



**Exploration Permit for Minerals  
EPM 18729 Drongo  
Annual Report for the period  
5 July 2012 to 4 July 2013**

**Tenure Holder:** Inova Resources Cloncurry Mines Pty Ltd  
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**Date:** July 2013

## **SUMMARY**

### **Aim of Project**

Exploration Permit for Minerals EPM 18729 Drongo was obtained to explore for different types of mineralisation. Possible mineralisation styles range from uranium mineralisation, iron oxide-copper-gold mineralisation, gold only mineralisation, molybdenum-rhenium mineralisation and massive sulphide lead-zinc-silver. The area is underexplored due to the lack of outcrop and paucity of drilling.

### **Object of Report**

This annual report documents the results of exploration on EPM 18729 conducted from 5 July 2012 to 4 July 2013.

### **Location**

EPM 18729 is located approximately 212 km south of Cloncurry.

### **Tenure**

EPM 18729 consisting of 48 sub-blocks was granted to Ivanhoe Cloncurry Mines Pty Limited (ICM) on 21 June 2012 for a term of five years. ICM changed its name to Inova Resources Cloncurry Mines Pty Ltd (IRCM) on 12 June 2013. IRCM is a 100% owned subsidiary of Inova Resources Limited (IVA).

### **Datum**

Data are presented in GDA94 Map Grid of Australia Zone 54 datum.

### **Summary of Work**

Previous exploration data collected from within EPM 18727 was compiled and reviewed during the period. A drill target was defined and tested during the first year of the permit by modelling existing geophysical data.

Under the new DNRM Operational Policy (Department of Natural Resources and Mines, 2012), which includes exploration activities and expenditure, compliance with the work program will be assessed in year three (the end of the first milestone) and in year five of the permit term (at renewal). This annual report is for year one of the five year term, two more years of exploration will take place before compliance with the work program is assessed.

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## 1. INTRODUCTION

This annual report documents exploration work conducted over the 48 sub-blocks of Exploration Permit for Minerals EPM 18729 from 5 July 2012 to 4 July 2013. EPM 18729 was granted to Ivanhoe Cloncurry Mines Pty Limited (ICM) on 5 July 2012 for a period of five years. ICM changed its name to Inova Resources Cloncurry Mines Pty Ltd (IRCM) on 12 June 2013. IRCM is a 100% owned subsidiary of Inova Resources Limited (IVA).

The tenement is prospective for uranium mineralisation, iron oxide-copper-gold mineralisation, copper-gold mineralisation, molybdenum-rhenium mineralisation and massive sulphide lead-zinc-silver deposits.

IVA has the philosophy to select world-class underexplored mineral provinces such as the Eastern Fold Belt of the Mount Isa Inlier and search for a broad range of mineralisation types within the province systematically. Significant financial and human resources are invested in the selected province.

## 2. LOCATION AND ACCESS

EPM 18729 is centred approximately 212 km south of Cloncurry (Figure 1). EPM 18729 sub-blocks are situated within the Warena, Momedah and Pollygammon Pastoral Holdings.

