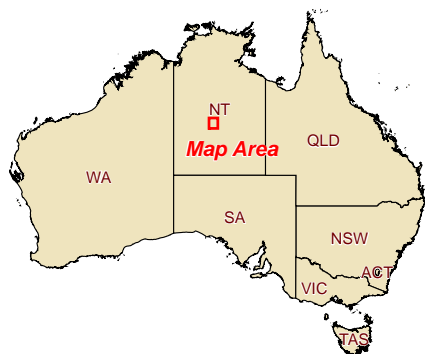
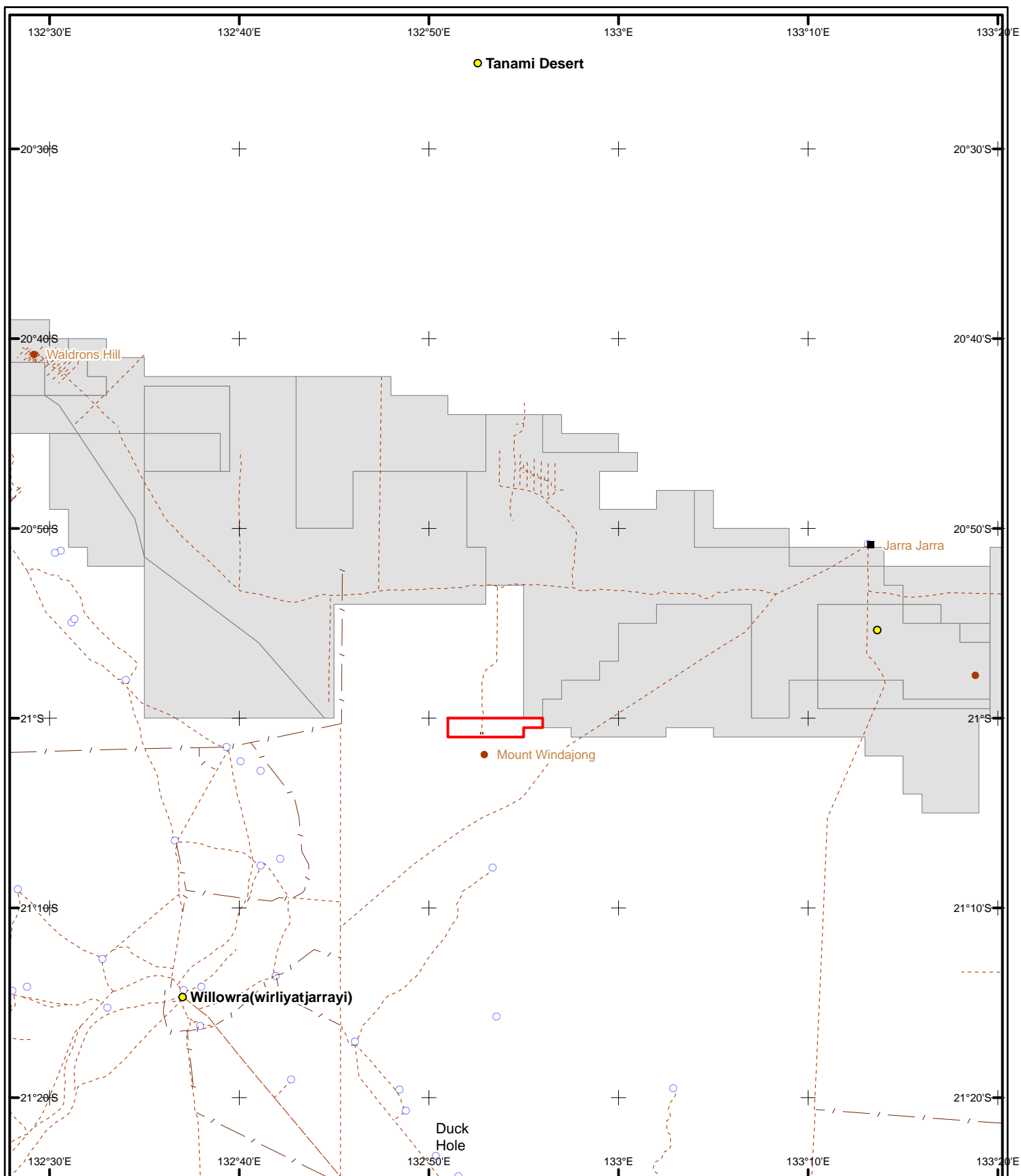
Licence	Detail	Grant Date	Blocks relinquished	Expiry
EL 23886	Grant	10/10/2006	5	9/10/2012

