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## No. 11,639

**EL 3830**

**MOUNT BRADY**

### **FIRST PARTIAL SURRENDER REPORT FOR THE PERIOD 10/7/2007 TO 9/7/2009**

Submitted by  
IMX Resources Ltd  
2009

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**Enquiries:** Customer Services Branch  
Minerals and Energy Resources  
7th Floor  
101 Grenfell Street, Adelaide 5000

Telephone: (08) 8463 3000  
Facsimile: (08) 8204 1880



**Government of South Australia**  
**Primary Industries and Resources SA**



# **EL 3830 Mt Brady Partial Relinquishment Report**

Volume 1 of 1

**Holder/Operator:** IMX Resources Ltd  
(formally Goldstream Mining N.L.)  
  
Level 2, 100 Railway Road Subiaco, WA 6008  
PO Box 879, Subiaco WA 6904

**Compiled by:** Alice Chai

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## **SUMMARY**

Exploration licence EL3830 'Mt Brady' covers an area of 90 km<sup>2</sup> some 40 km south of Coober Pedy in the northern Gawler Craton of South Australia (Figure 1). EL3830 is situated on the Mount Barry and Mount Penrhyn Pastoral Leases, on the Coober Pedy (SH53-06) and Billa Kalina (SH53-07) 1:250,000 map sheets. The EL lies within the Woomera Prohibited Area.

This partial relinquishment report describes activities conducted on the 27 km<sup>2</sup> portion of the tenement that is to be relinquished.

EL3830 Mt Brady is part of the Mt Woods Project, which is subject to an Amalgamated Exploration Agreement between IMX Resources Ltd and PIRSA.

A review of the geophysical targets on the licence and the potential for IOCG deposits is ongoing.

## **KEY WORDS**

Coober Pedy, Coober Pedy 1:250,000 map sheet, Billa Kalina 1:250,000 map sheet, Proterozoic, Mount Woods Inlier, Iron Oxide-Copper-Gold, IOCG, Base Metals, Magnetism, Gravity, Geophysical Anomalies

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EL3830\_Partial Relinquishment Report\_2009.pdf

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## **1.0 INTRODUCTION**

Mt Brady EL3830 is located approximately 40 km SSE of Coober Pedy in the northern Gawler Craton (Figure 1). EL3830 lies within the Coober Pedy (SH53-06) and Billa Kalina (SH53-07) 1:250,000 map sheets. The EL lies entirely within the Woomera Prohibited Area.

The sealed Stuart Highway from Coober Pedy passes north to south along the western side of the EL, which straddles the boundary between the Mount Penrhyn and Mount Barry Pastoral Leases. The EL is crossed by dirt tracks, many of which were established by opal prospectors. The Cairn Hill mine's haul road crosses the EL from east to west.

Most of the EL lies east of the Stuart Range, east of which are low breakaways. The terrain is dominantly flat to rolling plains with areas of bluebush and saltbush and intermittent drainage towards the east and northeast.

## **2.0 TENURE**

Exploration Licence 3830 was granted to IMX Resources Ltd on 10<sup>th</sup> July 2007. The current licence expires on 9<sup>th</sup> July 2009.

The lease is part of the Mt Woods Project Amalgamated Expenditure Agreement with PIRSA dated 23 June 2008, an extension to which is being sought.

The EL covers an area of approximately 90 km<sup>2</sup> (30 blocks).

<b>Licence</b>	<b>Granted</b>	<b>Expiry</b>	<b>Year</b>	<b>Area</b>	<b>Status</b>
EL 3830	10 <sup>th</sup> July 2008	9 <sup>th</sup> July 2009	1	90 km <sup>2</sup>	Current
EL 3830	10 <sup>th</sup> July 2007	9 <sup>th</sup> July 2008	1	90 km <sup>2</sup>	Expired

*Table 1: Licence Details*

This partial reduction reduces the EL by 27 km<sup>2</sup> (9 blocks) to 63 km<sup>2</sup> (21 blocks) (Figure 2).

## **3.0 REGIONAL GEOLOGY**

The Mt Brady exploration licence covers part of the western portion of the Palaeoproterozoic Mount Woods Inlier, a large block of variable magnetic intensity lying to the east and southeast of the Coober Pedy Ridge and the Mabel Creek Inlier. These three terranes abut an interpreted Archaean age cratonic area to their south and west. The area contains major regional structures (including the Karari Fault Zone) and is traversed by several prominent northwest trending structures along which significant thicknesses of Permian sediments have been deposited.

