



ActivEX Limited ABN 11 113 452 896



## EXPLORATION PERMIT FOR MINERALS 15055

### OXLEY CREEK

### PARTIAL RELINQUISHMENT REPORT

### FOR THE PERIOD

11<sup>th</sup> JANUARY 2006 to 10<sup>th</sup> JANUARY 2014

BY

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## TENEMENT REPORT INDEX

<b>OPERATOR:</b>	ActivEX Limited
<b>PROJECT:</b>	Pentland
<b>TENEMENT:</b>	Exploration Permit for Minerals 15055
<b>TITLE:</b>	Exploration Permit for Minerals 15055, Oxley Creek. Partial Relinquishment Report for the Period 11 <sup>th</sup> January 2006 to 10 <sup>th</sup> January 2014.
<b>HOLDER:</b>	ActivEX Limited
<b>REPORT PREPARED BY:</b>	ActivEX Limited
<b>AUTHOR:</b>	J. J. Hugenholtz
<b>STATE:</b>	Queensland
<b>LATITUDE (GDA94):</b>	-20° 18'
<b>LONGITUDE (GDA94):</b>	144° 54'
<b>MGA94 Zone 55 mN:</b>	7 753 200
<b>(GDA94) mE:</b>	281 700
<b>1 : 250,000 SHEET:</b>	Hughenden SF55-1
<b>1 : 100,000 SHEET:</b>	White Mountain 7857 Lolworth 7957
<b>LOCALITY:</b>	100 km southwest of Charters Towers
<b>TECTONIC:</b>	Charters Towers Region, Galilee Basin
<b>STRATIGRAPHY:</b>	Cape River Metamorphics, Kennedy Province Volcanics, Kennedy Province Intrusives
<b>AGE:</b>	Neoproterozoic, Cambrian, Carboniferous, Permian
<b>COMMODITIES:</b>	Gold, Copper, Molybdenum
<b>KEYWORDS:</b>	Geological traverses, rock chip sampling, lag sampling, stream sediment sampling, portable XRF analysis
<b>PROSPECTS:</b>	Chinamans, Quartz Hill, Scrubby Creek Shear

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## 1 SUMMARY

The ActivEX Pentland Project consists of three Exploration Permits, EPMs 14332, 15055 and 15185. The project is located to the north and north-northwest of the township of Pentland, approximately 100 kilometres west of Charters Towers in northern Queensland.

The tenements were acquired with the aim of exploring for intrusion-related gold mineralisation and porphyry-related gold-copper-molybdenum mineralisation.

33 sub-blocks were relinquished from EPM 15055, Oxley Creek, effective 11<sup>th</sup> January 2014. The sub-blocks mainly cover Cape River Metamorphics and Kennedy Province granitoids.

ActivEX exploration activities over the areas of the relinquished sub-blocks consisted of an assessment of the geological, geochemical and geophysical data from previous explorers and published mapping. Field activities consisted of geological traversing, lag, rock chip and stream sediment sampling and portable XRF data collection from rock chips and termite mounds.

Exploration activities on the tenement during 2011-2014 mostly involved a review of all data as field work was hampered by landowner access issues and the resulting inability to access field areas.

The results of ActivEX exploration over the relinquished sub-blocks did not reveal any high priority areas for further work.

