



**Partial Relinquishment Report
Exploration Permit for Minerals
EPM 11676 Mount Tracey**

Tenure Holders: Inova Resources Cloncurry Mines Pty Ltd
Exco Resources Limited

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SUMMARY

Aim of Project

Exploration Permit for Minerals EPM 11676 Mount Tracey was obtained to explore for iron oxide-copper-gold mineralisation, copper-gold mineralisation, massive sulphide lead-zinc-silver deposits, and uranium mineralisation hosted either within granites or within sandstone or limestone horizons.

Datum

Data are presented in MGA94 (z54) datum.

Object of Report

This report documents the results of exploration on the 16 relinquished sub-blocks of EPM 11676 conducted from 13 September 2005 to 12 September 2013.

Location

EPM 11676 is centred approximately 85 km south of Cloncurry (Figure 1).

Tenure

EPM 11676 currently consists of 14 sub-blocks. It was originally granted to BHP Billiton Minerals on 13 September 2005 for a period of five years with 92 sub-blocks.

Summary of Exploration

Exploration on the 16 relinquished sub-blocks of EPM 11676 conducted from 13 May 2005 to 12 September 2013 comprised of mapping, rock-chip, stream sediment and soil sampling programs.

In May and June 2010, a large regional airborne magnetic and radiometric survey was conducted by UTS that covered 11 of the 16 relinquished sub-blocks of EPM 11676.

Conclusions

The 50% reduction in area of EPM 11676 was required as part of the renewal application lodged on 12 June 2013 that is still pending an outcome. At least 15 of the 30 sub-blocks needed to be dropped. The 16 sub-blocks that were relinquished on 12 September 2013 were considered the least prospective based on regional aeromagnetic data combined with rock-chip, soil and stream sediment geochemistry.

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1. INTRODUCTION

EPM 11676 Mount Tracey was granted on 13 September 2005 to BHP Billiton Minerals with 92 sub-blocks for a term of five years. In June 2006 the EPM was assigned to Exco Resources. On 9 May 2007, EPM 11676 was included in a Joint Venture agreement between Exco Resources and Ivanhoe Cloncurry Mines Pty Ltd (ICM). ICM are the operators of the Joint Venture. On 17 October 2008, 30 sub-blocks were relinquished leaving 62 sub-blocks in the tenement. A total of 15 sub-blocks were relinquished on 13 September 2009, seven were relinquished on 12 September 2011, and a further 10 relinquished on 14 November 2012 (Figure 2).

On 23 April 2013 the tenement was assigned to Ivanhoe Cloncurry Mines Pty Limited (ICM) (80%) and Exco (20%). 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). A renewal application was lodged on 12 June 2013, a five year renewal term was requested. The application is still pending an outcome.

A further 16 sub-blocks were relinquished on 12 September 2013, there are currently 14 sub-blocks in the tenement (Figure 2).

This partial relinquishment report describes all activities carried out in the relinquished area of EPM 11676 from when the permit took effect on 13 May 2005 until the sub-blocks were relinquished on 12 September 2013.

Work completed in the relinquished area comprised mapping, rock-chip, stream sediment and soil sampling programs and conducting an airborne magnetic and radiometric geophysical survey over one sub-block of the tenement.

2. SUB-BLOCK RELINQUISHMENT

Below are the details of the sub-blocks that were relinquished and retained (Figure 2).

Relinquished sub-blocks:

<u>BIM</u>	<u>Block</u>	<u>Sub-blocks</u>
Clon	1041	x y z
Clon	1042	v
Clon	1111	s t x y
Clon	1113	c d e k z
Clon	1114	l v
Clon	1184	f

Total = 16 relinquished sub-blocks

Retained sub-blocks:

<u>BIM</u>	<u>Block</u>	<u>Sub-blocks</u>
Clon	1039	t u y z
Clon	1111	e k
Clon	1112	h
Clon	1327	z
Clon	1400	b c f g
Clon	1472	e k