Basement outcrop in the region is generally restricted to a quarry outcrop in the southwest of the tenement, and limited outcrop of Gawler Range Volcanics and Archaean Gneisses further south and southwest of the area.

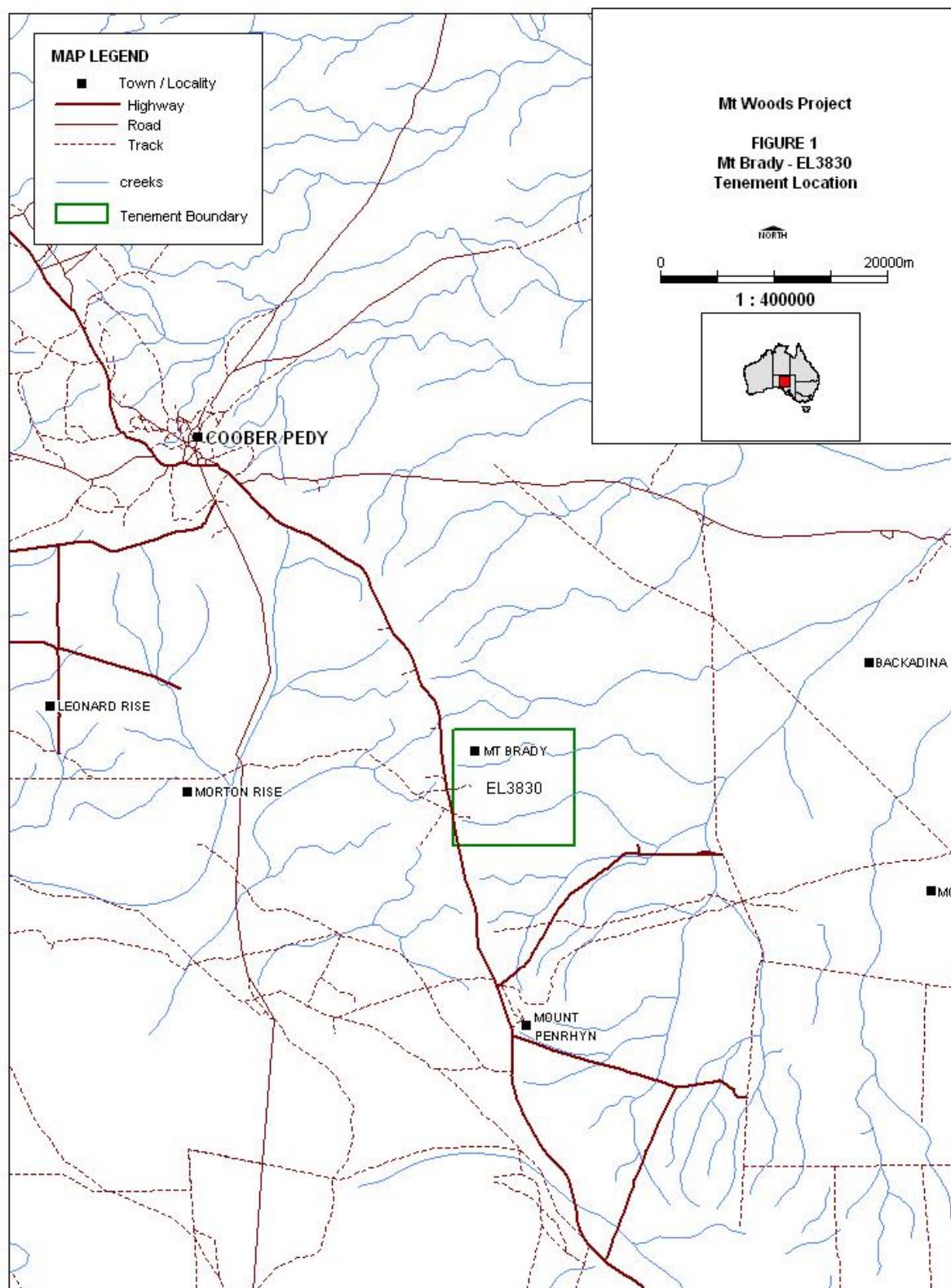


Figure 1: Mt Brady location map

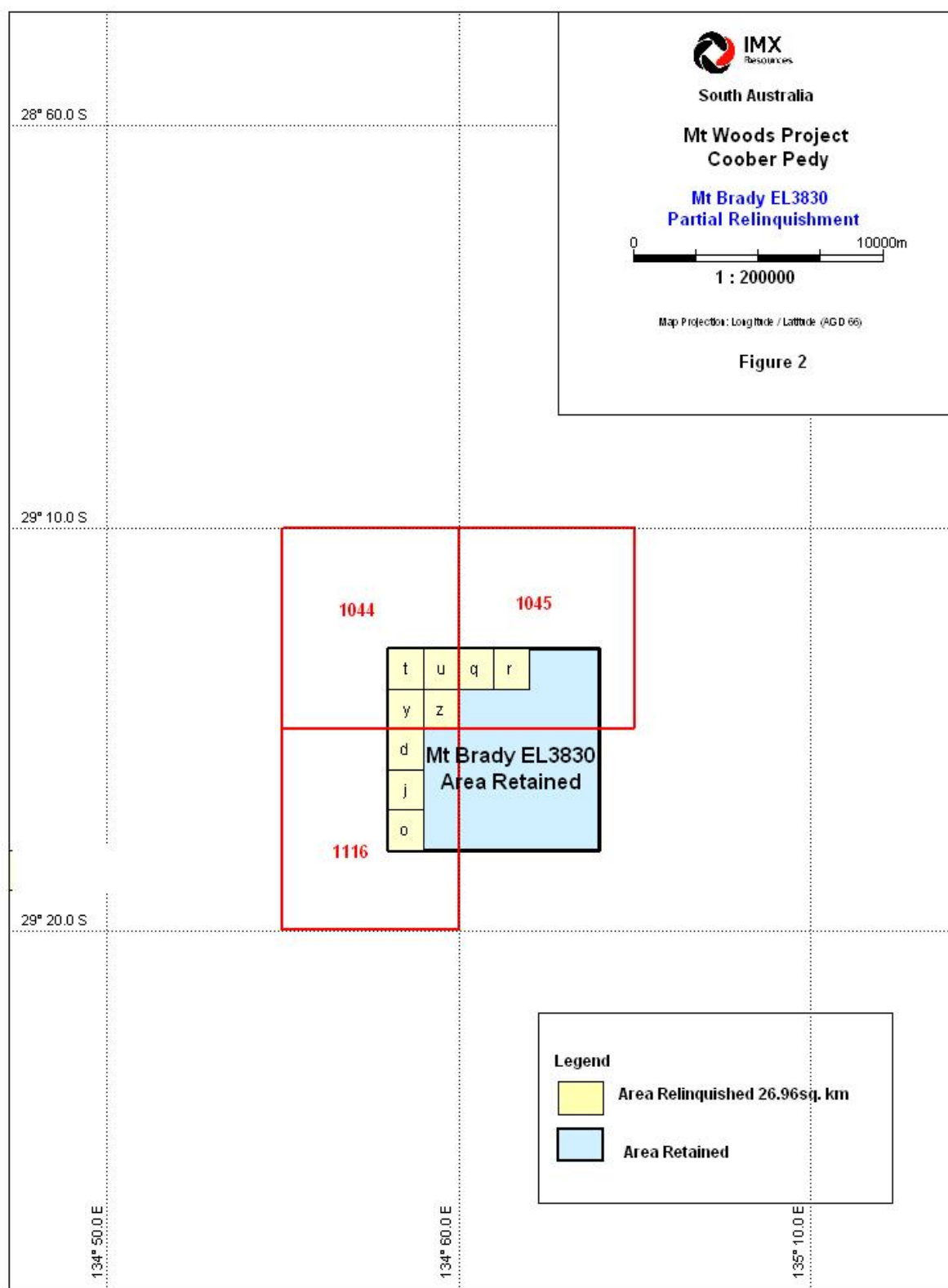


Figure 2: Mt Brady relinquished blocks

The Mount Woods Inlier comprises high grade Palaeoproterozoic metasedimentary rocks (amphibolite to granulite facies quartzo-feldspathic gneisses, meta-iron formations, quartz-feldspar-biotite schists, metaquartzites, calc-silicates and forsterite marbles) intruded by syn- to post tectonic granitoids, (eg, the Balta Granite, a polyphase Hiltaba Granite equivalent, comprising non-foliated brick-red granite, porphyritic granites and hybrid granites) and is covered by Mesozoic and Tertiary sedimentary cover. The metasediments are characterised by an intense magnetic response in regional aeromagnetic data, which reflects a combination of magnetite rich precursor sediments including BIFs, magnetite alteration, and interpreted probable mafic intrusive bodies. The Inlier is bounded by major shear zones, the most prominent of which is the Karari Fault Zone which bounds the east-west trending Coober Pedy Ridge.