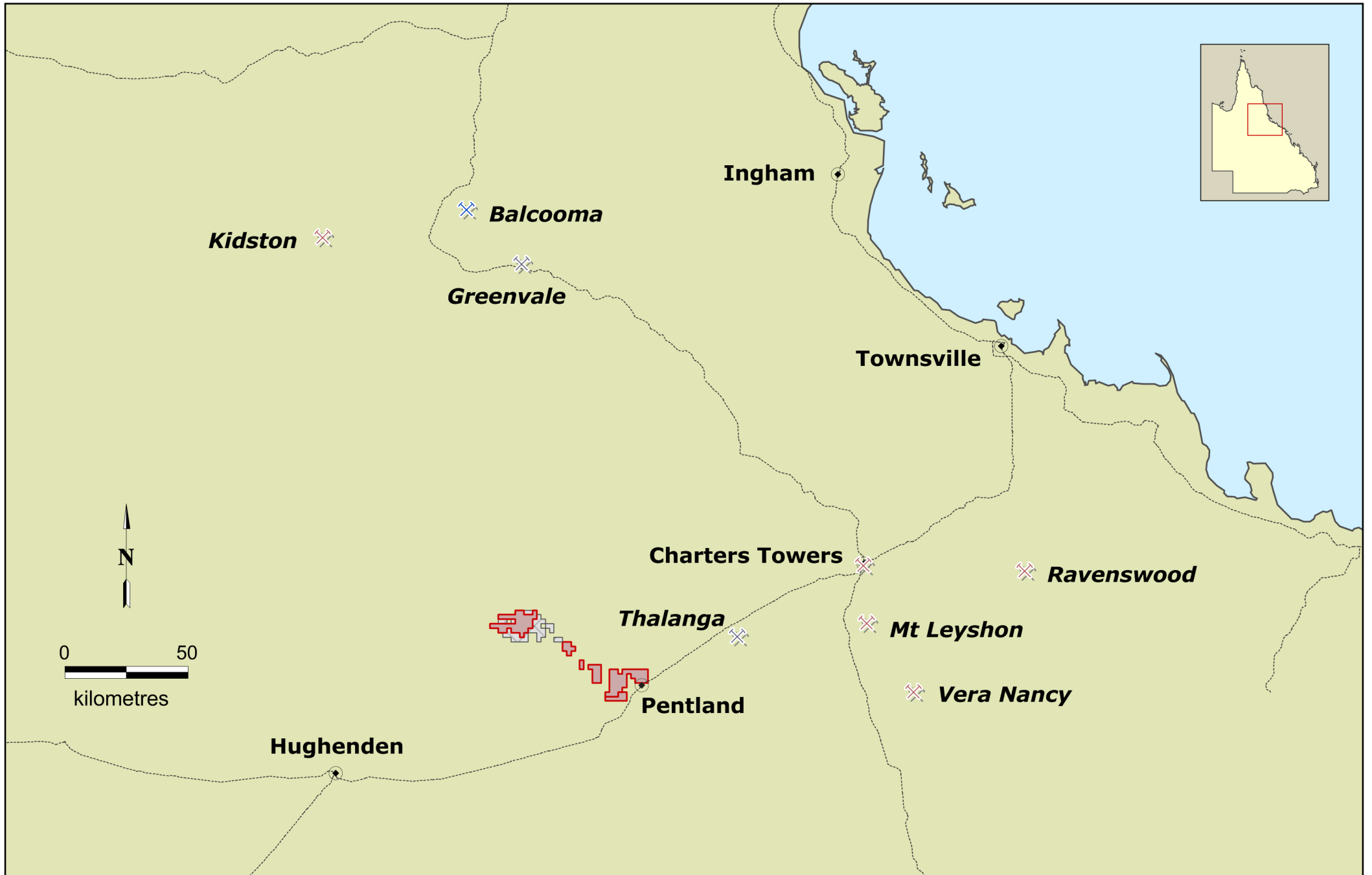


Figure 1 - Pentland Project, tenement location map

## 2 TENEMENT STATUS

Project tenure comprises three granted Exploration Permits in North Queensland with a combined area of 289.7 km<sup>2</sup>. Table 1 is a summary of the tenure position during the reporting period.

EPM 15055 (Oxley Creek) was granted as a 100 sub-block EPM to ActivEX Limited on 11<sup>th</sup> January 2006 for a period of five years. Tenement relinquishments consist of 24 sub-blocks effective January 2008, 10 sub-blocks effective January 2009, and 33 sub-blocks effective January 2014. The EPM was renewed for a further 5 year period in 2011 and currently consists of 33 sub-blocks (see Figure 3).