## 3. LOCATION AND ACCESS

EL 23886 is located approximately 300km north of Alice Springs and between 120km west to northwest of Barrow Creek. Access from Barrow Creek is via the Stuart Highway to the north and then using the Ali Curung to Jarra Jarra track. In 2007 Newmont constructed an access track from the Jarra Jarra to Willowra Rd to the Waldron's Hill prospect. In addition in 2008 Newmont constructed a series of north-south access tracks off the Waldron's Hill track to allow better access to the region.

**Figure 1      Location and Access**


**Figure 2      Tenement Relinquishment**

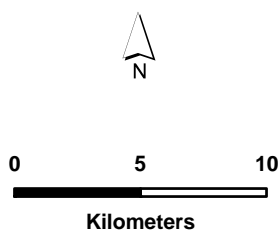
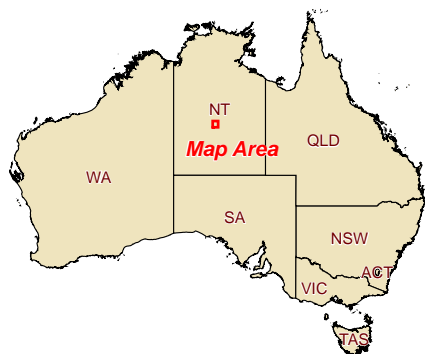
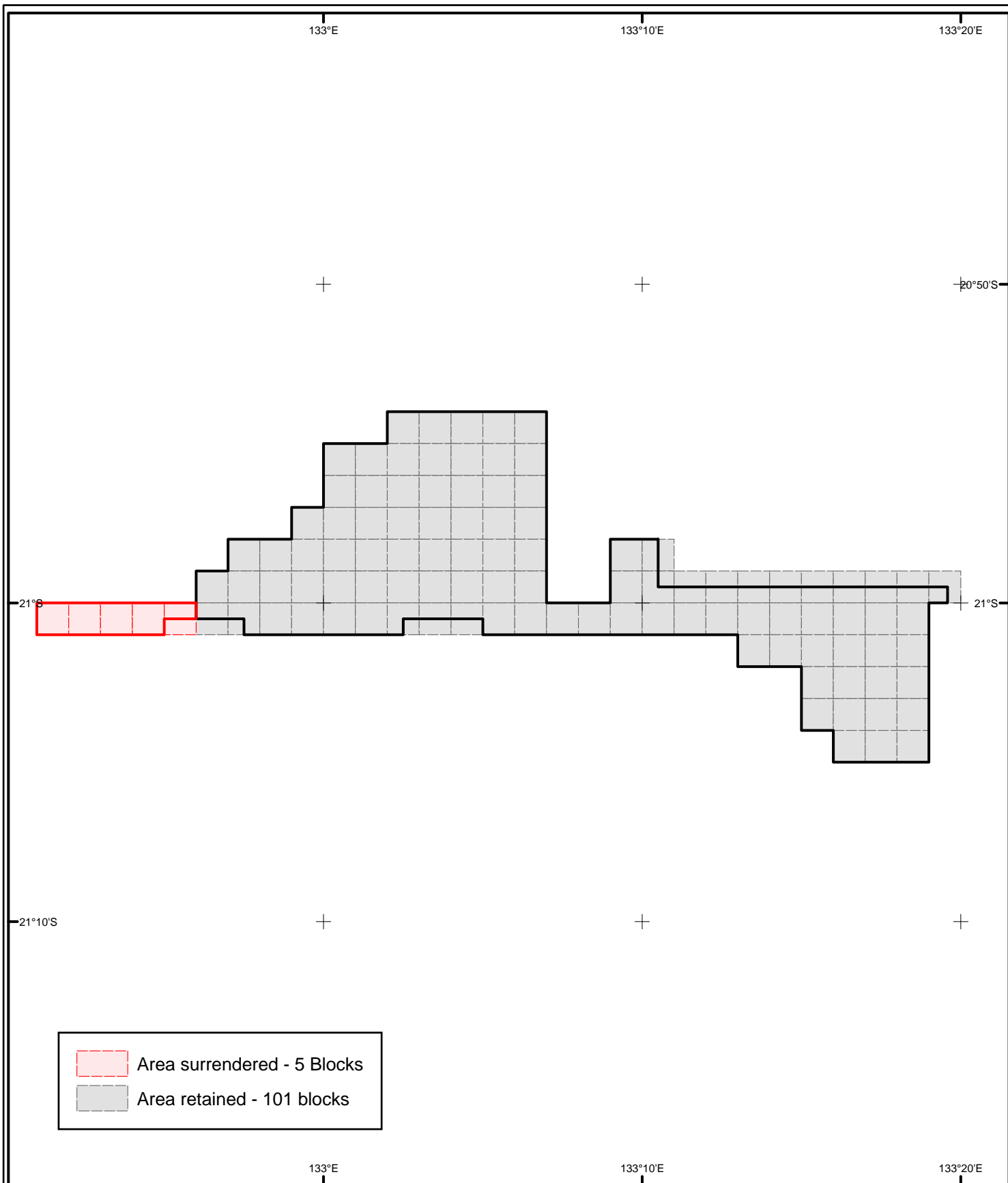