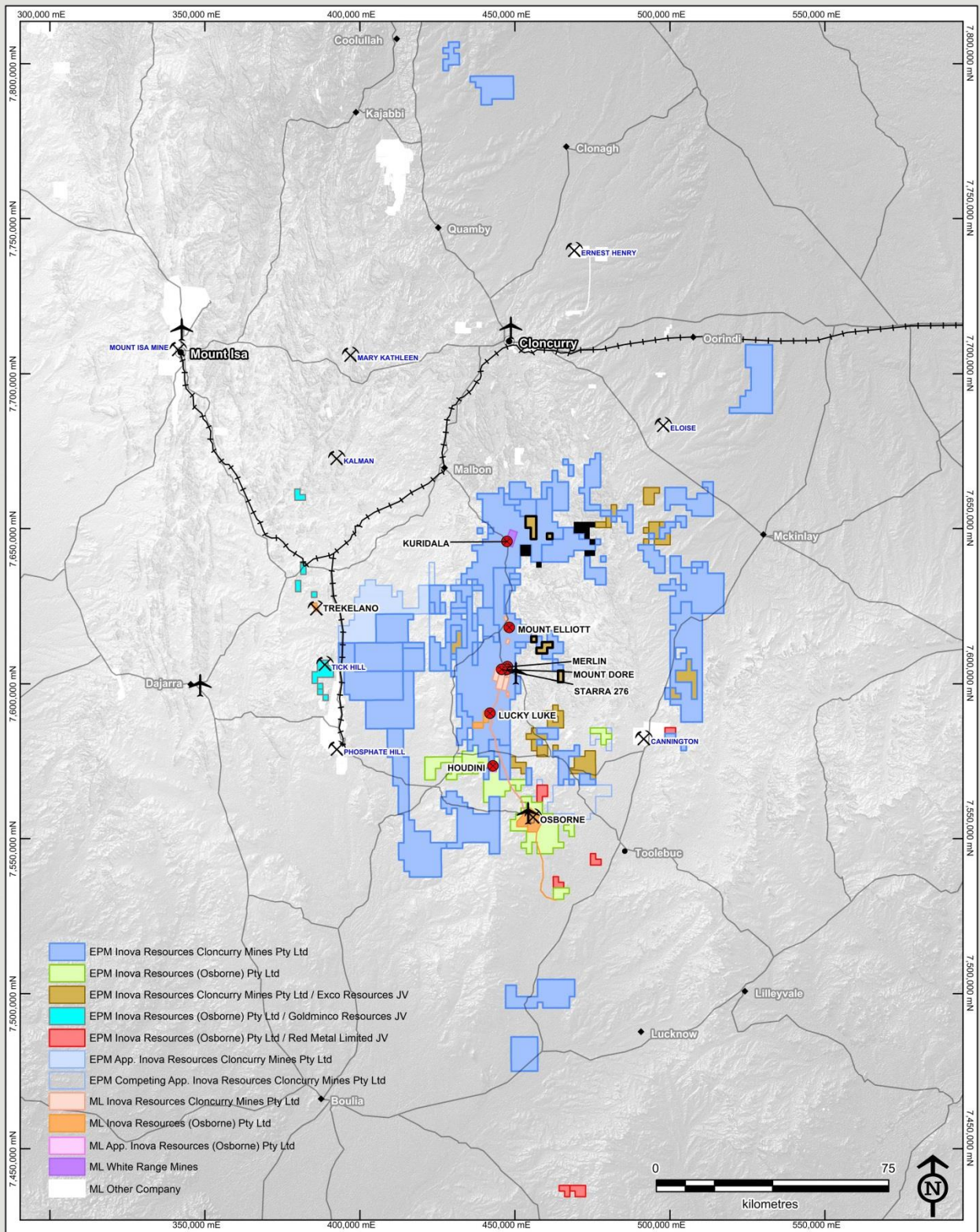
Total = 14 retained sub-blocks

3. LOCATION AND ACCESS

EPM 11676 Mount Tracey currently consists of 14 sub-blocks in five separate groups. These groups are centred approximately 85 km south of Cloncurry and are spread across the Girila, Glen Idol, Farley and Starcross Pastoral Leases (Figure 1 and Figure 2). The 16 relinquished sub-blocks from EPM 11676 lie across the same Pastoral Holdings.