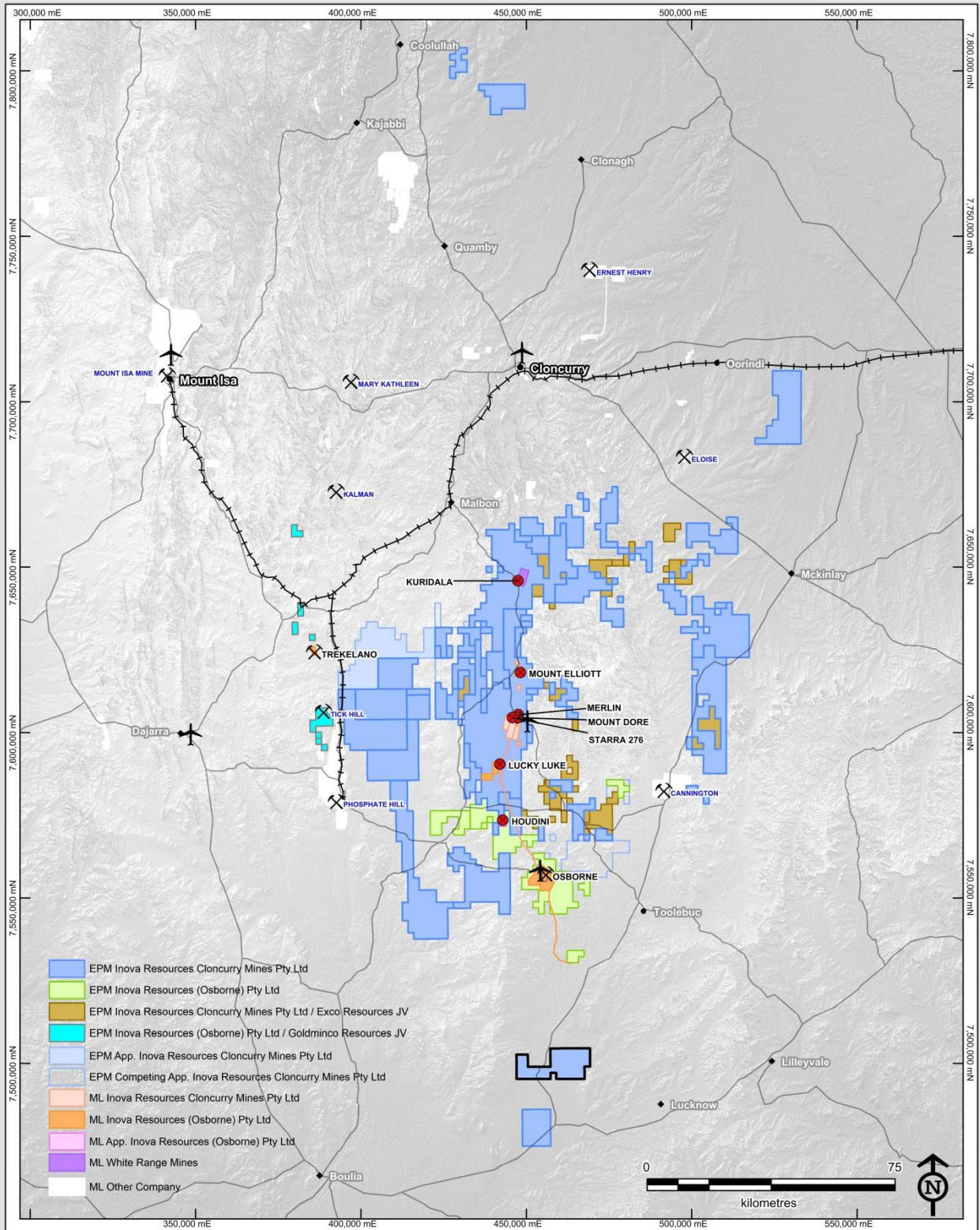
Vehicle access is by the sealed Cloncurry-Dajarra Rd from Cloncurry to Dajarra then via Diamantina Developmental Rd to Boulia. From Boulia, the Kennedy Developmental Rd takes you south of EPM 18729. Turn off towards Toolebuc, that road passes through the middle of EPM 18729. Road access is good from March to December with intermittent closure due to flooding and heavy rains possible from January to March. Limited existing tracks can be used by four wheel drive vehicles for access within the tenement.

## 3. TENURE

EPM 18729, consisting of 48 sub-blocks within six blocks, was granted to Ivanhoe Cloncurry Mines Pty Limited on 5 July 2012 for a term of five years (Figure 2).

<b><u>BIM</u></b>	<b><u>Block</u></b>	<b><u>Sub-blocks</u></b>
Clon	2192	v w x y z
Clon	2193	v w
Clon	2262	e k p u
Clon	2263	a f l m n o p q r s t u
Clon	2264	a b c d e f g h j k l m n o p r s t u
Clon	2265	a b f g l q

