

## PARTIAL RELINQUISHMENT REPORT FOR SEL 24032 (CRAWFORD)

for the period  
**14/07/2004 to 13/07/2008**

-For Immediate Release-

**Barrow Creek JV**  
NORTHERN TERRITORY

Volume 1 of 1

|                         |              |         |
|-------------------------|--------------|---------|
| <b>1:250,000 SHEET:</b> | Barrow Creek | SF53-06 |
|                         | Bonney Well  | SF53-02 |
|                         | Lander River | SF53-01 |
|                         | Mt Peake     | SF53-05 |

|                         |               |      |
|-------------------------|---------------|------|
| <b>1:100,000 SHEET:</b> | Conical Hill  | 5555 |
|                         | Jarrah Jarrah | 5556 |
|                         | Crawford      | 5655 |
|                         | Numagalong    | 5656 |

**AUTHORS:** M. Eisenlohr

**TENEMENT HOLDER:** Newmont Tanami 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 report is the partial surrender report for SEL 24032 (Crawford) and as such describes all exploration activity within the relinquished area from the 14 July 2004 to the 13 July 2008. The tenement is part of an area covered by the Barrow Creek Joint Venture (BCJV) between Newmont Tanami Pty Ltd (Newmont), who are managers of the joint venture and Yuendumu Mining Company NL (YMC). The BCJV tenement is located approximately 300km north of Alice Springs and is being explored for economic gold mineralisation.

Initial fieldwork after the signing of an Indigenous Land Use Agreement (ILUA) with Traditional Owners and the Central Land Council comprised a reconnaissance program to check out future access for drilling rigs along with minor soil and lag sampling.

More recently the tenement was included in Newmont's Tanami Regional Framework Study, which highlighted the prospectivity of the area.

A ground gravity survey was carried out over the combined Barrow Creek and Lander River tenements in Nov 2006.

Reconnaissance RAB holes were drilled along access tracks in the west of the lease during May 2007 with one hole located within the relinquished ground.

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## 1. INTRODUCTION

This document is the partial relinquishment report for immediate release to open file for SEL 24032 (Crawford) for the Barrow Creek JV Project (BCJV) and as such describes the exploration activities within the relinquished area covering the period 14th July 2004 through to 13th July 2008.

## 2. TENEMENT DETAILS

A summary of the tenement details is listed below:

SEL 24032      Newmont Tanami Pty Ltd                      100%

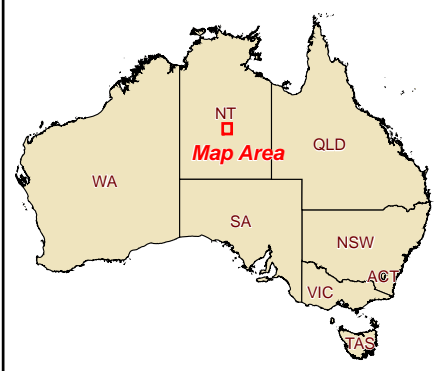
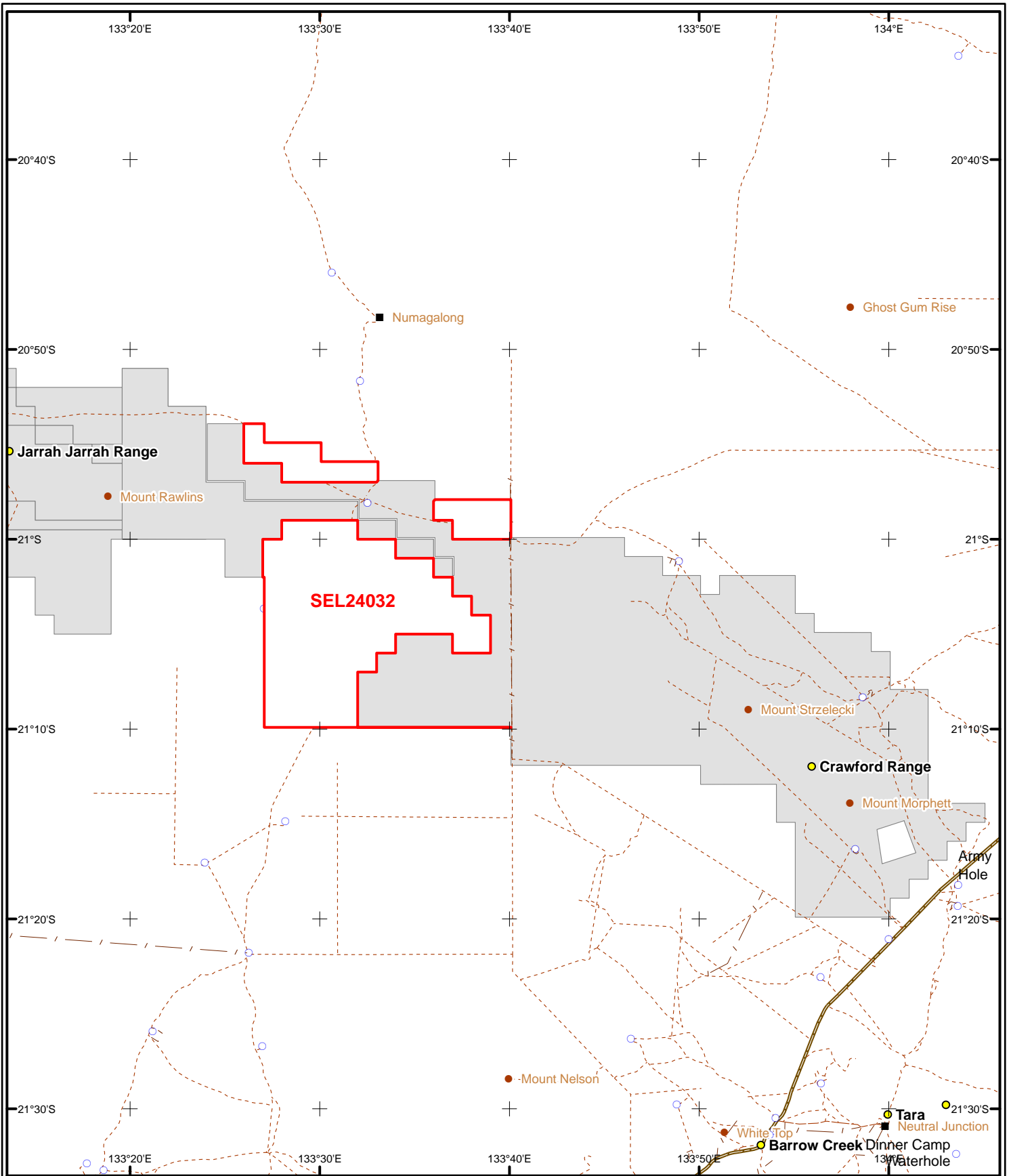
**Table 1      Tenement Summary for SEL 24032**

| Licence   | Detail | Period                      |
|-----------|--------|-----------------------------|
| SEL 24032 | Grant  | 14/07/2004 to<br>13/07/2008 |

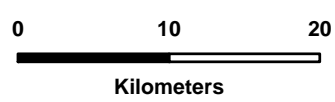
## 3. LOCATION AND ACCESS

SEL 24032 is located approximately 300km north of Alice Springs and between 20 to 85km north 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. During the period Newmont graded much of the Ali Curung to Jarra Jarra track as some sections had fallen into a poor state of repair. Access to much of the eastern portion of SEL24032 has not been possible due to extensive exclusion zones. The tenement is located on the Stirling and Neutral Junction Stations (NT Portion 655 & 3375 respectively).