Surrendered Area



0 10 20  
Kilometers

 <b>NEWMONT EXPLORATION PTY LTD</b>	
<b>Barrow Creek Project</b>	
<b>EL 23886</b>	
<b>LOCATION AND ACCESS</b>	
Author: M. Eisenlohr	Scale: 1:500 000
Drawn: V. Preedy	Date: Mar 2009
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 <b>NEWMONT EXPLORATION PTY LTD</b>	
<b>Barrow Creek Project</b>	
<b>EL 23886</b>	
<b>TENEMENT RELINQUISHMENT</b>	
Author: M. Eisenlohr	Scale: 1:300 000
Drawn: V. Preedy	Date: Mar 2009
File: TAN_Lnd_Ten_A4_23886psurrrRelinq.mxd Proj: Lat/Long (GDA 94) \AUS\NT\Tanami_Tenements\MXD\Reports\	

## **4. PREVIOUS EXPLORATION**

### **4.1 Previous Exploration by other companies**

Exploration at Lander River has historically been mainly for base metals, gold and Sn/W/Ta deposits. In the vicinity of Barrow Creek numerous copper workings can be found, including Home of Bullion and Petricks. The area to the south of the Crawford Range is the site of the majority of tin, tungsten and tantalum workings, most being small, low tonnage operations.

The Waldron's Hill gold prospect north of Lander River was worked briefly by Harold Waldron until his death in 1937. The workings consist of a 60 m long costean and a 5-6 m deep shaft at the western end of the hill. Rock chip samples of up to 3.75dwt (5.83g/t) gold were reported from mullock adjacent to the shaft during the 1941 Aerial Geological Survey of Northern Australia.