**Table 1** ActivEX Pentland Project Tenements

Tenement	Holder	Date of Grant	Expiry Date	Sub-blocks
EPM 14332	ActivEX Limited (100%)	10 Dec 2004	09 Dec 2014	39
EPM 15055	ActivEX Limited (100%)	11 Jan 2006	10 Jan 2016	33
EPM 15185	ActivEX Limited (100%)	30 Aug 2006	02 Aug 2017	18

Combined Annual Reporting status for the three EPMs was granted on 6<sup>th</sup> February 2006. The reporting date for the project is 10<sup>th</sup> January, corresponding to the anniversary of EPM 15055.

This report relates to the 33 sub-blocks relinquished effective January 2014.

### 2.1 LOCATION AND ACCESS

EPMs 14332, 15055 and 15185 are located in the Charters Towers district of northern Queensland, with the eastern edge of the EPMs approximately 100 km west of Charters Towers. The township of Pentland is located within the tenement area, in the southeast of EPM 14332.

The tenements lie in the eastern portion of the Hughenden 1:250,000 sheet area and are centred on longitude 145<sup>0</sup>06' E and latitude 20<sup>0</sup>23' S.

Pentland is situated on the Flinders Highway and access into most of the eastern and central tenement areas is via the unsealed Cape Road and well defined station tracks. Access into the western area of the tenement is via sparse station tracks and poorly defined access tracks constructed by previous explorers.

### 2.2 NATIVE TITLE

There is a single Native Title Claim Application present in the project area. An Application by Yirendali Core Country overlaps the south-west portion (approximately 10%) of EPM 15055. This is a recently lodged claim and as yet no negotiations have been entered into.