**Figure 1      Location and Access**



Relinquished area



|   |                  |
|---|------------------|
| <b>NEWMONT EXPLORATION PTY LTD</b>                                    |                  |
| <b>Barrow Creek Project</b>   |                  |
| <b>SEL 24032</b>  |                  |
| <b>LOCATION AND ACCESS</b>  |                  |
| Author: M. Eisenlohr  | Scale: 1:500 000 |
| Drawn: V. Preedy  | Date: Jan 2009   |
| File: TAN_Lnd_Ten_A4_24032pLoc.mxd      Projection: Lat/Long (GDA 94) |                  |
| VAUS\NT\Tanami_Tenements\MXD\Reports\TAN_Lnd_Ten_SEL24032psurr        |                  |

## **4. PREVIOUS EXPLORATION**

### **4.1 Previous Exploration by Other Companies**

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

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 a combination of percussion, reverse circulation and diamond drilling. This work delineated a sub-economic Cu-Ni resource (Prospect D), but grade was considered too low to warrant further investigation, and the ground was relinquished in 1973.

Limited exploration was conducted by Australis Mining NL during 1969, for base metal potential in the Crawford Range area. Pegmatites, granites and metadolerites were targeted with disappointing results.

More recently, Aberfoyle Ltd has explored firstly for base metal mineralisation and later gold mineralisation in the Home of Bullion area.

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

Newmont (and its precursor companies) has had an exploration presence in the Barrow Creek area since 1988. Work over this time has included reconnaissance programs comprising soil sampling, and vacuum and RAB drilling as well as detailed aeromagnetic/radiometric 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.

During the 2003 field season a limited program of lag and soil sampling as well as aircore drilling was conducted within the EL 10013, SEL 10038 and SEL 22042 tenements (precursors to SEL 24032).

## **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 that reach thicknesses of at least 10,000 metres.

The sedimentary rocks include ridge-forming quartzites, felspathic, lithic and minor conglomeratic arenites and friable arenite, siltstone, shale and carbonate. The Ooradidgee Subgroup consists mainly of fluvial sedimentary and sub-aerial volcanic rocks which partly interfinger. The Wauchope Subgroup is characterised by large volumes of volcanic and sedimentary rocks, probably both marine and fluvial in origin. The Hanlon Subgroup may be entirely marine and lacks volcanic units (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**

The surface geology within SEL 24032 ranges from outcrop to thick cover in washout areas, and on average comprises 4-5m of soil cover. In the western area thick alluvial sediments are derived from the associated floodplains and palaeo-channels of the northward flowing Hanson River that flows through the licence. Cover in these areas can be in excess of 30m.

The dominant rock types include quartz-biotite schists and quartz arenites to the north, interpreted to be part of the Gwynne Sandstone and Illoquara Sandstone, along with tuffaceous siltstones and arenites of the Strzelecki Volcanics (all formations within the Wauchope subgroup of the Hatches Creek Group). Minor granite intrusions occur throughout the area. A strong NW-SE foliation is observed in the region paralleled by numerous quartz veins.

## **6. WORK CARRIED OUT BETWEEN 2004 AND 2008**

### **2004 to 2005**

Newmont developed the Tanami Regional Framework Study during 2005 / 2006 to identify prospective regions and target areas. The study highlighted the Barrow Creek – Rawlins Range region which partly included SEL24032. As the prime area of interest within SEL24032 was covered by an extensive exclusion zone, the main emphasis of the framework study was in other areas.

### **2006**

Work undertaken during the 2006/07 reporting period consisted of a geophysical program comprising a ground gravity survey and a regional aerial magnetic survey, part of which covered this tenement. (see below)

### **2007**

The RAB drilling program included one hole drilled within the relinquished area. NEWRRRB0002 was drilled to 11m stopping in quartz rich channel sediments. This vertical hole was collared west of the Hanson River.