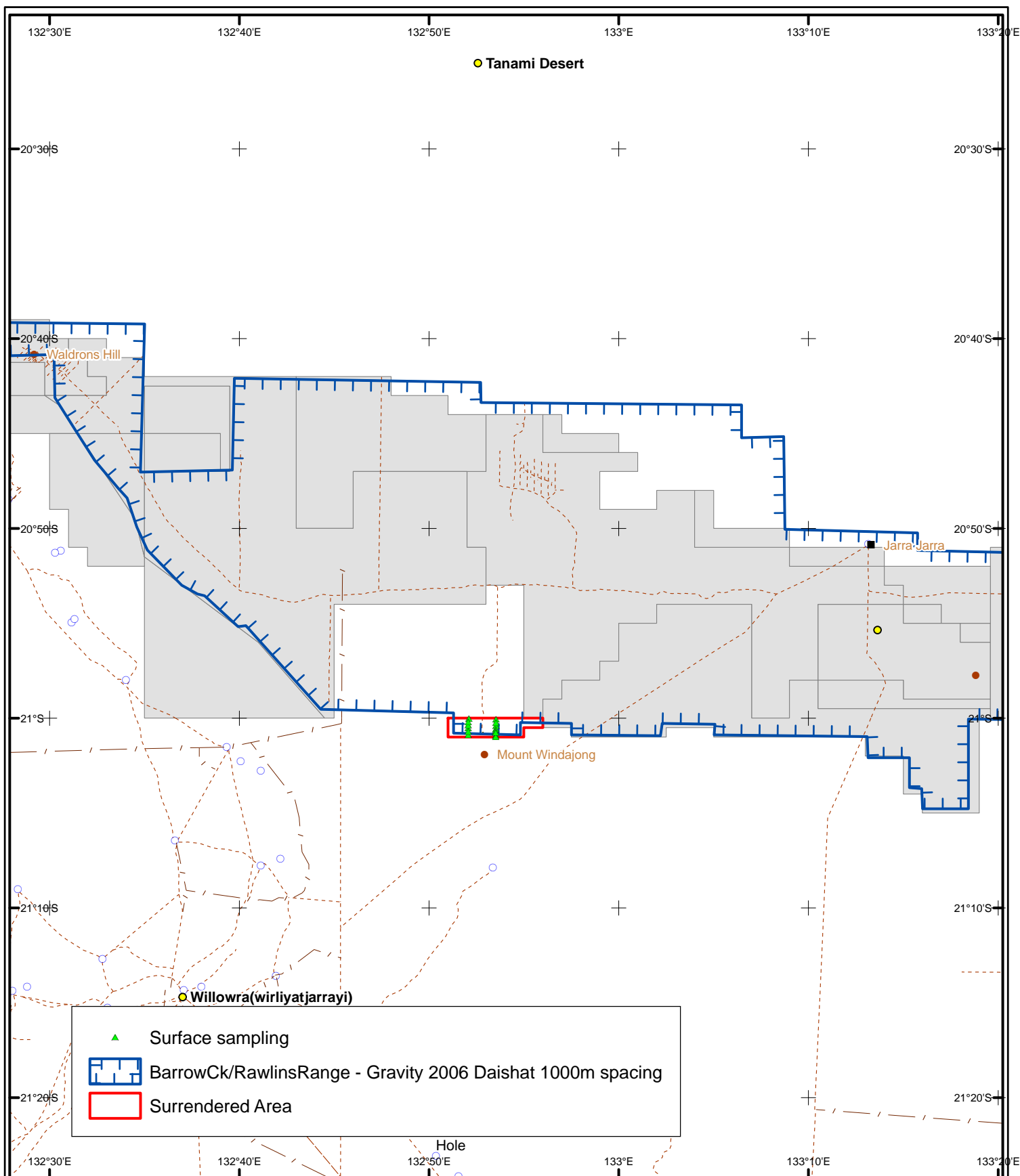
Kewanee Australia Pty Ltd undertook a broad exploration program between 1970 and 1974 within the Crawford-Osborne Range area. Several targets were delineated by a combination of airborne magnetics, radiometrics and EM survey techniques. Targets generated by this method were followed up with geological mapping, sampling and some percussion drilling. Kewanee routinely assayed for Cu, Pb & Zn and less commonly for W, Ta, Li, Mn, Be, Au & Ag.

### **4.2 Previous Exploration by Newmont Tanami Pty Ltd**

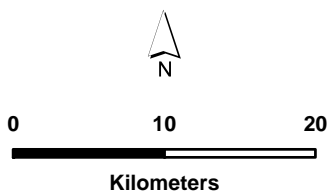
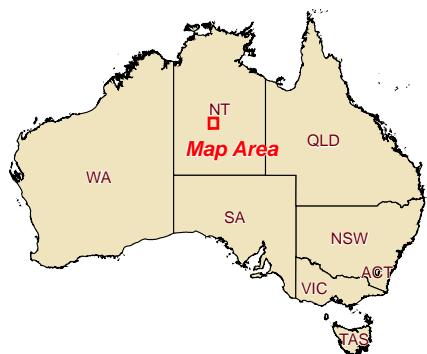
Newmont and its precursor companies have had an exploration presence in the Barrow Creek area since 1988. Work over this time has included reconnaissance techniques such as soil sampling, and vacuum and RAB drilling, as well as detailed aerial magnetic/radiometrics surveys, regional ground-based gravity surveys and detailed regional regolith mapping. Detailed prospect evaluation work has also been conducted, including reverse circulation and diamond drilling as well as prospect-based IP surveys.

Newmont developed the Tanami Regional Framework Study during 2006 to identify prospective regions and target areas. The study highlighted the Lander River region which includes EL's 8766, 23880, 23883, 23884, 23885, and 23886, specifically TAN 16 centred on the western end of the tenement package including Waldron's Hill at the western tip.