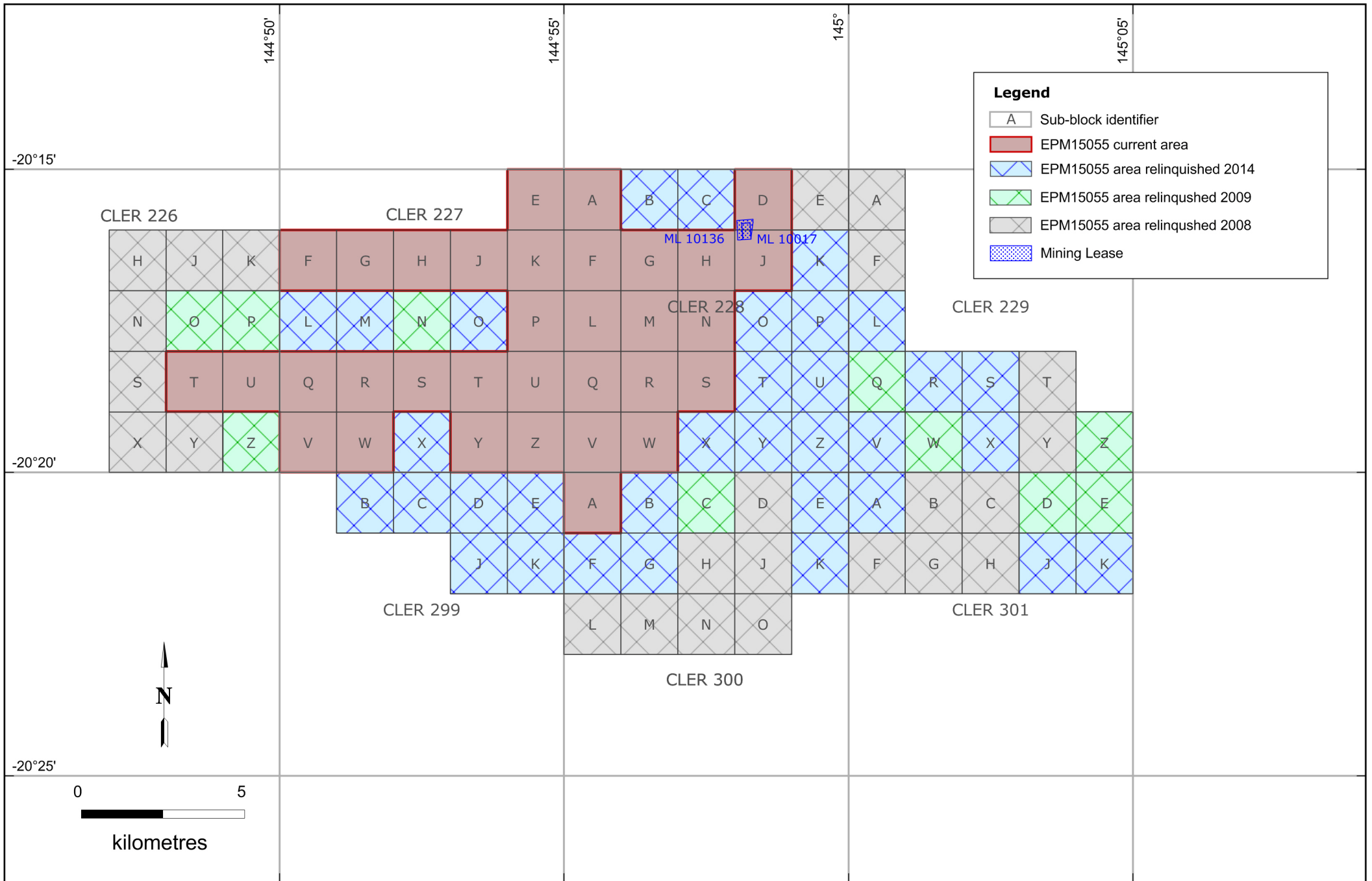


Figure 2 - EPM 15055, Oxley Creek, sub-block plan

### 3 REGIONAL GEOLOGY

The three Pentland EPMs comprise an elongate area which trends northwest and takes in approximately 65 kilometres of strike length of the northwest trending ( $S_2$  foliation) Neo-Proterozoic **Cape River Metamorphics** consisting of predominantly mica schists and meta-arenites with minor calc-silicates.

The Cape River Beds are bounded on the northeast by granitoids of the Ordovician-Silurian **Macrossan Province** and the Silurian-Early Devonian **Pama Province**.

In the area of the Pentland tenements, the northwest trending belt of Macrossan Province granitoids largely comprise variably foliated to gneissic tonalite to granodiorite of the Fat Hen Creek Complex. In the east of EPM 14332, quartzite and calc-silicate gneiss of the Cape River Metamorphics occur as rafts and xenoliths in the gneissic granite. Non-deformed granites occur in a belt along the south-western part of the complex, from north of Mount Remarkable to the southern end of Gorge Creek. These granites have numerous meta-sedimentary enclaves, and are interpreted as S-type granites derived by partial melting of the Cape River Metamorphics (Hutton, Fanning & Garrad, 1996; Withnall & others, 1997; in Withnall et al., 2003). The smaller Ballabay Complex, which is mapped as a roughly equant area that straddles the boundary between EPMs 14332 and 15185, has also been assigned to the Macrossan Province, and consists of hornblende gabbro, granodiorite, and altered granite.

The younger Pama Province granitoids (late Silurian-early Devonian) consist of a series of adamellites, granodiorites, quartz diorites and granites. This intrusive complex (formerly known as the Lolworth Complex) borders the tenement area to the northwest. This igneous event is considered to be the source of mesothermal vein systems at the historic Charters Towers field.

Scattered intrusive and extrusive igneous rocks of the Permo-Carboniferous **Kennedy Province Intrusives** and **Volcanics** are located in the southeast and northwest of the tenement area. The Kennedy Province units largely consist of the Deep Water Creek Granophyre and Gypsy Pocket Granodiorite in the northwest, and the Elimeek Volcanics in the southeast. Several small occurrences of brecciated quartzite and meta-arenite are also attributed to the Kennedy Province Intrusives, including the Mo-anomalous breccia identified by Central Coast Exploration at 8 Mile Creek (located within EPM 15185). The Kennedy Permo-Carboniferous igneous event is considered to be related to a number of north Queensland deposits, including the Mt Leyshon and Kidston gold breccias, and the Red Dome porphyry & skarn copper-gold deposit.

To the southwest of Pentland, the Cape River Metamorphics and Permo-Carboniferous units are covered by unconformably overlying Permian to Triassic shallow marine sediments (including coal formations) of the **Galilee Basin**. The basal unit, the Betts Creek Beds, comprises sandstone, siltstone and shale and is in turn overlain by the Warang Sandstone.

