

# Deep Yellow Limited

ABN 97 006 391 948

## RELINQUISHMENT REPORT

**EPM 14281**

**YAMAMILLA**

**7 July 2005 – 6 July 2013**

<b>Holder:</b>	Deep Yellow Ltd
<b>Operator:</b>	Deep Yellow Ltd / Syndicated Metals Ltd
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<b>1:100,000 Mapsheets:</b>	Prospector, Quamby, Mary Kathleen and Marraba
<b>Target Commodities:</b>	Uranium, Base Metals
<b>Distribution:</b>	Department of Natural Resources and Mines Deep Yellow Ltd Syndicated Metals Ltd

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## 1. SUMMARY

Exploration Permit for Minerals (EPM) 14281 lies approximately 60 kilometres north-east of Mount Isa. It was granted over 95 sub-blocks to Matrix Metals Limited (Matrix) on 7 July 2005. Prior to Matrix going into receivership in November 2008, Deep Yellow Ltd (DYL) was exploring EPM 14281 under the terms of a Joint Venture Heads of Agreement. In 2009, DYL acquired a 100% interest in the permit from the Receivers and Managers of Matrix.

In July 2011 DYL entered into a Farmout Joint Venture Agreement with Syndicated Metals Limited (SMD) whereby Syndicated has the right to earn an 80% interest in all non uranium metals on four of DYL's tenements in the Mt Isa region, including EPM 14281 Yamamilla.

EPM 14281 was the subject of a partial relinquishment of twenty-two sub-blocks effective 6 July 2013; this report covers exploration conducted on the relinquished sub-blocks.

DYL's primary exploration target is metasomatic uranium hosted within Tewinga Group rocks of the Kalkadoon/Leichardt Block which comprise metamorphics and granitoids.

SMD assessed the relinquished portions for shallow, oxide or sulphide Cu-Au targets of possible IOCG affiliation. Regional fault breccia zones were targeted as likely hosts for IOCG plays. Exploration targeting involved investigation of known Cu geochemical anomalies coincident with geophysical anomalies.

Exploration carried out by DYL over the relinquished blocks consisted of desktop review of regional and historical data followed by a regional reconnaissance programme to investigate radiometric anomalies. Similarly, exploration carried out by SMD on the relinquished blocks consisted of desktop reviews of available Cu-Au geochemical datasets pertaining to possible IOCG-related mineralisation.

SMD carried out exploration for IOCG-related Cu-Au mineralisation. Following a VTEM survey, a number of targets were subsequently drilled at the Yamamilla, Floodbird and Portal Creek prospects; however no targets or anomalies worthy of follow-up were highlighted within the relinquished blocks.

## 2. INTRODUCTION

This partial relinquishment report has been prepared to present the exploration carried out on the twenty-two sub-blocks relinquished from EPM 14281 effective 6 July 2013 during the period 7 July 2005 to 6 July 2013.

### 2.1. Tenure

EPM 14281 was granted to Matrix on 7 July 2005 consisting of 95 sub-blocks. Prior to Matrix going into receivership in November 2008, Deep Yellow Ltd (DYL) was exploring EPM 14281 under the terms of a Joint Venture Heads of Agreement. In 2009, DYL acquired a 100% interest in the permit from the Receivers and Managers of Matrix.

In July 2011, DYL entered into a Farmout Joint Venture Agreement with Syndicated Metals Limited (SMD) whereby Syndicated has the right to earn an 80% interest in all non uranium metals on four of DYL's tenements in the Mt Isa region including EPM 14281, Yamamilla.

Renewal of EPM14281 for a further five years, expiring 6 July 2015, was granted on 31 August 2010 covering 68 sub-blocks in nine discrete groups.

Following a number of partial relinquishment offers at the end of the seventh year of term in 2012, DYL was advised that eight sub-blocks had been relinquished effective 21 May 2013. None of the proposed partial relinquishments offered matched the sub-blocks relinquished completely, however all eight sub-blocks were acceptable to both DYL and SMD.

In May 2013, DYL offered 23 sub-blocks for relinquishment at the end of the eighth year of term on 6 July 2013, seeking variation to retain 37 sub-blocks instead of the prescribed 9 sub-blocks. On 18 December 2013 advised that the variation had been approved to retain 38 sub-blocks, accepting a relinquishment of 22 sub-blocks. The report covers exploration on the 22 relinquished sub-blocks.

The relinquished and retained blocks and sub-blocks are as shown in Tables 1 and 2 and Figure 1.