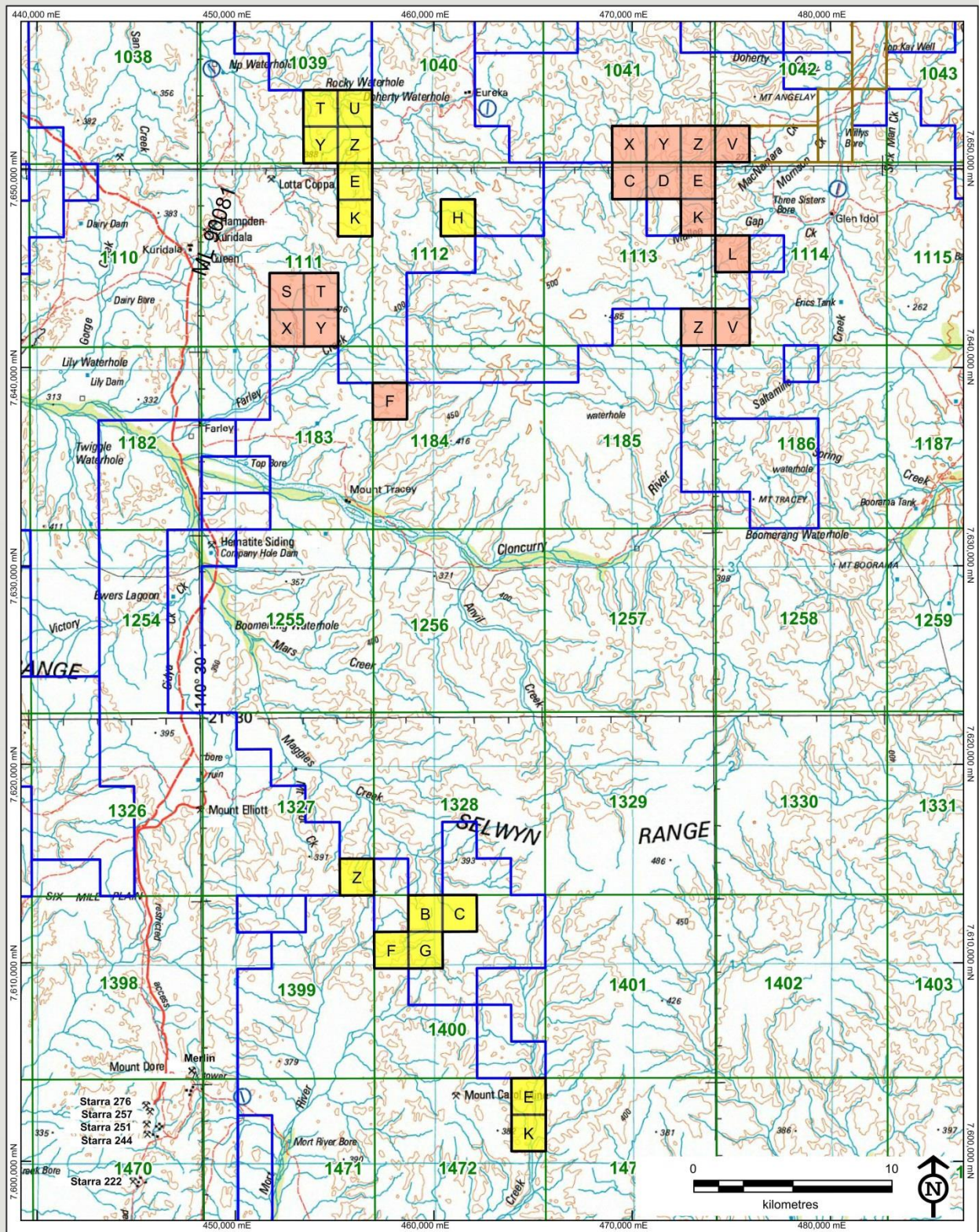

The tenement area is characterised by open wooded, semi-arid landscape, incised by intermittent creeks and gullies. All creeks are ephemeral and major drainage consists of the Cloncurry River, Florence Creek and Farley Creek.

Vehicle access to EPM 11676 is obtained via the Malbon – Mount Elliott and the Kuridala – Eureka metalled roads. 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 4 wheel drive vehicles for access within the tenement.



- IVA Prospect
- Prospect / Mine
- Major Town
- Town
- Main Road
- Railway
- Airstrip
- EPM 11676 (retained)
- EPM 11676 (relinquished)

Figure 1: EPM 11676 regional location of relinquished sub-blocks

- EPM 11676 (currently 14 sub-blocks)
- Relinquished 12 September 2013 (16 sub-blocks)
- EPM Inova Resources Cloncurry Mines Pty Ltd
- EPM Inova Resources Cloncurry Mines Pty Ltd / Exco Resources JV
- Exploration Blocks

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EPM 11676
Sub-Block Location

DRAWN BY: BST 28/10/2013
1:250,000 @ A4 (MGA254)

Figure 2: EPM 11676 relinquished sub-block location

4. REGIONAL GEOLOGY

The majority of EPM 11676 lies within the Williams Granite (Squirrel Hills, Mount Angelay and Mount Dore Granites). To the north, sections of EPM 11676 contain units of the Kuridala, Corella and Doherty Formations.

The project area lies on the western margin of the Mesozoic Eromanga Basin, close to the exposed eastern boundary of the Eastern Succession of the Proterozoic Mount Isa Inlier (Figure 3). Most of the project area is covered by Mesozoic to Quaternary sediments. There are isolated outcrops of Proterozoic basement in the extreme western margins of the project area.

The Eromanga Basin cover units comprise monotonous, mostly carbonaceous mudstones, siltstones and rarer sandstones and gravels of the Mesozoic Rolling Downs Group - dominantly the Wallumbilla Formation - and locally the overlying calcareous mudstones and dirty limestones of the Toolebuc Formation. These Mesozoic deposits are overlain by a thin veneer of Quaternary and Tertiary sands, gravels and clays, forming a flat-lying, featureless terrain broken only by a number of river channels and associated terraces. To the south around Dingading homestead a major water divide occurs with the Mesozoic exposed as a series of low hills and mesas possibly reflecting more recent uplift. Rivers north of this divide merge and drain towards the Gulf of Carpentaria. Those rivers to the south ultimately feed the Diamantina River and the Lake Eyre system.

A variable 3-20 m thick basal fluvial clastic sequence directly overlies basement over much of the project area. This basal cover unit is interpreted to be the late Jurassic Gilbert River Formation (Ryburn and Grimes, 1988) or its equivalent and generally occupies topographic lows, paleodrainage channels and probably broader braided river plains on the pre-Mesozoic surface. The unit contains fragments and reworked portions of the mineralisation and alteration, as seen at Ernest Henry and Cannington. Regionally the basal cover unit is characterised by subangular to subrounded quartz-feldspar-clay gravels and sands with pieces of pyritized wood and fine-grained pyrite spotting throughout. Feldspar is commonly replaced by kaolinite indicating that acid-oxidizing conditions must have occurred within this unit either during or subsequent to deposition. Alternatively, the provenance of the sediments may have been from a weathered protolith. The formation of pyrite within this unit is indicative of overprinting reduced conditions of an earlier oxidised sequence. As a result this unit is geochemically active and represents a good regional geochemical sampling medium.