### **2008**

#### **Geophysics**

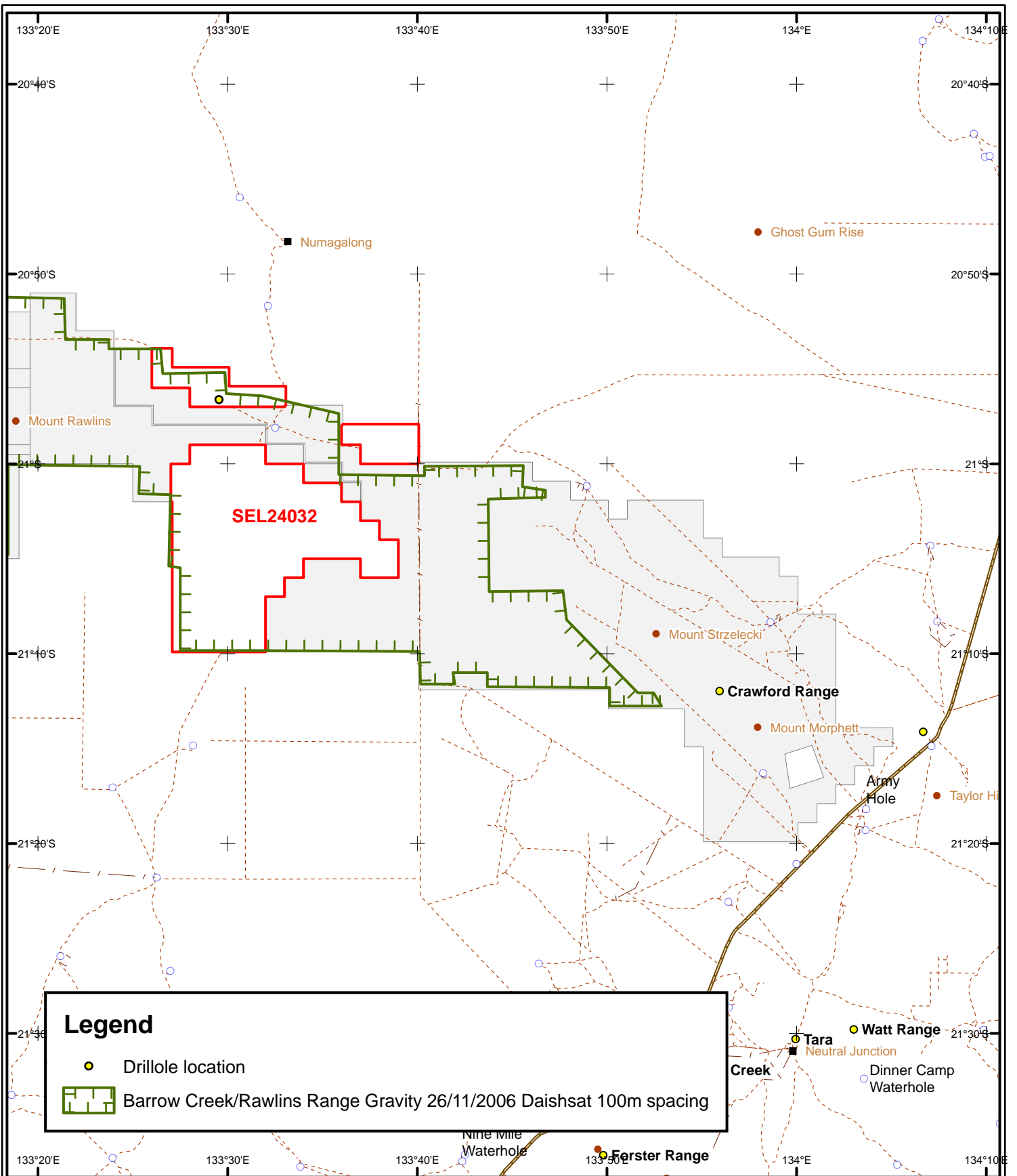
An outcome of the Tanami Framework Study completed during the middle of 2006 was the need for improved gravity and magnetic coverage over the Barrow Creek/Rawlins Range package of tenements.

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 (Figure 2).

In July 2007 an aerial magnetic and radiometric survey was flown over the western Rawlins Range tenements.