**Total = 48 sub-blocks**

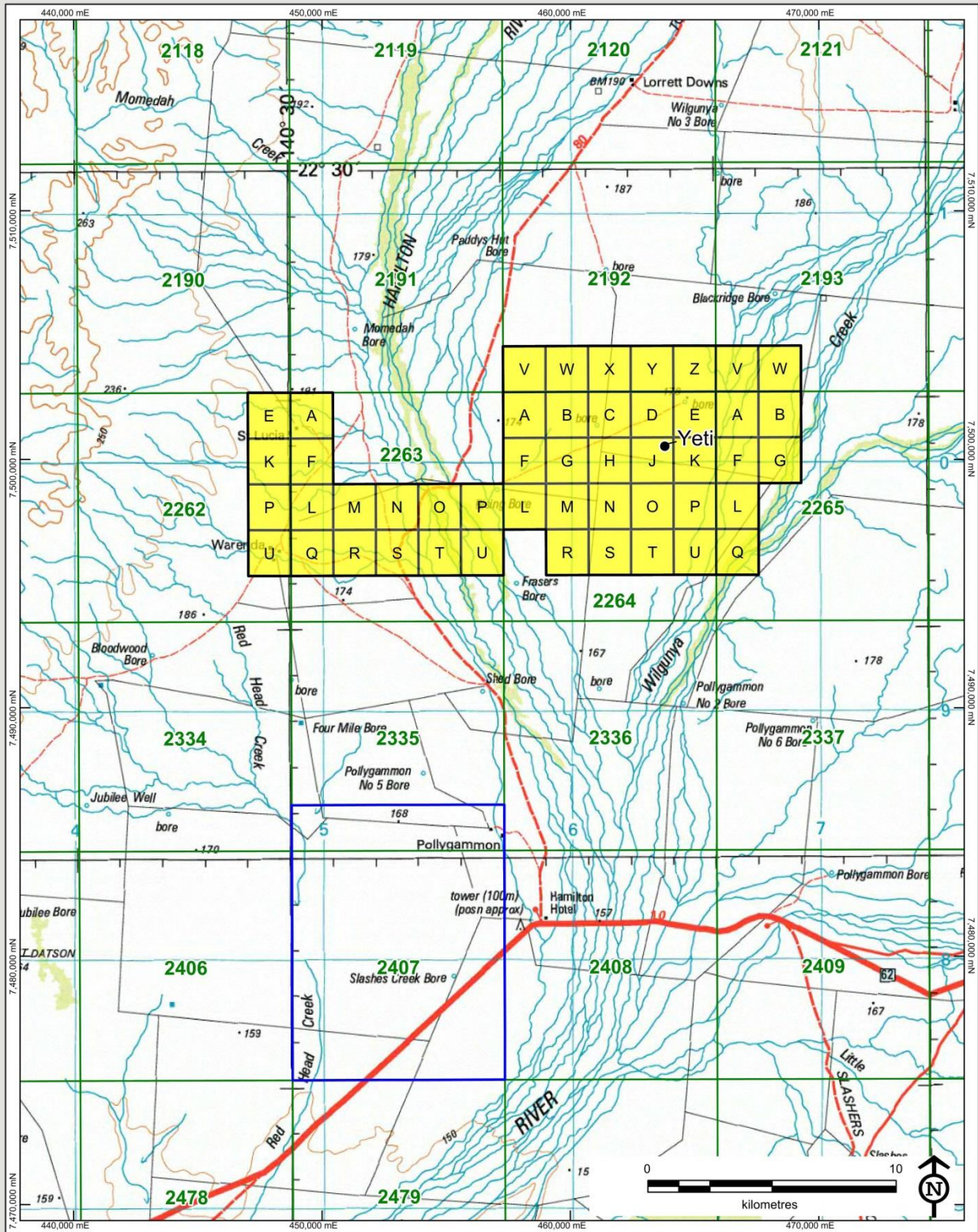


- IVA Prospect
- ✕ Prospect / Mine
- Major Town
- ◆ Town
- Main Road
- +— Railway
- ✈ Airstrip

□ EPM 18729

**Figure 1: EPM 18729 regional location**





EPM Inova Resources Cloncurry Mines Pty Ltd  
 Exploration Blocks



EPM 18729  
Sub-Block Location

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 +61 7 4748 0472 (ext 8472)

DRAWN BY: BST 30/07/2013  
 1:200,000 @ A4 (MGAz54)

**Figure 2: EPM 18729 sub-block location**

#### 4. REGIONAL GEOLOGY

Basement rocks within EPM 18729 are expected to be moderately to highly metamorphosed metasediments, mafic or felsic igneous rocks of the Kuridala Formation / Mitakoodi Quartzite, Marraba Volcanics, or Argylla Formation, respectively. Open file reports indicate that the nearest drilling to intersect basement is over 10 km to the east: generally intersecting gneiss, granite, psammite, schists, amphibolites and calc-silicates. Cover rocks are likely to consist of both Mesozoic and Cambrian rocks, with low potential for U or sediment hosted Cu mineralisation.

#### 5. PREVIOUS EXPLORATION

The thickness of cover has previously been prohibitive for exploration. The area contains numerous large and prospective magnetic anomalies that have been the target for previous explorers. These targets however remain undrilled. Advances in magnetic processing have highlighted significant targets, helping refine drill targeting for IOCG deposits under deep cover. Inova Resources has the ability and proven track record to explore for these deep covered targets.