Much of the project area south of Cloncurry is underlain by sub-units of the Proterozoic Soldiers Cap Group (1695 - 1665 Ma; Giles and Nutman, 2003). The dominant lithologies in the Soldiers Cap Group are meta-siliciclastics which include planar-bedded pelitic schists with graded bedding; thin units of cross-bedded immature quartzo-feldspathic meta-arenites and orthoquartzites; and intervals of more abundant interbedded basic volcanics and basic sills with minor carbonaceous schists, calc silicates and quartzites. Overall there is a distinctive absence of significant carbonate sequences or acid volcanics and a dominance of immature clastics. Thin horizons of banded iron formation associated with small base metal showings occur at restricted stratigraphic levels, generally within the Mount Norna Quartzite.

Metamorphic grade in the north of the project area is largely greenschist facies with abundant relict sedimentary textures. To the south and southeast towards Cannington the metamorphic grade increases. The grade reaches upper amphibolite facies resulting in widespread sillimanite-K feldspar-bearing schists and migmatitic gneisses.

Poor outcrop and the differences in metamorphic grade complicate clear correlation of these higher grade metamorphic sequences with the previously defined Soldiers Cap Group around Cloncurry. Interpretation of unpublished regional magnetic surveys indicates that the higher metamorphic grade sequences within the Soldiers Cap Group extend for up to 50 km under cover to the east and southeast. Many of the lithostratigraphic units interpreted from the magnetic data are not well represented in areas of outcrop.

The Cannington deposit occurs within these undercover extensions, and is interpreted to lie within broad litho-magnetic equivalents of the Mount Norna Quartzite of the Soldiers Cap Group. However, given lack of outcrop, complex deformation and high grade metamorphism, detailed correlations are uncertain.

Beardsmore, Newberry and Laing (1988) proposed an informal stratigraphic scheme for the Eastern Succession. Higher grade metamorphics south of Cloncurry were assigned to the Fullarton River Group, overlain by components of the previously defined Soldiers Cap Group, with the two groups included in a newly defined Maronan Supergroup. However, type sections, critical age relationships and contacts have not been formally defined. Host lithologies evident in drilling from the Cannington area are comparable with units of the proposed Fullarton River Group in this informal terminology. Based on broad litho-stratigraphic and geophysical similarities between the Soldiers Cap Group and the Fullarton River Group, the authors believe they are equivalent sequences.

Dating of a garnetiferous felsic gneiss from the proposed Fullarton River Group (some 30 km north of Cannington), has given an age of 1677 ± 9 Ma (Page, 1983), which would imply an age equivalence with Cover Sequence 3.

A range of small silver-lead-zinc prospects with Broken Hill-type affinities occur within the outcropping higher grade metamorphics within the Soldiers Cap Group (Dingo, Maramungee, Fairmile, Black Rock, Pegmont), as well as in under-cover equivalents (Altia, Maronan, Cannington). Interestingly, all of these prospects are hosted within psammite-rich packages that are correlated with the Mount Norna Quartzite.