The Tertiary **Campaspe Formation** covers about 8000 km<sup>2</sup> between Charters Towers and Pentland, and residuals of the Formation occur scattered through the tenement area, particularly in the southeast. The Campaspe Formation is a continental fluvial assemblage comprising mainly immature sandstones with minor siltstone, and includes the gold bearing gravels that were extensively worked in the Pentland area.



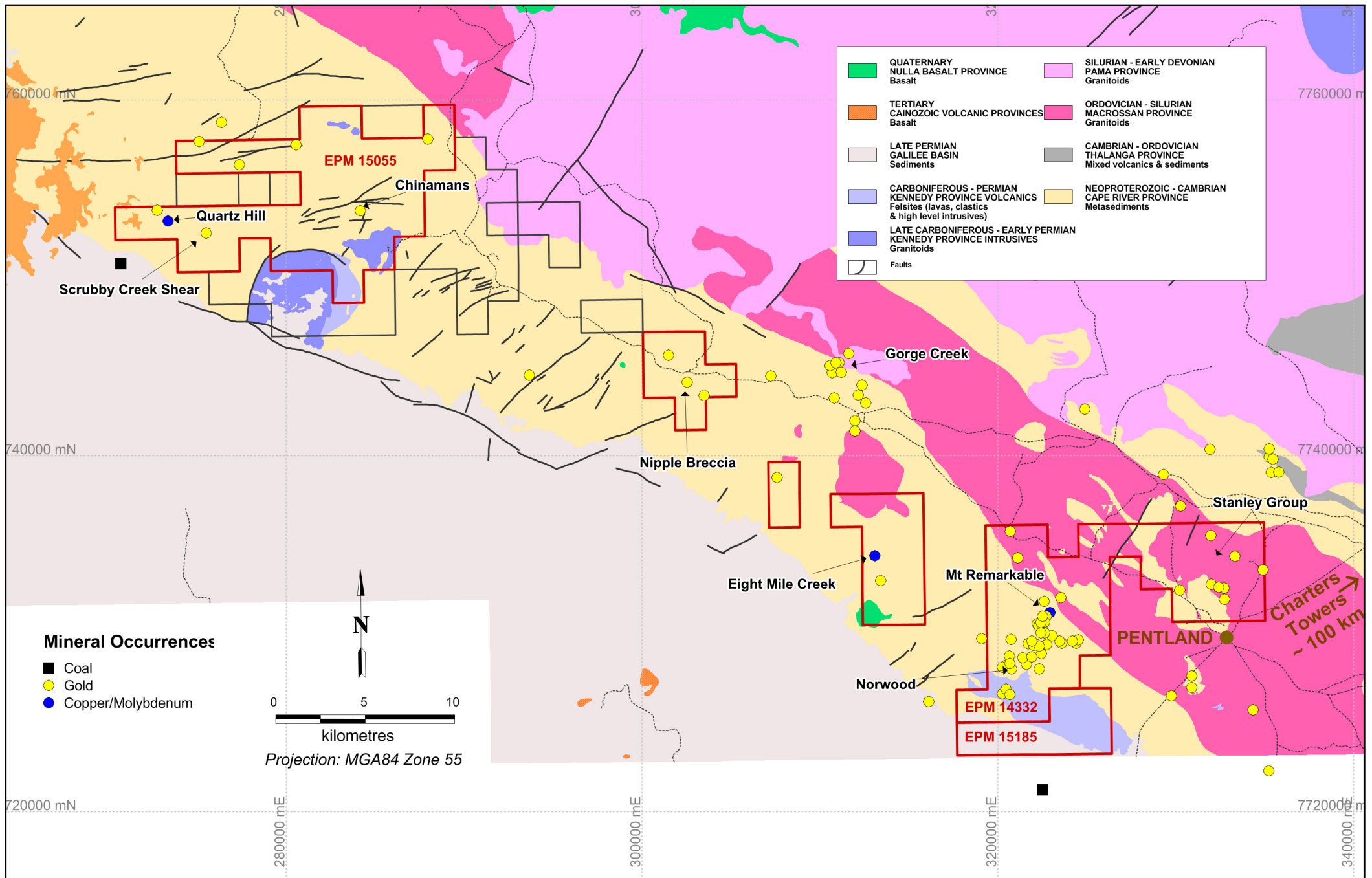


Figure 3 - Pentland Project, geological provinces and mineral occurrences

## 4 ACTIVEX EXPLORATION

In the 2008 ActivEX carried out a program of re-processing the aeromagnetic and airborne radiometric data collected by MPI-Placer in the 1990's. The re-processing of the aeromagnetics covering the Oxley Creek North area was successful in improving the definition of several anomalous areas, and in detecting subtle features in the areas of relatively flat response.

The 2009 program focused on ground follow-up of geochemical anomalies generated by previous explorers, airborne magnetic and radiometric anomalies, and air photo anomalies. Grass-roots regional prospecting and sampling were carried out in the north, east and south-east of EPM 15055 Oxley Creek, and comprised lag, rock chip, and stream sediment sampling (BCL and - 80#).

Investigation of small aeromagnetic anomalies in the north-east of the Oxley Creek EPM indicated these are due to mafic intrusives, based on subcrop and creek float; these do not appear to be altered or mineralised. A nearby pale air photo anomaly is due to a felsic intrusive, with local and very minor quartz veinlets.

Exploration activities on the tenement during 2011-2014 mostly involved a review of all data as field work was hampered by landowner access issues and the resulting inability to access field areas.

The results of ActivEX exploration over the relinquished sub-blocks did not reveal any high priority areas for further work.

### 4.1 LAG SAMPLES

The lag sampling program was a reconnaissance program that was carried out to assess the use of this sampling method in areas of little or no outcrop. Samples were collected over areas of around 50 to 100 m in diameter. Sample collection comprised sweeping up some of the surface pebble sized material over the broad sampling area, and then sieving to separate >2mm fraction for analysis.

Lag sampling has not been carried out in this area before so there are no previous data to provide information on expected background values for the various lithologies.