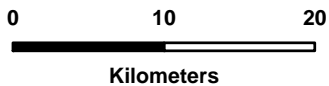
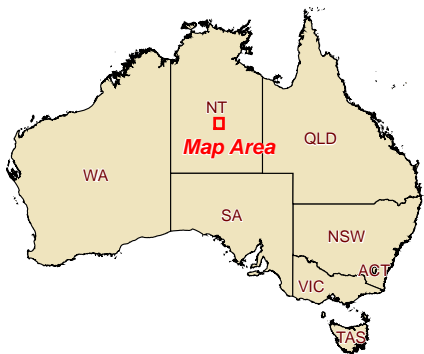
## **Figure 2 Exploration Index**





**Legend**

- Drillhole location
- Barrow Creek/Rawlins Range Gravity 26/11/2006 Daishsat 100m spacing



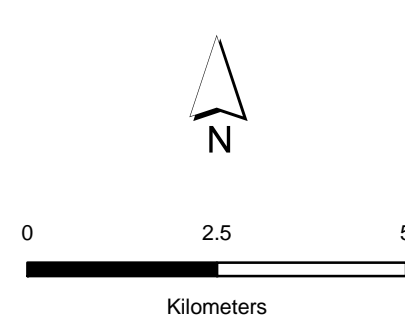
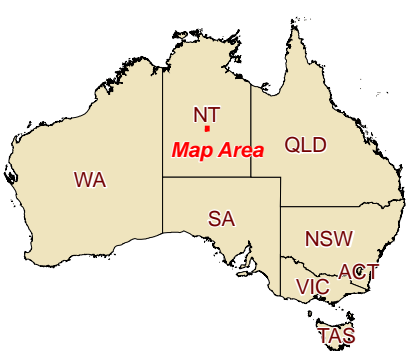
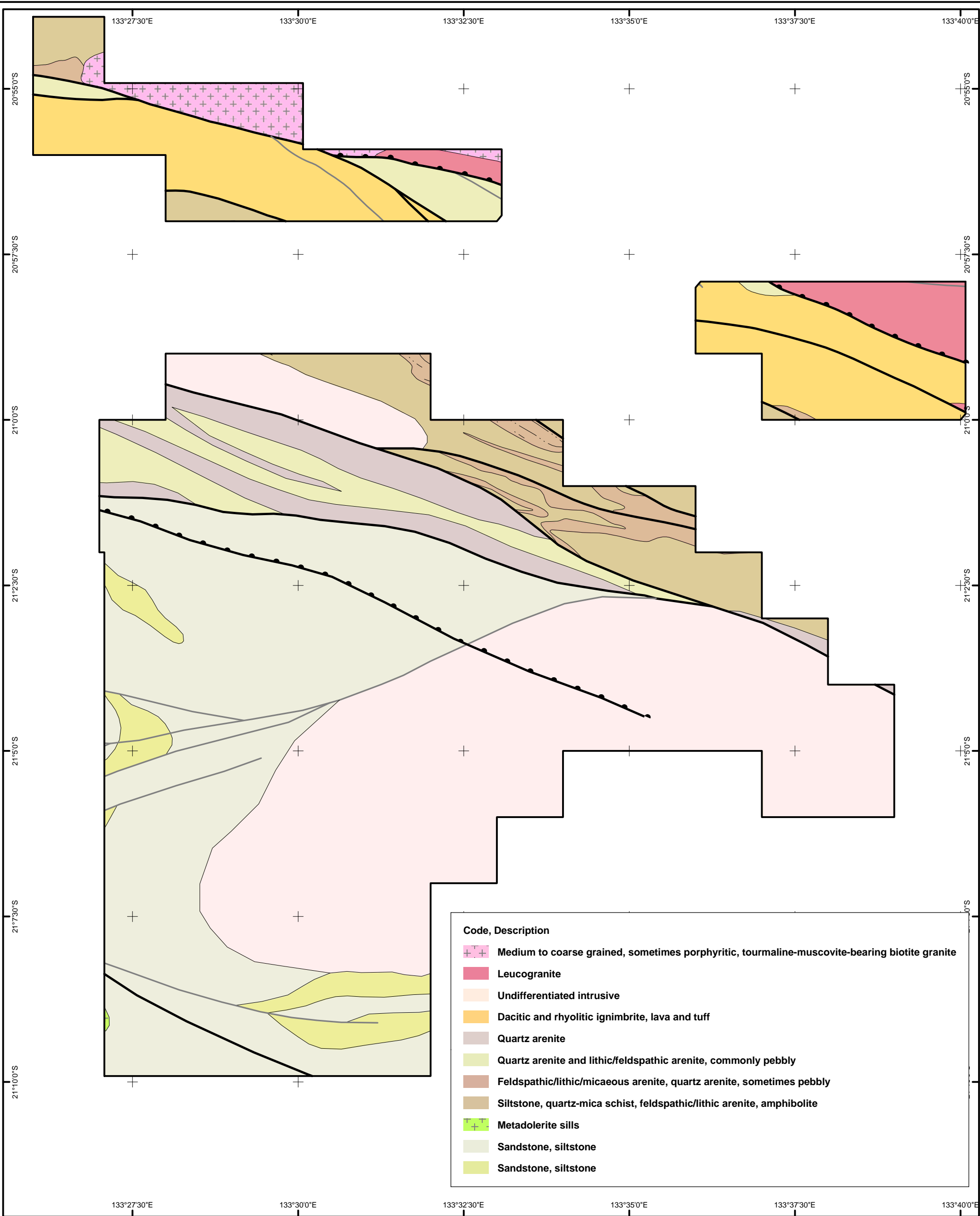
**NEWMONT EXPLORATION PTY LTD**