Recent exploration in the Lander River region has focused on acquiring regional data sets to better assess the prospectivity of the area. A detailed 1x1km helicopter borne gravity survey was completed in November 2006, a 100m line spacing airmag survey was completed over the northern half of the tenement package in July 2007. In May 2006 broad spaced RAB drilling along access tracks was used to test the thickness and nature of regolith through the region as well as collect some bedrock information. There was a limited program of prospect scale RAB drilling at Waldron's Hill. Starting in 2007 surface sampling, including soil (BLEG A) and lag, has been carried out in areas interpreted to have less than 15m of transported cover.



	Surface sampling
	BarrowCk/RawlinsRange - Gravity 2006 Daishat 1000m spacing
	Surrendered Area



<b>NEWMONT EXPLORATION PTY LTD</b>	
<b>Barrow Creek Project</b>	
<b>EL 23886</b>	
<b>EXPLORATION INDEX</b>	
Author: M. Eisenlohr	Scale: 1:500 000
Drawn: V. Preedy	Date: Mar 2009
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## Figure 3 Exploration Index

### 5. GEOLOGY

#### 5.1 Regional Geology

The oldest exposed basement in central Australia comprises metamorphic and igneous rocks of the Arunta Inlier (Haines et al., 1991). Rocks of the Arunta Inlier are interpreted as being at least partly correlative with sedimentary and volcanic sequences of the adjacent Tennant Creek and Granites -Tanami Inliers.

The Arunta Inlier (Early-Middle Proterozoic) is characterised by metamorphosed sedimentary and igneous rocks of low to medium pressure facies. Deformation and regional metamorphism to upper greenschist facies took place between 1810-1750 Ma (Black, 1981). Shaw and Stewart (1975) established three broad stratigraphic subdivisions based on facies assemblages and lithological correlations. From oldest to youngest, these subdivisions are named Division 1, 2 and 3. Using this model defined by Shaw and Stewart (1975), the orthogneiss east of Osborne Range, the calc-silicate rocks west of Crawford Range and the Bullion Schist would be included in Division 2, and the Ledan Schist in Division 3 of the Arunta Inlier.

Unconformably overlying these rocks are the Hatches Creek Group sedimentary and volcanic rocks. Blake et al. (1987) formally subdivided the Group into the Ooradidgee, Wauchope and Hanlon Subgroups, comprising a total of 20 Formations and two Members. The Hatches Creek Group is a folded sequence of shallow-water sediments with interbedded volcanic units which reach thicknesses of at least 10,000 metres.

The sediments include ridge-forming quartzites, felspathic, lithic and minor conglomeratic arenites and friable arenite, siltstone, shale and carbonate. The Ooradidgee Subgroup consists mainly of fluvial sediments and sub-aerial volcanics which partly interfinger. The Wauchope Subgroup is characterised by large volumes of volcanics and sediments probably both marine and fluvial in origin. The Hanlon Subgroup may be entirely marine and lacks volcanics (Blake et al., 1987).

Deformation and regional metamorphism took place between 1810-1750 Ma (Black, 1981). Folding was about NW trending axes while metamorphism to upper greenschist facies took place. Later intrusion of both the Arunta basement and the Hatches Creek Group by granitoids of the Barrow Creek Granitic Complex took place around 1660 Ma (Blake et al., 1987). Contact metamorphism and metasomatism are often observed.

Sedimentation associated with the Georgina Basin commenced during the Late Proterozoic with the Amesbury Quartzite and was terminated during the Early Devonian after deposition of the Dulcie Sandstone. The Georgina Basin sequence was mildly affected by the Carboniferous Alice Springs Orogeny.

A long erosional period followed with subsequent deep weathering during the Tertiary produced silcrete and ferricrete horizons. A veneer of Quaternary sands and soils overlays much of the area, except where recent and active alluvial sedimentation is present.

## 5.2 Local Geology

There is little outcrop in the portion of EL 23886 that is being relinquished. There is a thick layer of transported material in a NE flowing paleodrainage feature that covers much of the eastern half of the area. Outcrop immediately north of the tenement boundary and Mt Windajong to the south suggest that cover thins rapidly around the margins of the tenement.

Outcrop immediately north of the tenement includes prominent quartz ridges and low mica schist rises.. The meta sediments have been interpreted as belonging to the Lander Rock Formation, however Newmont places them in the Killi Killi formation that likely represent equivalents of the Tanami Formation. Airmag interpretation indicates that large intrusive bodies cover much of the area being relinquished.