#### 6. WORK DONE FROM 5 JULY 2012 TO 4 JULY 2013

Previous exploration data collected from within EPM 18729 was compiled and reviewed during the period.

A total of eight rock-chip samples were collected on 16 December 2012 from around the Yeti prospect and submitted for analysis. Assay results were not significant. Digital data is provided in Appendix 1.

Two holes were drilled between 15 November and 12 December 2012 at the Yeti prospect for a total depth of 1,110.89 m. The drilling aimed to test an intense coincident geophysical anomaly. The first hole (YTRC0001) was only RC drilled to 81.2 m and was not sampled. The second hole (YTD0002) coincides with the top edge of a dense body that dips east and is centred on the core of one of two magnetic lobes. The southern lobe magnetic zone has a moderate-steep east-northeast-plunge and coincident strong east-northeast dipping density gradient which infer a contact between dense and weakly magnetic rocks beneath lower density and weakly magnetic rocks above.

Drill hole details are given below in Table 6.1.

**Table 6.1: 2012 Yeti drill hole details**

HoleID	Easting MGA94	Northing MGA94	RL	Depth
YTRC0001	463759	7500027	188	81.2 m
YTD0002	463488	7499119	183	1029.69 m

Throughout the hole, the rocks are variably red feldspar-silica and carbonate altered. Disseminated magnetite is pervasive as blebs while later stage overgrowths of actinolite-epidote+/- garnet porphyroblasts are common. Cross cutting mostly concordant veins hosting carbonate-magnetite (blebby) are evident throughout the basement with some zones containing actinolite-quartz-biotite-chlorite. Preferential biotite banding (within mafic bands) is evident from 763 m to EOH and patchy strong red feldspar with associated magnetite is noted between 932 - 936 m and 993 -1013.26 m.

The XRF was used throughout the hole on the different rock textures / alterations mentioned above. High Ca, K and Fe values were evident. The iron and titanium values were generally higher (around 6% and 5,000 ppm respectively) in the green/mafic/blebby rocks than those RF-Silica-CB rich rocks (3% and 3,000 ppm). Cu was around 20 ppm with a max of 269 ppm Cu at 937.6 m (with trace chalcopyrite).

Significant mineralisation was not encountered in this hole. Patchy pyrite within the mudstone and sandstone units was encountered, however, the basement rocks with carbonate-quartz-magnetite veining do not contain significant mineralisation. Trace chalcopyrite is evident at 934 m within dark green mafic bands in a strongly magnetic, strongly (preferential) red feldspar altered rock. This 'red-rock' alteration within mafic zones is also seen near EOH however no visible chalcopyrite is present. Complete assay data is provided in Appendix 2.

A third planned hole was abandoned based on the poor results of YTD0002.

## **7. PROGRESS OF WORK PROGRAM**

Under the new DNRM Operational Policy (Department of Natural Resources and Mines, 2012), which includes exploration activities and expenditure, compliance with the work program will be assessed in year three (the end of the first milestone) and in year five of the permit term (at renewal). This annual report is for year one of the five year term which has geophysical surveys listed in the permit. IVA has modelled existing geophysical to delineate a drill target which was then tested.

## **8. ENVIRONMENT**

In order to conduct the drilling program described in section 6, two drill pads and two access tracks were cleared. A total disturbance of 9,000 m<sup>2</sup> was made within EPM 18729 as a result. The disturbed land has not yet been rehabilitated at the time of writing this report.

## **9. CULTURAL HERITAGE**

A cultural heritage survey was required ahead of the drilling. This survey was conducted on 6 October 2012 by an Inova representative and two representatives from the Pitta Pitta Native Title Group.

## **10. PROPOSED WORK FOR THE PERIOD 5 JULY 2013 TO 4 JULY 2014**

The next main phase of work for EPM 18729 may include further ground geophysical surveys to help delineate new drill targets. The first step would be a detailed ground gravity survey with 100 m station spacing, followed by a possible Induced Polarisation (IP) survey.



## 11. REFERENCES

Department of Natural Resources and Mines (2012) Operation Policy - Work program and relinquishment conditions. Policy No. 5/2012, October 2012, Version 1.0

**Appendix 1: EPM 18729 – rock-chip sampling digital assay data**

Digital data included as a separate component in QDEX.

**Appendix 2: EPM 18729 – drilling digital assay data**

Digital data included as a separate component in QDEX.