To the north, the Coober Pedy Ridge is separated from the Mabel Creek Ridge by the Permian Tallaringa Trough, and the cover thickness increases markedly. To the west cover thickness also increases due to the presence of Permian and some Cambrian sediments, and increased thickness of Mesozoic cover. Limited previous exploration drilling has shown that the cover sequences generally comprising Cretaceous sediments of the Cadna-Owie Formation, Algebuckina Sandstone and the Bulldog Shale, which are in turn overlain by Tertiary, Quaternary and recent cover, are highly variable over the tenement area. Basement is interpreted to deepen to the south of the tenement into the Phillipson Trough.

Extensive pre- and post-tectonic alteration can be observed from drill holes in the region. Hematite  $\pm$  magnetite  $\pm$  sulphide breccias, iron introduction into meta-sediments and calcium-iron silicate alteration have been reported.

#### **4.0 PREVIOUS EXPLORATION**

The Mt Brady area abuts the northern boundary of IMX's EL3445 (Kangaroo Dam). This forms part of a broader tenement package held by IMX over the Mt Woods Inlier that has been actively explored for IOCG ore as well as Ni/PGE and Uranium mineralisation. IMX is a major explorer in this area, having spent several million dollars over the last few years on developing the magnetite(-Cu-Au) mine at Cairn Hill.

Numerous regional targets exist elsewhere over the Mt Woods project for additional iron ore as well as high grade IOCG-style deposits. Drilling by Goldstream/IMX immediately south of Mt Brady has intersected Ni-PGE mineralisation associated with alteration related to mafic intrusive bodies. This represents a previously, unrecognised target style in the Mount Woods Inlier, and South Australia generally.

Regional aeromagnetic interpretations have identified preliminary targets around the southern margin of a probable mafic intrusive body.