Four lag samples were collected from the relinquished sub-blocks, as part of a larger sampling program. Most samples were collected from flat to gently sloping topographic highs with thin soil cover and little or no outcrop. Three of the samples, OCL0014, 0015 and 0016, were collected along the base of ridges, which are not ideal lag sample sites, i.e. not from a relict or erosional regime (e.g. Butt et al., 2005).

The assay results for the lag samples are presented as Appendix 1, and sample locations are shown on Figure 4.

### 4.2 ROCK CHIP SAMPLES

Twenty-one rock chip samples were collected during the regional traversing. Sample locations are shown on Figure 4, assay results and descriptions are presented as Appendix 2.

#### 4.3 STREAM SEDIMENT SAMPLES

13 stream sediment samples were collected from the relinquished sub-blocks. Sample locations are shown on Figure 4, assay results and descriptions are presented as Appendices 3 and 4.

Results from -80# samples were uniformly low. The highest BCL result was 11 ppb Au from a small creek in the north of the Oxley Creek EPM; the -80# sample from the same site returned below detection Au. The creek drains schists and gneisses of the Cape River Metamorphics. Quartz veins in the metamorphics crop out in the creek, however, rock chip sampling of the veins did not return anomalous results, and the source of the Au anomalism has not yet been identified.

#### 4.4 TERMITE MOUNDS

During the program of geological traversing and lag sampling, portable XRF measurements were collected from termite mounds to assess the value of these data in widely spaced regional geochemical surveys.

The termite mound XRF data were collected in conjunction with rock chip or lag sampling. In general, one to four termite mounds were measured at each site, and two to three XRF measurements were collected from each mound. A site generally comprised an area of roughly 50 to 100 m in diameter.

The portable XRF data are presented as Appendices 5 and 6 and sample site locations are shown on Figure 4. Results suggest the termite data may be revealing some evidence of metal associations in different areas..

This sampling program did not provide sufficient data coverage to adequately assess the effectiveness of the technique for regional prospecting. However, preliminary assessment suggests that portable XRF from termite mounds may be a useful additional tool.