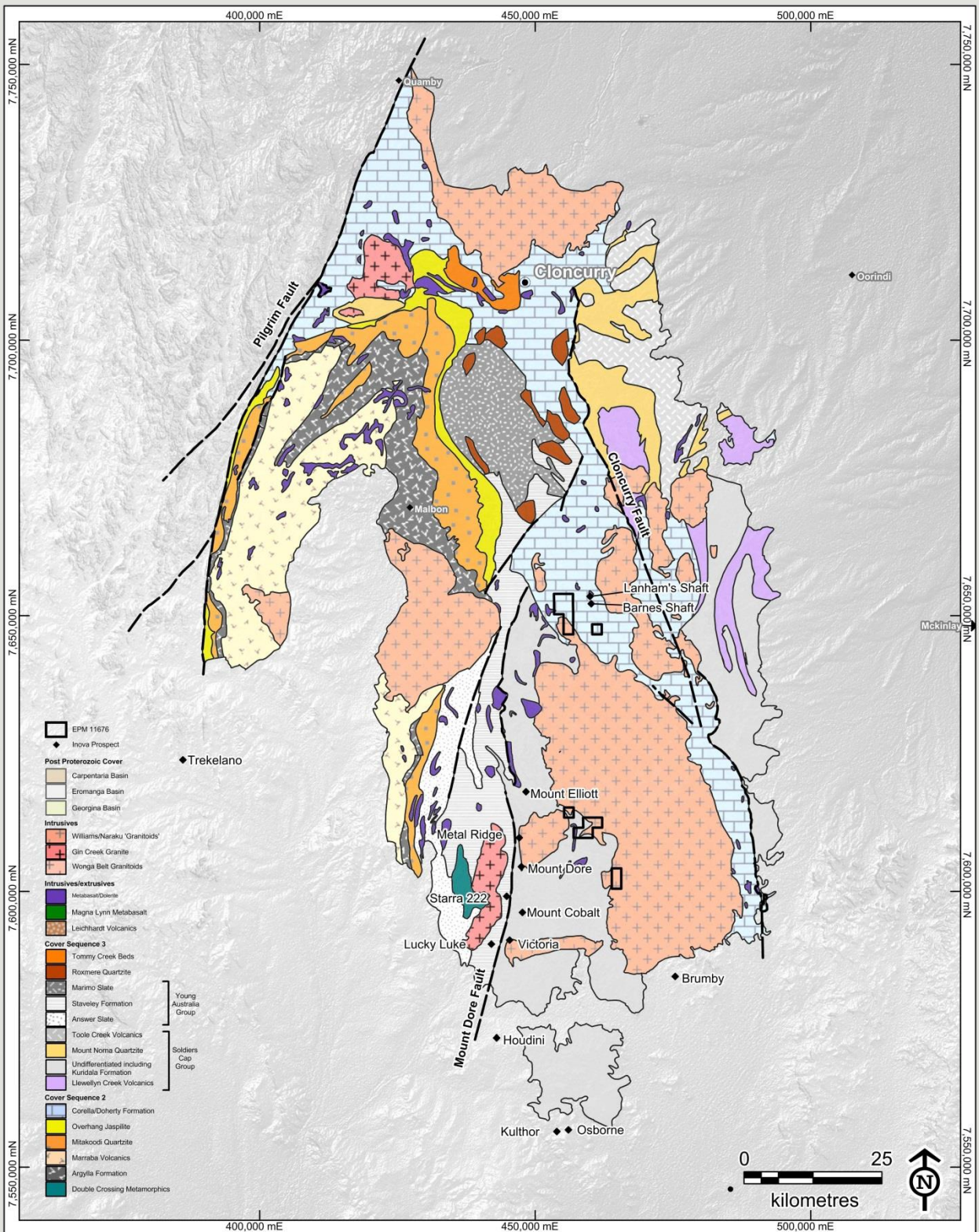


Figure 3: EPM 11676 on regional geology

5. WORK DONE ON RELINQUISHED SUB-BLOCKS

5.1 Introduction

In eight years of exploring EPM 11676 (granted 13 September 2005 - relinquished 12 September 2013), one prospect (MiGlen Idol) was identified in the 16 relinquished sub-blocks. A second prospect (Amethyst) lies just to the west of the relinquished sub-block CLON1111X (Figure 2).

5.2 2008 Rock-chip Sampling

Ninety-one rock-chip samples were collected during a helicopter reconnaissance trip from outcrop within the relinquished area of EPM 11676 between 13 March and 21 May 2008 (Figure 4). The samples were sent to the lab for multi-element analysis and the digital assay data is provided in (Appendix 1).

5.3 2008 Stream Sediment Sampling

Between 15 and 17 August 2008, 81 stream sediment samples were collected from the 16 relinquished sub-blocks of EPM 11676 (Figure 5). These samples were also sent to the lab for multi-element analysis and the digital assay data is provided in (Appendix 2).

5.4 2010 Soil Sampling

Between 15 May and 27 July 2010, 971 soil samples were collected from the 16 relinquished sub-blocks of EPM 11676 (Figure 6). The sampling program used a 50 m grid for collection locations and took place in the southern parts of sub-blocks CLON1111X and CLON1111Y. Samples were analysed in the field using a Niton handheld XRF analyser and the digital data is provided in (Appendix 3).

5.5 2010 Airborne Magnetic and Radiometric Survey

Between 29 May and 8 June 2010, a large regional airborne magnetic and radiometric survey was conducted by UTS that covered 11 of the 16 relinquished sub-blocks of EPM 11676. Full survey details including acquisition parameters, flight lines and digital data were included in Whitehead and Adiya (2011). Figure 7 shows the TMI RTP aeromagnetics image.

5.6 2010 Rock-chip Sampling

Five rock-chip samples were collected from outcrop within the relinquished area of EPM 11676 on 20 June 2010 (Figure 4). The samples were taken to compliment the 2008 program. They were sent to the lab for multi-element analysis and the digital assay data is provided in (Appendix 1).

5.7 2011 Soil Sampling

Between 15 and 20 February 2011, 19 soil samples were collected from the 16 relinquished sub-blocks of EPM 11676 (Figure 6). The sampling program continued the 50 m grid that commenced in 2010. Samples were analysed in the field using a Niton handheld XRF analyser and the digital data is provided in (Appendix 3).

5.8 Conclusions

The 50% reduction in area of EPM 11676 was required as part of the renewal application lodged on 12 June 2013 that is still pending an outcome. At least 15 of the 30 sub-blocks needed to be dropped. The 16 sub-blocks that were relinquished on 12 September 2013 were considered the least prospective based on regional aeromagnetic data combined with rock-chip, soil and stream sediment geochemistry.