**Table 1: EPM 14281 Relinquished Blocks and Sub-blocks**

BIM/Blocks	Sub-blocks	
CLON167	T W X	3
CLON168	G M Y	3
CLON169	W X	2
CLON239	B	1
CLON240	D	1
CLON311	N O S X	4
CLON312	Y	1
CLON383	C	1
CLON454	G M X	3
CLON455	E	1
CLON456	A S	2
		<b>22</b>

**Table 2: EPM 14281 Retained Blocks and Sub-blocks**

<b>BIM/Blocks</b>	<b>Sub-blocks</b>	
CLON167	A B G H M N	6
CLON168	Z	1
CLON169	V	1
CLON311	K P	2
CLON312	F G H L M N Q R S V W X	12
CLON384	A B C	3
CLON455	J K M N O P Q U	8
CLON456	O Q T U Y	5
		<b>38</b>

## **2.2. Location and Access**

The Yamamilla project area is located approximately 60 kilometres north-east of Mount Isa in North West Queensland. The permit area overlies the Mary Kathleen (6856), Prospector (6857), Quamby (6957) and Marraba (6956) 1:100 000 scale sheets.

Access to the area is east from Mount Isa via the Barkly Highway, then north on the Lake Julius Road and then via a network of station tracks. The project lies within the City of Mount Isa Local Government Authority area and the Mining District of Mount Isa.