**Barrow Creek Project**

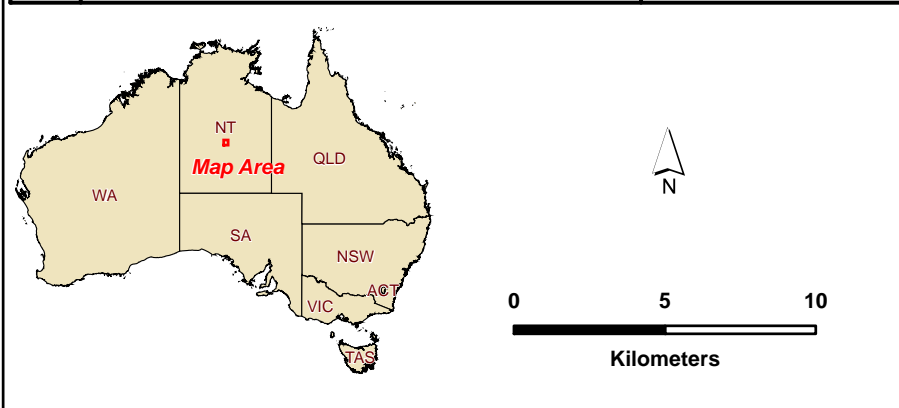
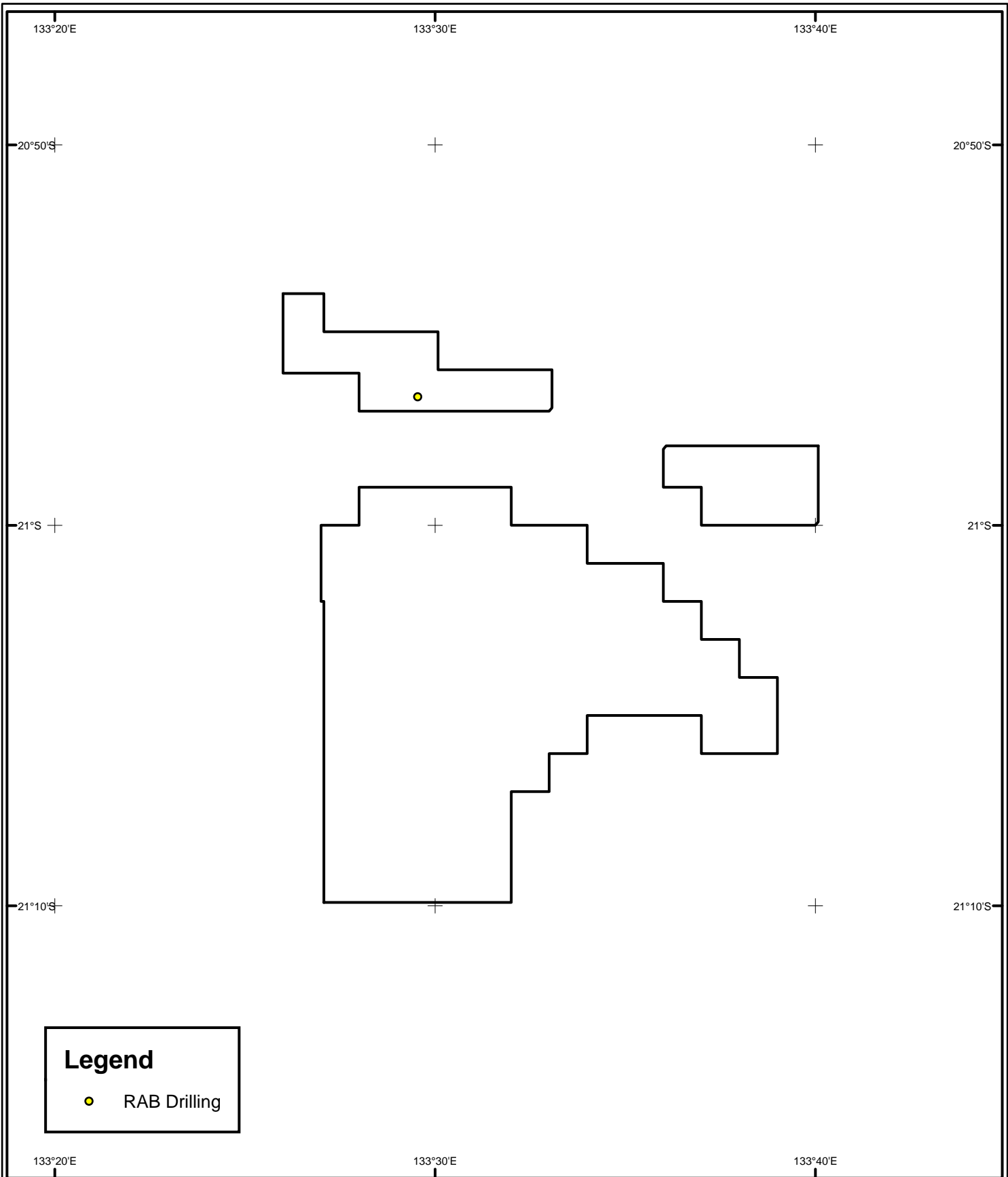
**SEL 24032**