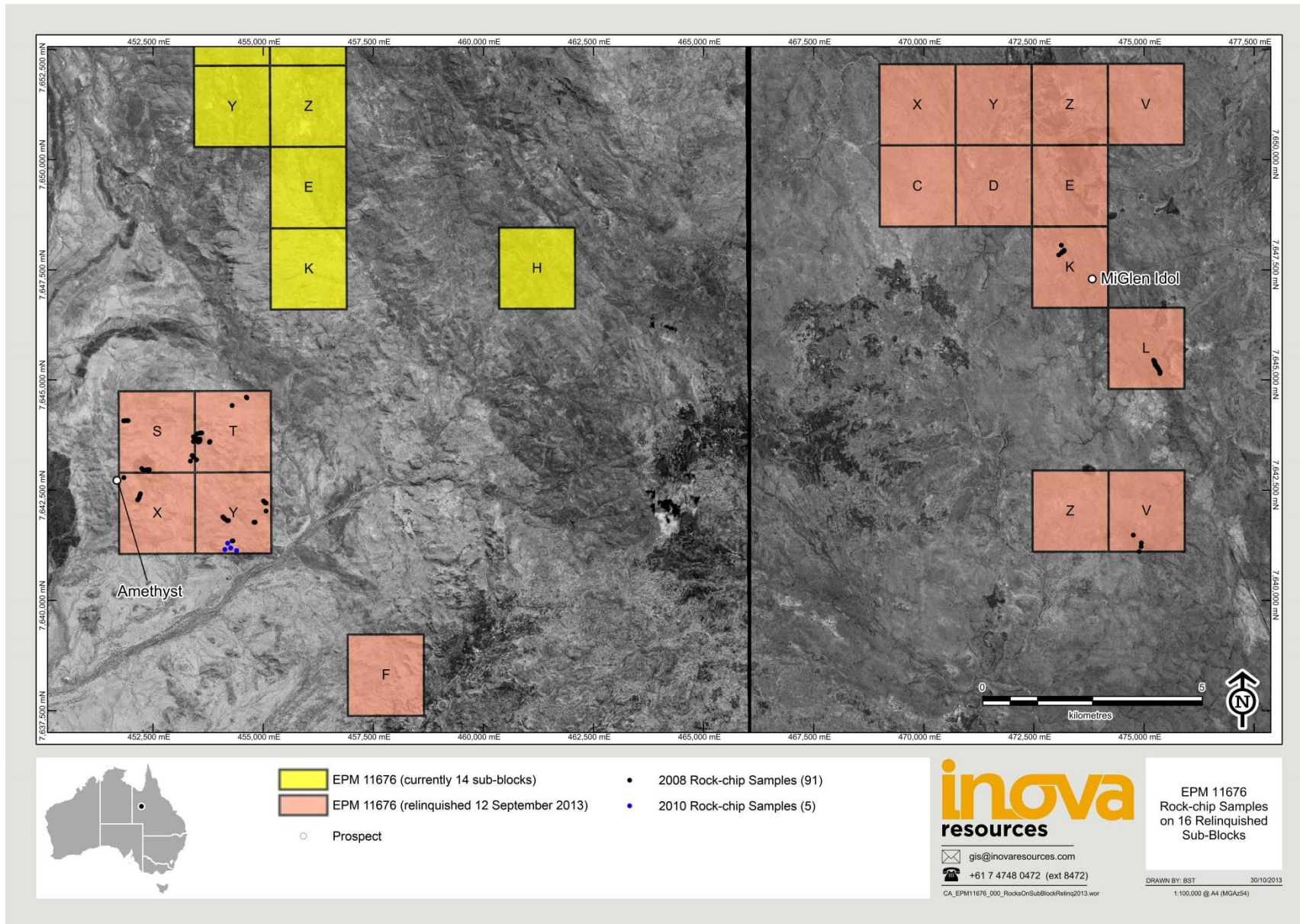


Figure 4: 2008 and 2010 rock-chip sample locations on relinquished sub-blocks

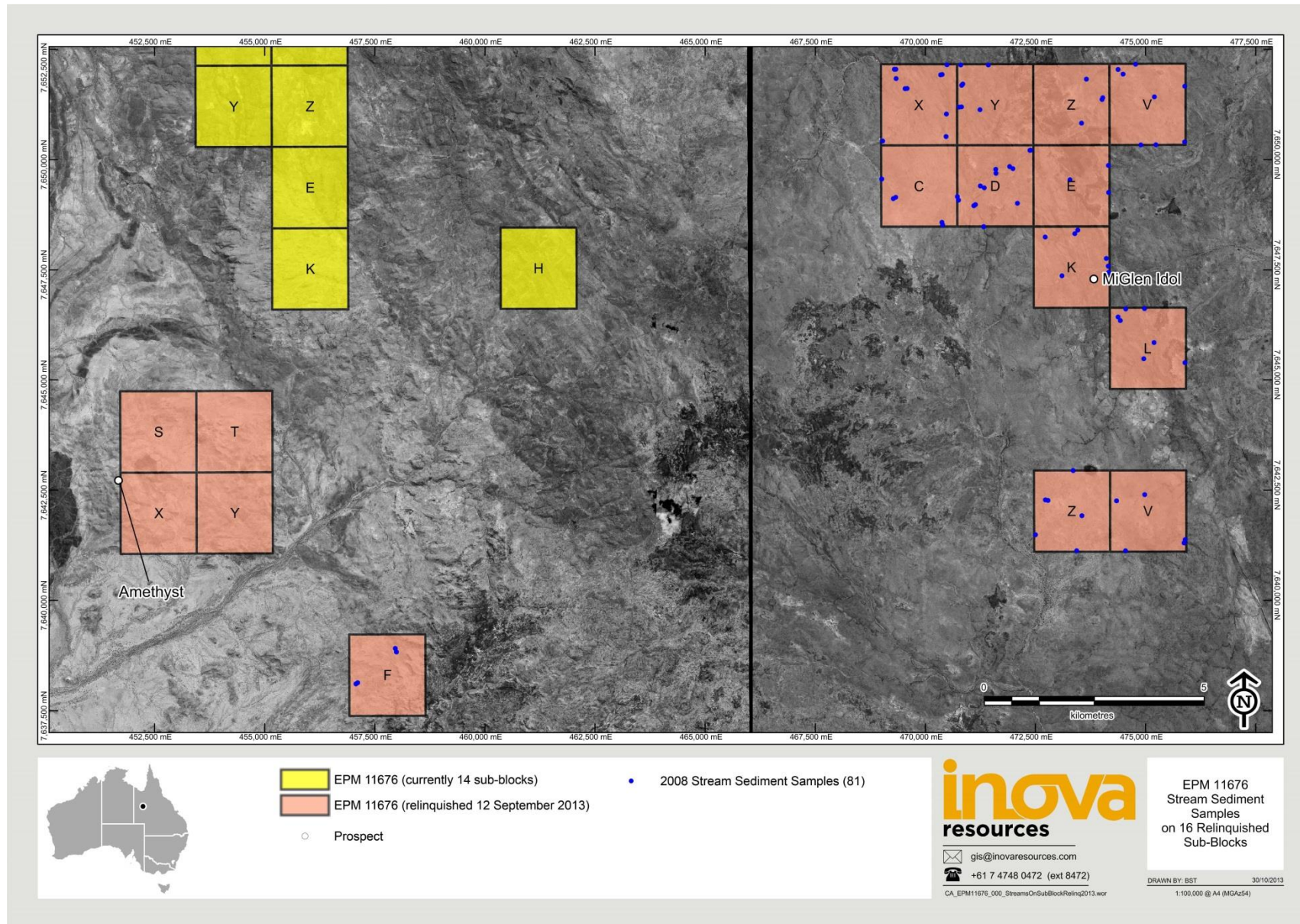


Figure 5: 2008 stream sediment sample locations on relinquished sub-blocks

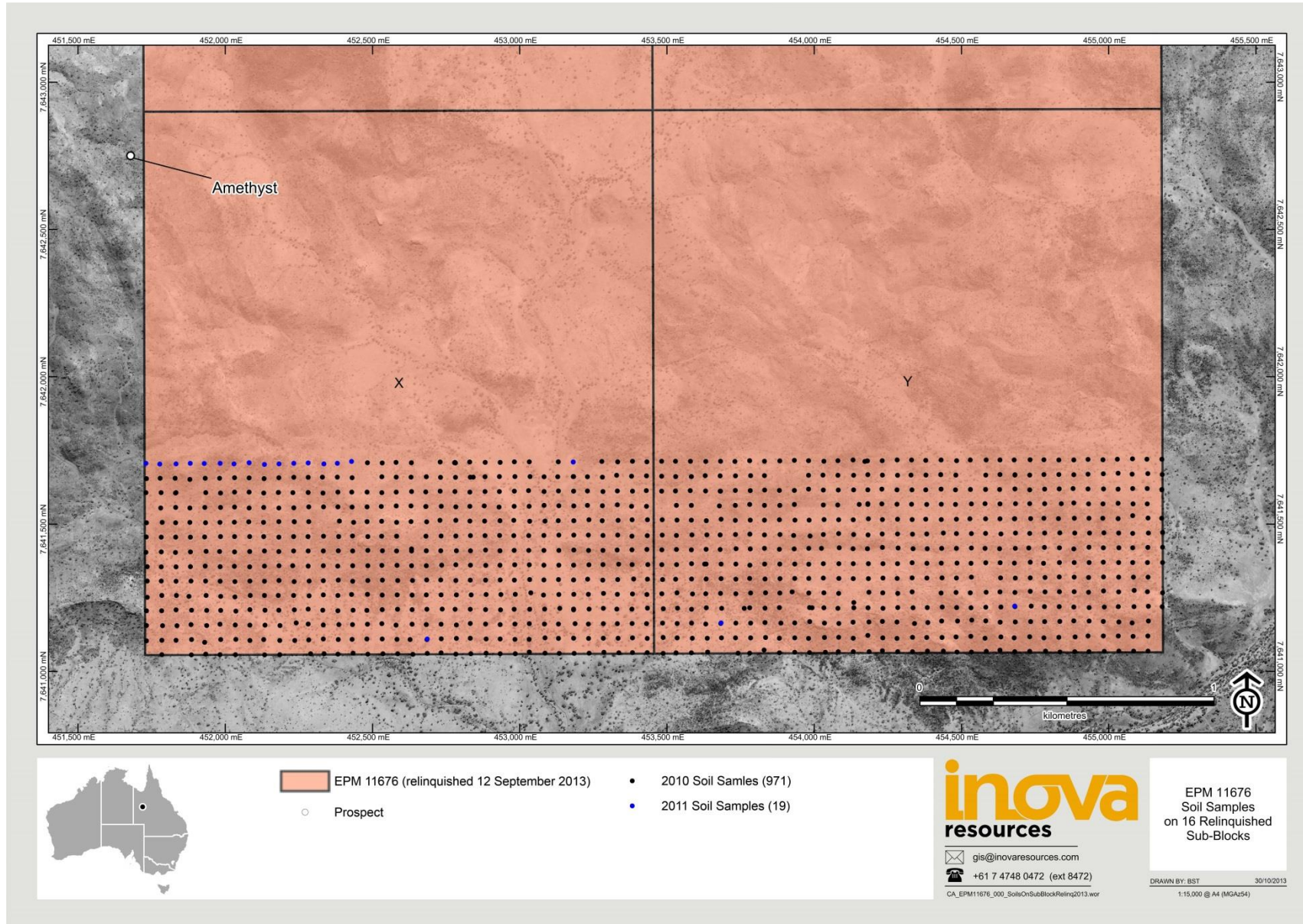