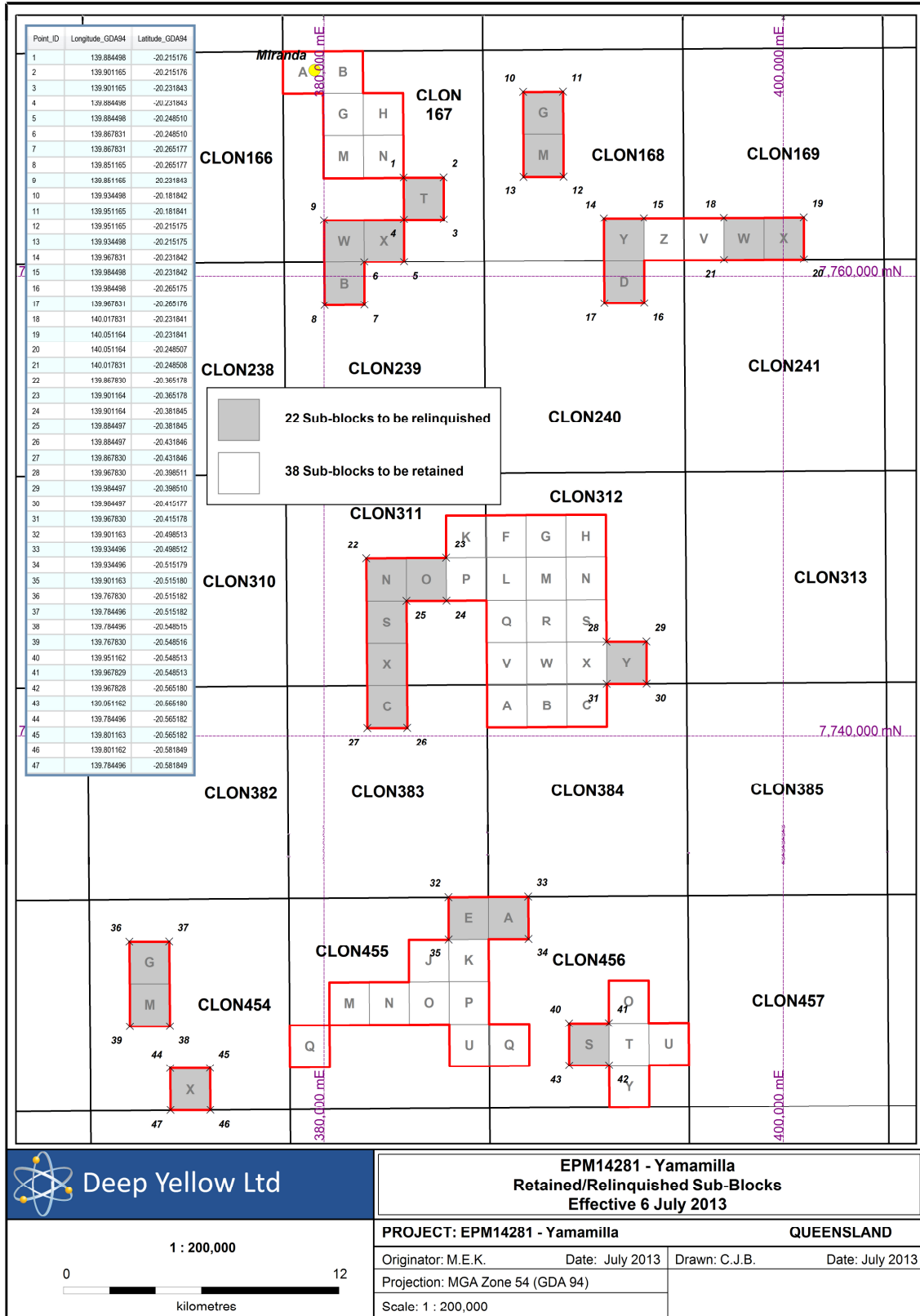


Figure 1: EPM 14281 Retained and Relinquished Sub-blocks July 2013

### **3. EXPLORATION PROGRAMME**

#### **3.1. Exploration Rationale**

DYL's primary target within EPM 14281 is Palaeoproterozoic basement hosted alkali-metasomatic uranium mineralisation. The Yamamilla EPM covers a number of airborne radiometric anomalies and a known uranium occurrence (Miranda). Figure 2 shows the location of the Miranda uranium prospect and some known copper occurrences within the EPM.

SMD carried out exploration for IOCG-related Cu-Au mineralisation.

#### **3.2. Exploration Programme and Methods Used**

Exploration undertaken by DYL on the relinquished sub-blocks was limited to data review and reconnaissance field work.

SMD's exploration on the relinquished sub-blocks included an assessment for any walk-up drill targets within their IOCG target paradigm. SMD's parameters encompassed shallow supergene Cu-Au targets, together with any underlying sulphide Cu potential. No Cu-Au geochemical anomalies were apparent and thus no drill-ready targets on offer. Available resources were thus directed at the better opportunities within the tenement.

### **4. GEOLOGY**

#### **4.1. Regional Geology**

The tenement is located across the central Kalkadoon Leichhardt belt and the Eastern Succession of the Mount Isa Inlier (Figure 2) that hosts a number of significant occurrences of mineralisation. The most well known uranium occurrence of the Eastern Succession is the Mary Kathleen deposit which is hosted by Corella Formation rocks of the Mary Kathleen Group.

#### **4.2. Tenement Geology**

To the west the Kalkadoon Granodiorite (1856±9 Ma) intrudes metavolcanics (both felsic and mafic) and metasediments of the Tewinga Group (i.e. the Leichhardt Metamorphics, 1865±3 Ma). To the east the Wonga Granite (ca 1750 - 1730 Ma) forms large NNW striking bodies intruding mainly into the Argylla Formation (1781±3 Ma) of the Tewinga Group, but also into metasedimentary rocks of the Mary Kathleen Group.

Situated centrally between the foregoing sequences is a complexly faulted synclinal (NNW axis) zone. The outer parts of this consist of Tewinga Group rocks with a core of metasediments and lesser metabasalt and metadolerite of the Mary Kathleen Group - i.e. Ballara Quartzite, (1755±3 Ma), and Corella Formation, (<1750±7 Ma), and the Mount Albert Group (Deighton Quartzite <1670Ma?).

Large mafic dykes (dolerite, meta-dolerite, and amphibolite) intrude all other units in the area, but are folded by the major syncline. A major NNE striking fault - the Mount Remarkable Fault - traverses the western part of the area. Towards the north this fault separates the Kalkadoon Granodiorite rocks and older units (Cover Sequence 1 rocks) from the younger mainly metasedimentary sequences.

A second major fault is located to the east and southeast of the area - the Wonga Fault (further north called the Pinnacle Fault). In the south this fault strikes NNE, further north it swings around to a northerly direction. NNW striking faults within the central zone cause multiple repetitions of the stratigraphy. Other NNE and NW striking faults result in significant offsets of the stratigraphy.



Many of these faults are mapped showing curvilinear traces. This complex structure would appear to make the area highly prospective for open space-filling, structurally controlled hydrothermal mineralization.

The Miranda uranium prospect is hosted within the Leichhardt Metamorphics of the Kalkadoon Leichhardt belt in the west of the tenement. The uranium mineralisation is hosted in metasomatised inequigranular granitoids, specifically in pods of intense alteration typically composed of chlorite + quartz + feldspar ± magnetite ± pyrite.