## 6. WORK DONE DURING THE PERIOD ENDING 9 OCTOBER 2008

### 6.1 Soil Sampling

Surface sampling has focused on areas where cover depths are interpreted to be 10-15m or less. Areas sampled are further constrained by a number of exclusion zones through the tenement package. Priority was given to those areas within the TAN16 target identified during the Newmont's 2006 Tanami framework study.

An orientation soil sampling program over Waldron's Hill (at the western end of the TAN16 target) was conducted prior to reconnaissance soil sampling. Initially sampling was on lines 640m apart with samples spaced 160m along them. The reconnaissance sample line spacing was initially widened to 1280m and then 2560m with samples every 320m which allowed for faster coverage of the area. All reconnaissance soil samples were processed by Newmont's proprietary BLEG A method through the it's Welshpool (Perth) lab.

Lag sampling and rock samples were collected during the soil sampling program if suitable material was encountered. There is very little outcrop through the area however pisolitic gravels and quartz scree are comparatively common. Consequently the lag sample spacing generally reflects the soil sample spacing..

**Table 2 Summary of surface sampling**

Tenement	Sampling Type	Number of Samples
EL 23886	Soil – BLEG A	13
	Lag	1

### 6.2 Geophysics

An outcome of the Tanami Framework Study completed middle of 2006 was the need for improved gravity and magnetic coverage over the Barrow Creek/Rawlins Range package of tenements.

On the 12th November 2006 Daishat began a ground gravity survey assisted by a helicopter. It took 14 days to complete 2923 stations at one kilometre station spacing over the combined Barrow Creek and Lander River tenements.

### **6.3 Regolith Mapping**

Regolith mapping has been used to target surface sampling in areas where the regolith regime is thought to be erosional / residual or have <15m of cover. Regolith mapping has relied heavily on remote sensing techniques but have been ground truthed with field data.

## **7. LAND ACCESS**

All proposed Newmont work programs are reviewed by the CLC and if necessary a field visit will be organised by them with the Traditional Owners for the area. This is particularly important in areas, where more intensive exploration activities such as drilling and track clearing is proposed. Additionally if sites that appear significant are encountered during field work the CLC is notified of their nature and location. Several areas of significance have been identified during this process, these are now covered by exclusion zones.

## **8. CONCLUSION**

Surface sampling returned no significant gold results in the area being relinquished, a peak value of 1.58ppb Au in soils was returned.

This portion of the tenement is well outside the interpreted structural corridor that controls mineralisation in the area.