**EXPLORATION INDEX**

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| File: TAN_Lnd_Ten_A4_24032psurrindex.mxd Projection: Lat/Long (GDA 94) |                  |
| VAUS\NT\Tanami_Tenements\MXD\Reports\TAN_Lnd_Ten_SEL24032psurr         |                  |



|  |                  |
|--|------------------|
| <b>NEWMONT EXPLORATION PTY LTD</b>   |                  |
| <b>Barrow Creek Project</b>  |                  |
| <b>SEL 24032</b>   |                  |
| <b>INTERPRETED GEOLOGY</b>   |                  |
| Author: M. Eisenlohr   | Scale: 1:100 000 |
| Drawn: V. Preedy   | Date: Jan 2009   |
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|  |                  |
|--|------------------|
|  <b>NEWMONT EXPLORATION PTY LTD</b>  |                  |
| <b>Barrow Creek Project</b>  |                  |
| <b>SEL 24032</b>   |                  |
| <b>DRILLHOLE LOCATIONS</b>   |                  |
| Author: M. Eisenlohr   | Scale: 1:250 000 |
| Drawn: V. Preedy   | Date: Jan 2009   |
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## 7. REFERENCE LIST / ANNUAL REPORT BIBLIOGRAPHY

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Kuoni, J; 1994. First Annual Report for EL7928 (Crawford) for the period 06/02/94 to 05/02/95. PosGold, Tennant Creek.