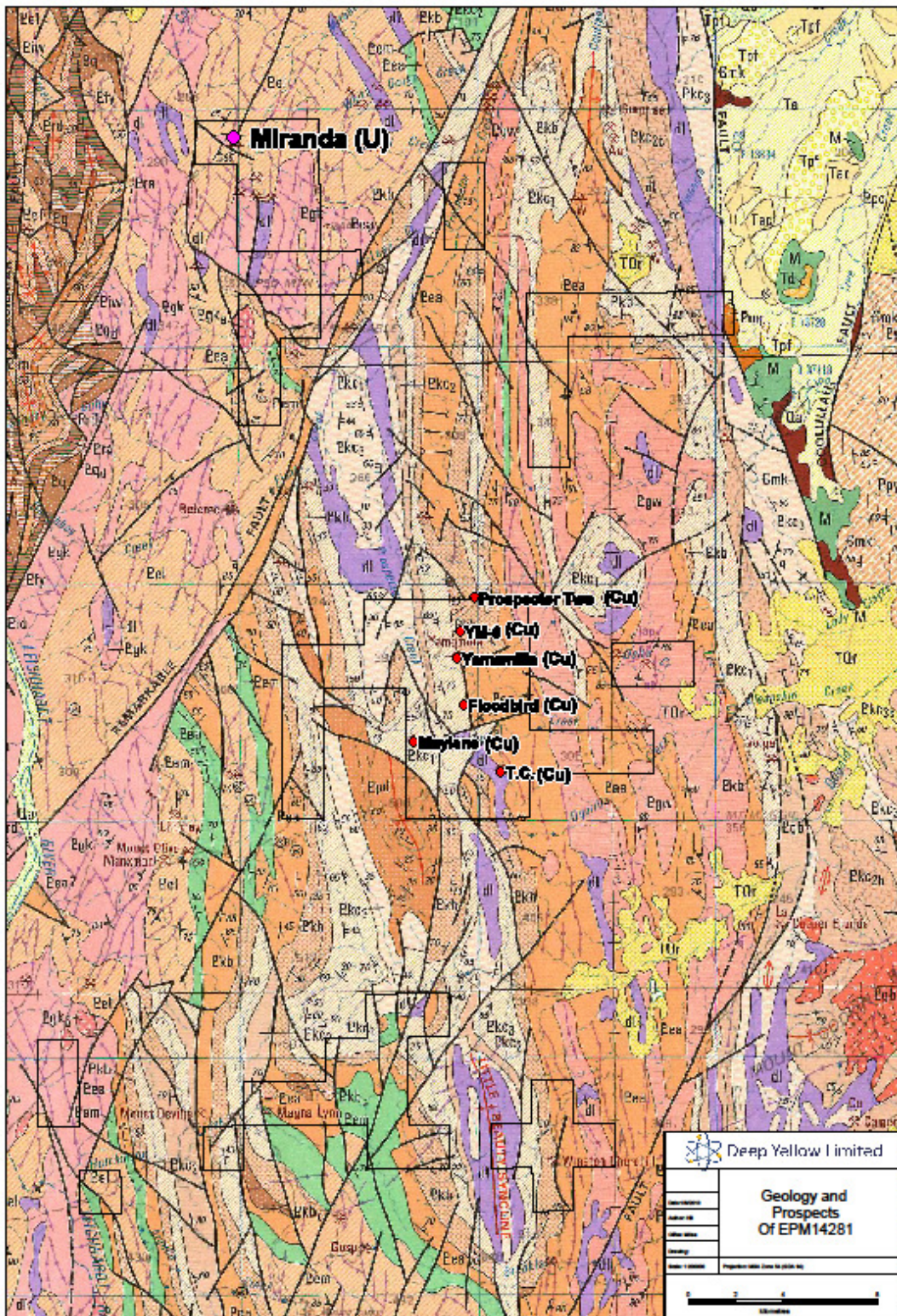


Figure 2. Geology of EPM 14281 (Source – Geological Survey of Queensland)

## **5. PREVIOUS EXPLORATION**

Previous exploration history and mineral occurrences of EPM 14281 have been well documented in an earlier Annual Report. (Davey, 2006). Exploration conducted on the tenement by Matrix and DYL (as part of the previous JV) is documented in the earlier Annual Reports, (Davey, 2007), (Rypkema et al, 2008) and (Frew, 2009). DYL's exploration since acquisition of the tenement is documents in the Annual Reports, (Bridgwater, 2010, 2011 and 2012).

## **6. EXPLORATION COMPLETED**

Exploration undertaken by DYL on the relinquished sub-blocks consisted of data review and reconnaissance field work.

SMD carried out exploration for IOCG-related Cu-Au mineralisation. Work carried out by SMD consisted of limited desktop geological reconnaissance and data review, aimed at identifying any obvious historical Cu-Au geochemical anomalies or surface mineralisation. No targets of a drill worthy nature were identified. Exploration resources were thus directed to the better targets on offer within this tenement.

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