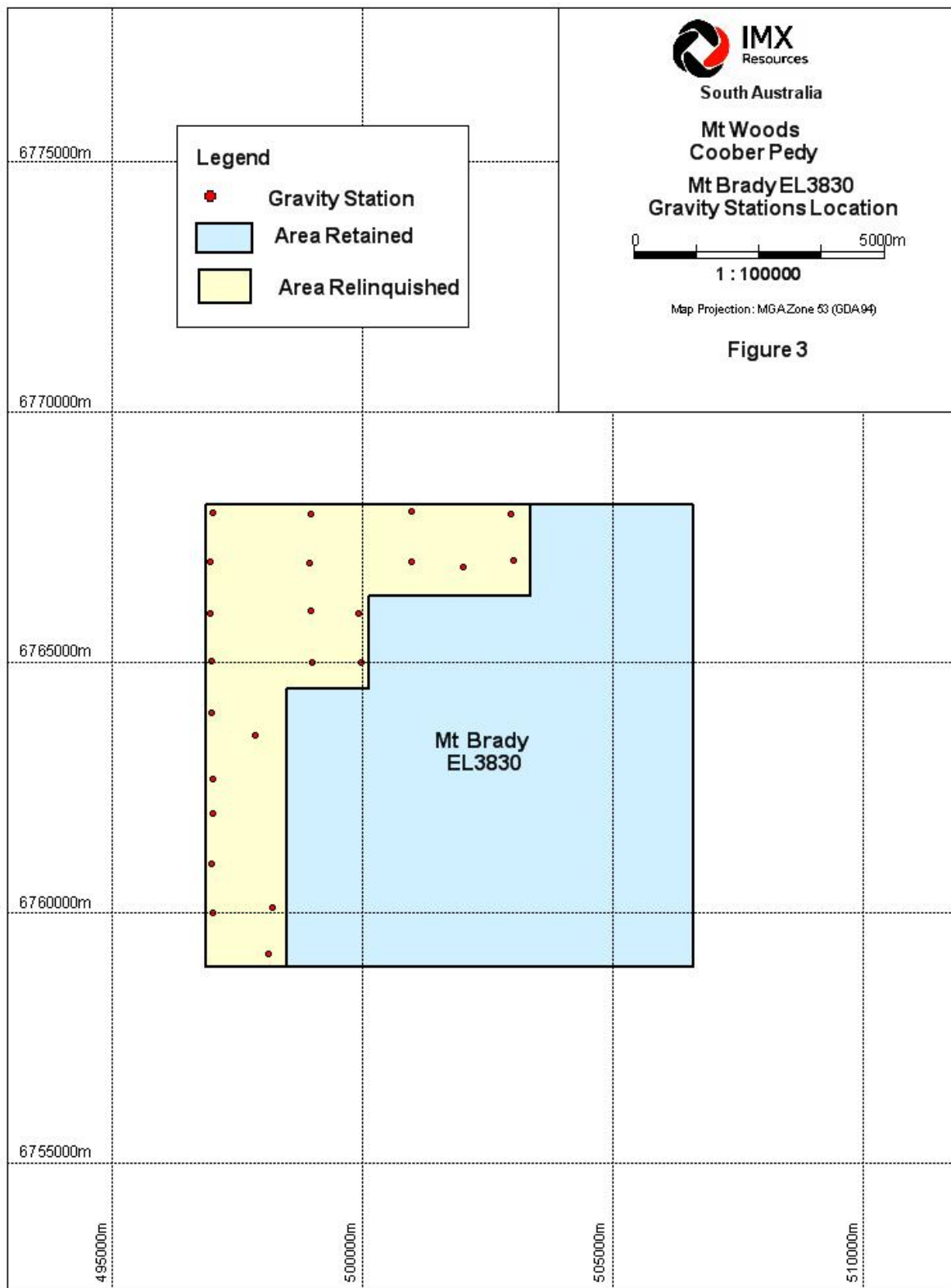


Figure 3: Mt Brady – location of gravity stations

## **5.0 EXPLORATION ACTIVITIES**

The area to be relinquished was covered by part of a 2003 gravity survey by Anglo with stations spaced at 400 m intervals on N-S lines spaced 1600 m apart. Appendix I shows the gravity survey data.

During the 2008-2009, the haul road from the Cairn Hill ML6303 was built across the exploration licence, and work began on an underpass beneath the Stuart Highway on the western boundary of the exploration licence. Several water bores were attempted along the haul road. None were in the relinquished area.

Assessment of geophysical targets and the uranium potential of the licence is ongoing.

One target has been drilled. It is not in the relinquished area.

## **6.0 EXPENDITURE**

Expenditure for the relinquished portion of EL3830 for the reporting period is \$5,000.

## **7.0 CONCLUSIONS AND RECOMMENDATIONS**

The tenement EL3830 is being reduced in size for the company to focus on the more prospective portion of the tenement and also as part of the Mount Woods Amalgamated Agreement with PIRSA.

Modeling of gravity and magnetics data and reinterpretation of the existing data is ongoing in order to determine depths and geometry of the IOCG targets.

The uranium potential of the licence is also being assessed.

## **8.0 REFERENCES**

**Garsed, I., 2004.** Goldstream Mining NL Mt Woods Project, Exploration Review and Target Generation. Volumes I & II. Garsed & Associates. *Internal unpublished report for Goldstream Mining NL.*

**Chai, A., 2008.** EL3830 'Mt Brady' Annual Report for the Period 10<sup>th</sup> July 2007 to 9<sup>th</sup> July 2008. *Internal unpublished report for IMX Resources Ltd.*

# **APPENDIX 1**

## **Gravity Station Data**

X_GDA94	Y_GDA94	SURVEY_ID	GDAZONE
498135	6759193	North29_Plus	53
497010	6760004	North29_Plus	53
498197	6760108	North29_Plus	53
496997	6760994	North29_Plus	53
497024	6762002	North29_Plus	53
497018	6762695	North29_Plus	53
497865	6763558	North29_Plus	53
497002	6764002	North29_Plus	53
499982	6764997	North29_Plus	53
499010	6765002	North29_Plus	53
497000	6765027	North29_Plus	53
499915	6765986	North29_Plus	53
496967	6766000	North29_Plus	53
498977	6766040	North29_Plus	53
502017	6766926	North29_Plus	53
498959	6766991	North29_Plus	53
500989	6767009	North29_Plus	53
496970	6767014	North29_Plus	53
503015	6767039	North29_Plus	53
502974	6767983	North29_Plus	53
498976	6767985	North29_Plus	53
497005	6767988	North29_Plus	53
500988	6768017	North29_Plus	53