## **9. REFERENCES**

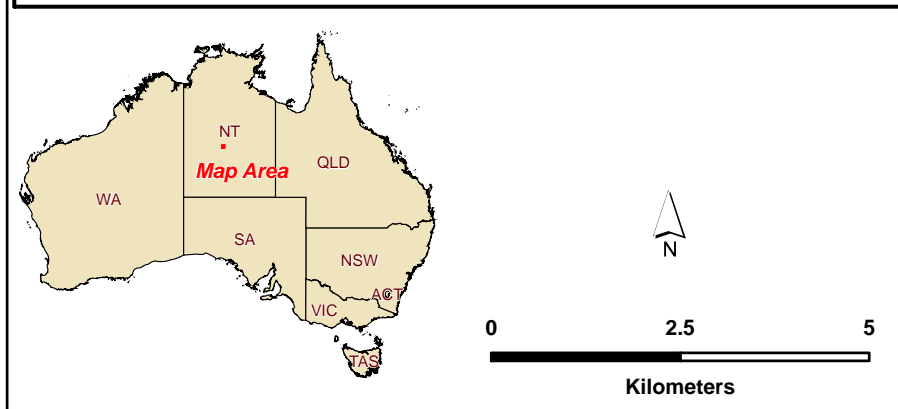
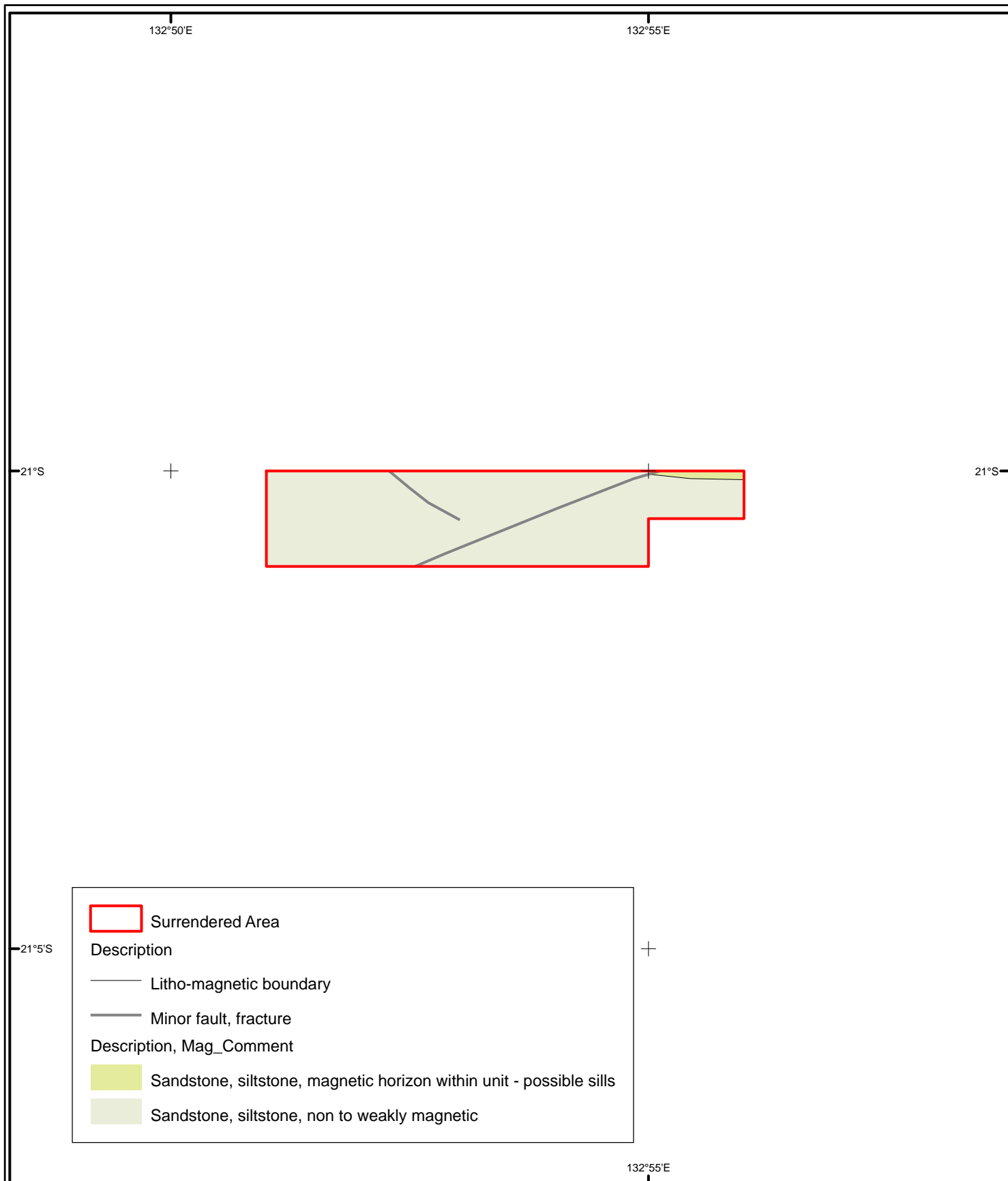
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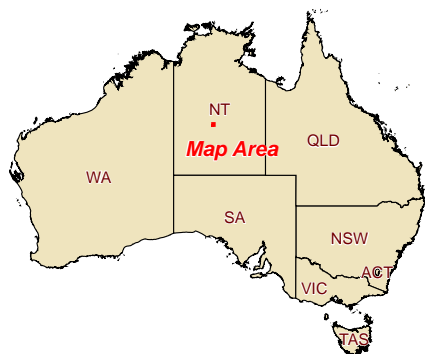
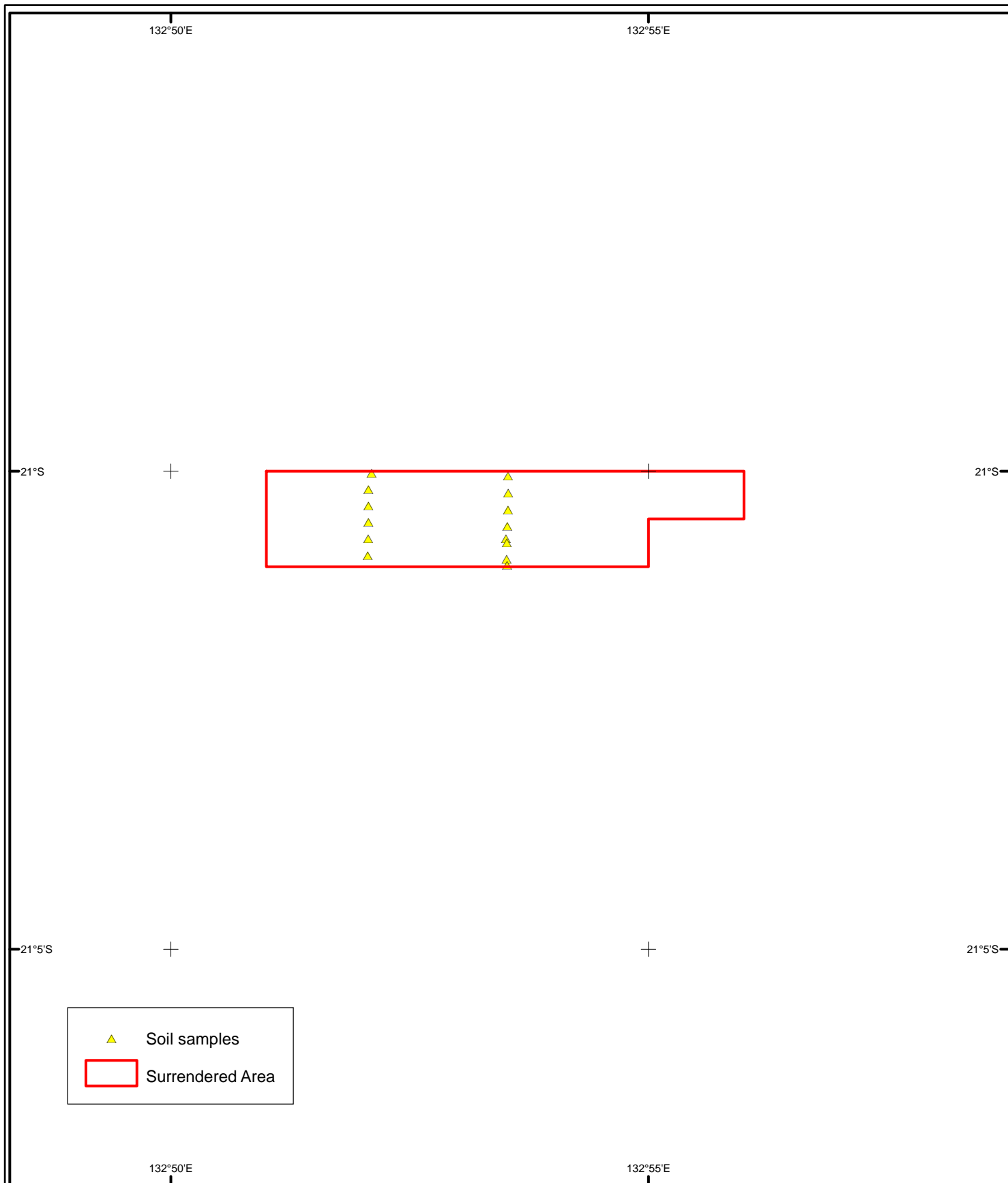
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 <b>NEWMONT EXPLORATION PTY LTD</b>	
<b>Barrow Creek Project</b>	
<b>EL 23886</b>	
<b>INTERPRETED GEOLOGY</b>	
Author: M. Eisenlohr	Scale: 1:100 000
Drawn: V. Preedy	Date: Mar 2009
File: TAN_Lnd_Ten_A4_23886psurrGeology.mxd Proj: Lat/Long (GDA 94) \AUS\NT\Tanami_Tenements\MXD\Reports\	



**NEWMONT** **NEWMONT EXPLORATION PTY LTD**

**Barrow Creek Project**

**EL 23886**

# **SURFACE GEOCHEMISTRY**

Author: M. Eisenlohr	Scale: 1:100 000
Drawn: V. Preedy	Date: Mar 2009
File: TAN_Lnd_Ten_A4_23886psurrGeochem.mxd Proj: Lat/Long (GDA 94) \\AUS\NT\Tanami_Tenements\MXD\Reports\	

**Figure 4      Geology**

**Figure 5      Surface Geochemistry**