Figure 6: 2010 and 2011 soil sample locations on relinquished sub-blocks

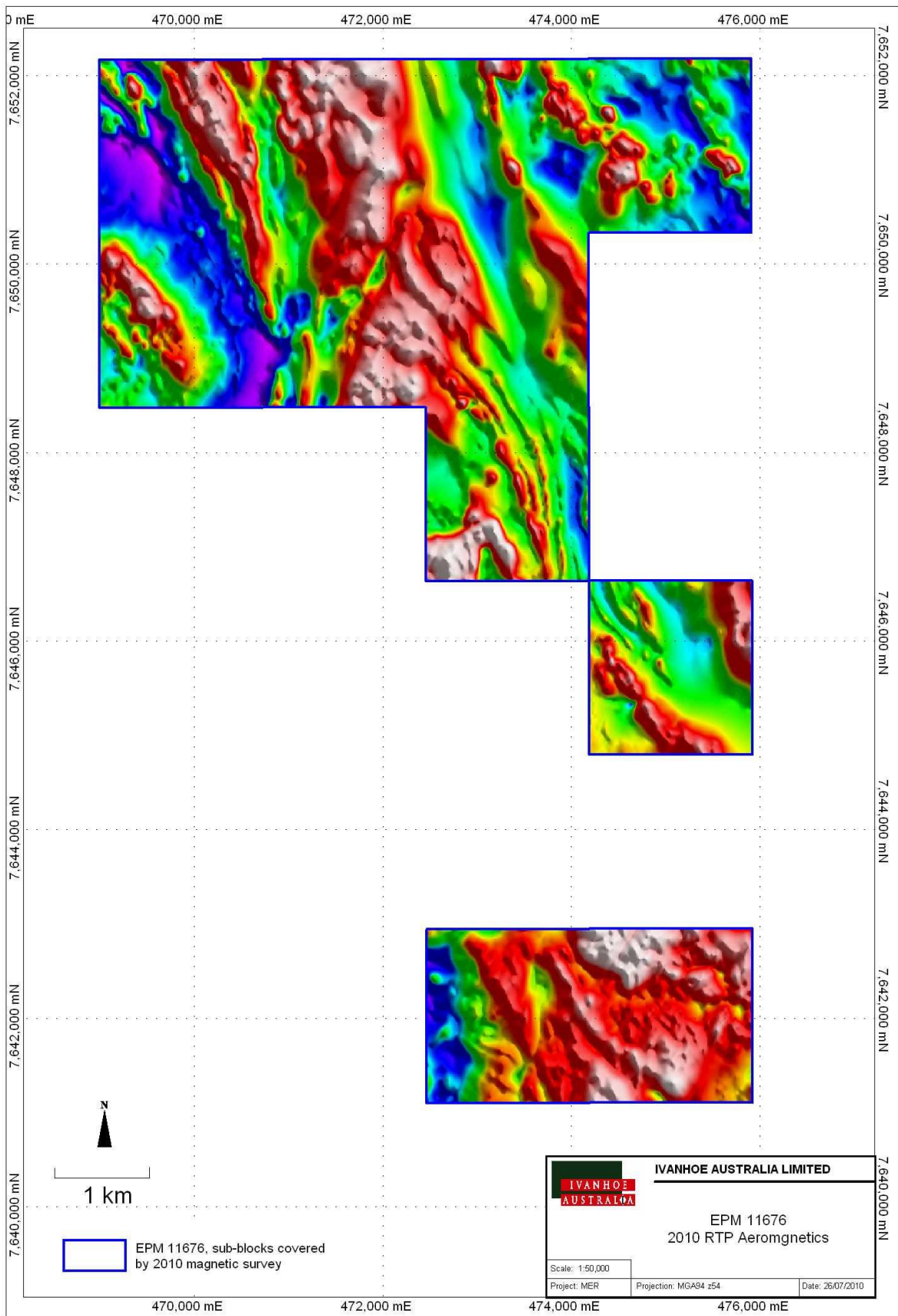


Figure 7: EPM 11676 sub-blocks on 2010 RTP aeromagnetics
(from Whitehead and Adiya, 2011)

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APPENDIX 1: 2008 & 2010 Rock-Chip Sampling – Assay Data

Data included as a separate component in QDEX.

APPENDIX 2: 2008 Stream Sediment Sampling – Assay Data

Data included as a separate component in QDEX.

APPENDIX 3: 2010 & 2011 Soil Sampling – XRF Data

Data included as a separate component in QDEX.