## 8. BIBLIOGRAPHIC DATA SHEET

**HOLDER:** Newmont Tanami Pty Ltd  
**PROJECT:** Barrow Creek Joint Venture  
**PROSPECT:** Crawford  
**TENEMENTS:** SEL24032  
**REPORT NUMBER:** CR34072  
**DATE:** January 2009  
**AUTHORS:** M. Eisenlohr, P. Pring  
**STATE:** NT  
**LATITUDE:** -20°70' to -21°10'  
**LONGITUDE:** 133°25' to 134°40'

**1:250,000 SHEET:**

|              |         |
|--------------|---------|
| Barrow Creek | SF53-06 |
| Bonney Well  | SF53-02 |
| Lander River | SF53-01 |
| Mt Peake     | SF53-05 |

**1:100,000 SHEET:**

|               |      |
|---------------|------|
| Conical Hill  | 5565 |
| Jarrah Jarrah | 5556 |
| Crawford      | 5655 |
| Numagalong    | 5656 |

**COMMODITY:** gold  
**KEYWORDS:** drilling, geological interpretation, gravity survey,

## 9. VERIFICATION LISTING FORM

| Exploration Work Type        | File Name   | Format                   |
|------------------------------|---|--------------------------|
| Office Studies               |   |                          |
| Literature search            |   |                          |
| Database compilation         |   |                          |
| Computer modelling           |   |                          |
| Reprocessing of data         |   |                          |
| General research             |   |                          |
| Report preparation           | <a href="#">SEL24032_2008PR2.PDF</a>  | PDF                      |
| Other (specify)              | Figures<br><a href="#">SEL_24032_Location.pdf</a><br><a href="#">SEL_24032_Index.pdf</a><br><a href="#">SEL_24032_Drilling.pdf</a><br><a href="#">SEL_24032_Geology.pdf</a> | PDF<br>PDF<br>PDF<br>PDF |
| Airborne Exploration Surveys |   |                          |
| Aeromagnetics                |   |                          |
| Radiometrics                 |   |                          |
| Electromagnetics             |   |                          |
| Gravity                      |   |                          |
| Digital terrain modelling    |   |                          |
| Other (specify)              |   |                          |
| Remote Sensing               |   |                          |
| Aerial photography           |   |                          |
| LANDSAT                      |   |                          |
| SPOT                         |   |                          |
| MSS                          |   |                          |
| Radar                        |   |                          |
| Other (specify)              |   |                          |
| Ground Exploration Surveys   |   |                          |
| Geological Mapping           |   |                          |
| Regional                     |   |                          |
| Reconnaissance               |   |                          |
| Prospect                     |   |                          |
| Underground                  |   |                          |
| Costean                      |   |                          |
| Ground Geophysics            |   |                          |
| Radiometrics                 |   |                          |
| Magnetics                    |   |                          |
| Gravity                      | <a href="#">SEL24032_Partial_Gravity.xls</a>  |                          |
| Digital terrain modelling    |   |                          |
| Electromagnetics             |   |                          |
| SP/AP/EP                     |   |                          |

|                            |  |  |
|----------------------------|--|--|
| IP                         |  |  |
| AMT                        |  |  |
| Resistivity                |  |  |
| Complex resistivity        |  |  |
| Seismic reflection         |  |  |
| Seismic refraction         |  |  |
| Well logging               |  |  |
| Geophysical interpretation |  |  |
| Geochemical Surveying      |  |  |
| Drill sample               |  |  |
| Stream sediment            |  |  |
| Soil                       |  |  |
| Rock chip                  |  |  |
| Laterite                   |  |  |
| Water                      |  |  |
| Biogeochemistry            |  |  |
| Isotope                    |  |  |
| Whole rock                 |  |  |
| Mineral analysis           |  |  |
| All Drilling               | Types Undertaken:<br>RAB DRILLING<br>SEL24032_drilling.xls |  |
| Collar                     |  |  |
| DH_Survey                  |  |  |
| Geology_Interval           |  |  |
| Geology_Point              |  |  |
| Sample & Assay             |  |  |
| Logs                       |  |  |