The collection of portable XRF data on site significantly slows down traversing, and it is probably more efficient to bag termite mound samples and collect the XRF data back at camp. This also provides an option of dispatching anomalous samples for laboratory assay.

## 5 REFERENCES

- |                                    |  |
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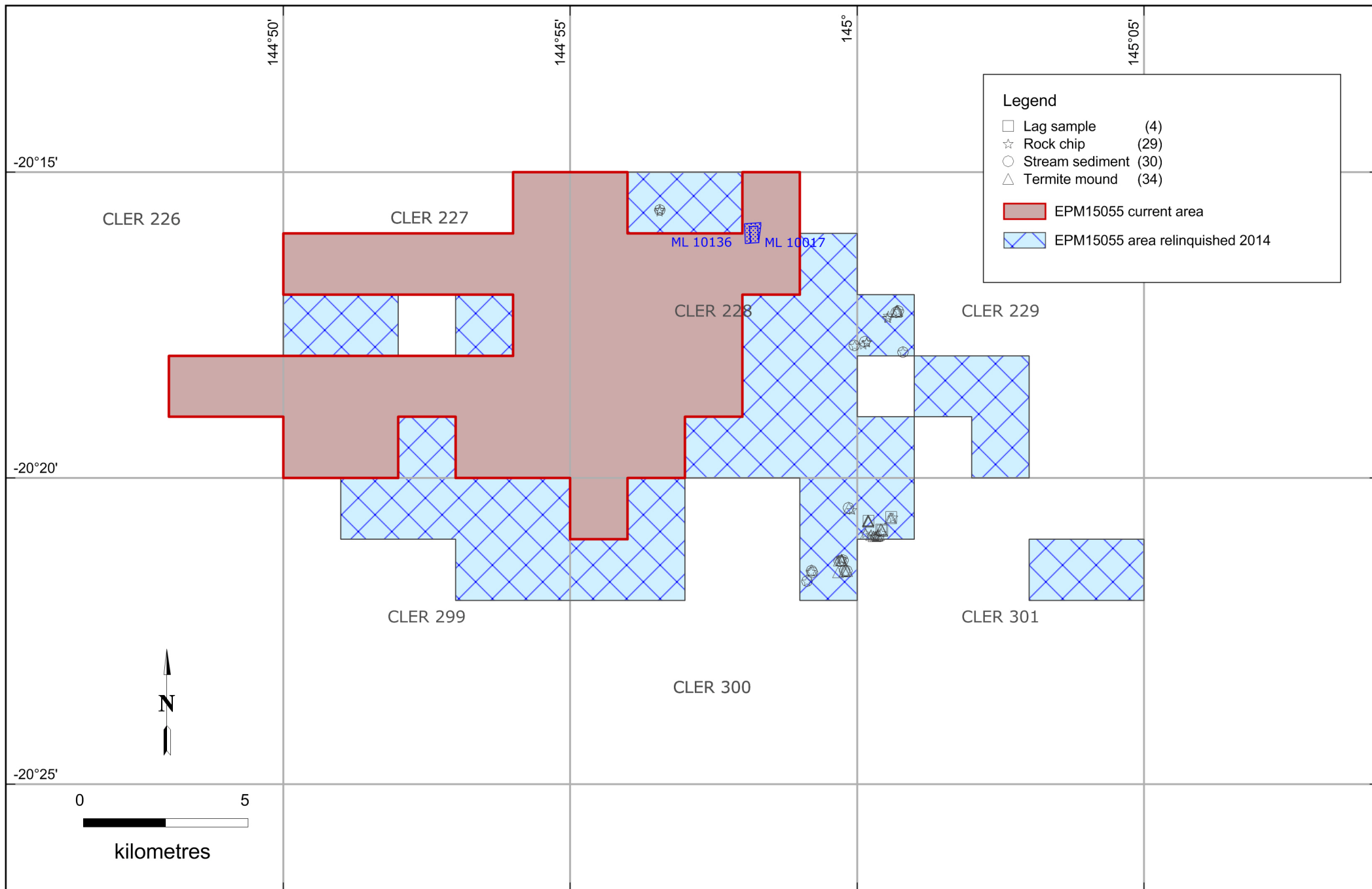


Figure 4 - EPM 15055, Oxley Creek, exploration index plan

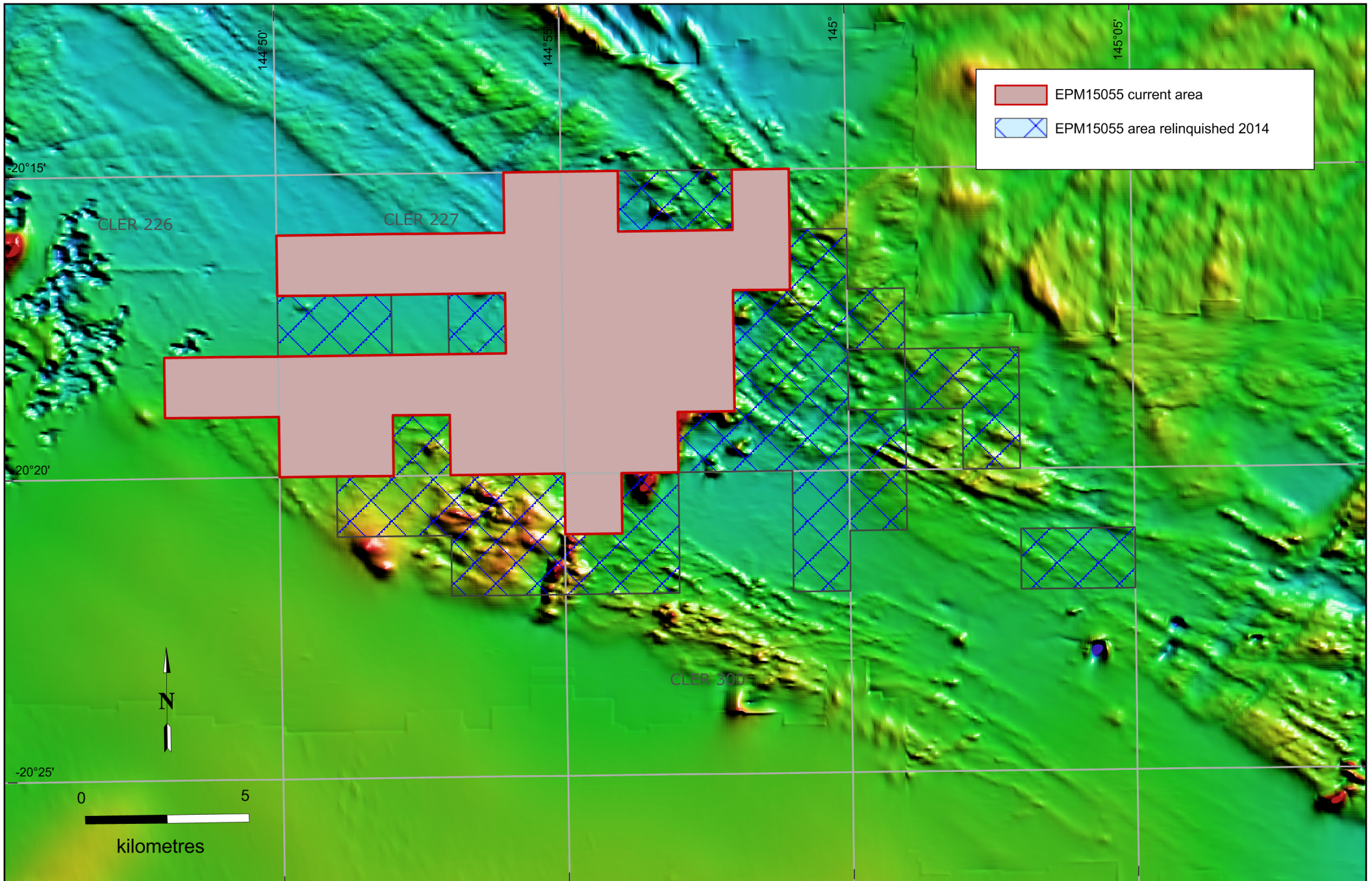


Figure 5 - EPM 15055, Oxley Creek, geophysics