



**EPM 12513**

**“Ironstone Knob”**

**PARTIAL RELINQUISHMENT REPORT**

**ON 25 SUB-BLOCKS**

**Relinquishment Effective from 4<sup>th</sup> October 2012**

**Kim Hurd**

October 2012

**Map Sheets:**

1:250 000 Sheet: Einasleigh (Sheet SE55-9)

1:100 000 Sheet: Einasleigh (Sheet 7760)

**Distribution:**

Department of Natural Resources and Mines (digital copy via QDEX)

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## **SUMMARY**

*EPM 12513 is located approximately 270km west of Townsville and 280km southwest of Cairns in North Queensland. The tenement currently consists of 70 sub-blocks and was granted to Glengarry Resources Limited on the 5th October 2004. Kagara Limited purchased this tenement, along with three other tenements in the area, from Glengarry in September 2008. Glengarry sold the uranium exploration rights over EPM 12513 to Mega Georgetown Pty Ltd, a wholly owned subsidiary of Mega Uranium Ltd, in January 2007.*

*The tenement lies within the Forsayth Sub-province of the Proterozoic Georgetown Inlier. The Georgetown Inlier is overlain to the south and west with Mesozoic and Cainozoic sediments of the Eromanga and Carpentaria Basins. The Burdekin River Fault Zone to the south and east separates the Georgetown Inlier from the Palaeozoic Broken River and Hodgkinson Provinces. The geology within EPM 12513 is dominated by the Einasleigh Metamorphics which are part of the Mid Proterozoic Etheridge Group. The Einasleigh Metamorphics can be subdivided into three main units consisting of thick basal calc-silicate gneiss, a thin iron-rich leucogneiss, and thick upper unit dominantly consisting of biotite gneiss.*

*During Glengarry's period of tenure, an Indicated and Inferred Resource of 1.49 million tonnes at 1.48% copper was delineated at Maitland. The tenement is considered most prospective for "Maitland-style" shear-hosted copper (molybdenum) mineralisation and "Einasleigh-style" IOCG copper and BHT zinc-lead-silver mineralisation. Some potential exists for buried intrusive/breccia-hosted gold mineralisation.*

*Glengarry completed rock chip sampling in 2005 over two of the relinquished 25 sub-blocks. The best results were returned from sample QR00412 with 0.58g/t Au, 8.4g/t Ag, 7010ppm Cu, 16ppm Pb and 42ppm Zn.*

*Mega Georgetown conducted a high resolution airborne radiometric and magnetic survey over EPM12513 as part of a regional program, carried out by UTS Geophysics. Six low priority radiometric anomalies were detected within the relinquished sub-blocks. Follow-up ground work was conducted over the G003 anomaly with no significant findings.*

*Kagara geologists reviewed the historic open file data, focussing on stream sediment data. The review has indicated several potentially prospective areas, with several anomalies occurring over the relinquished sub-blocks including two lead, two copper (one partial) and one zinc stream sediment anomaly. One panned concentrate gold anomaly was also identified over the relinquished area. However, these anomalies are non-coincident and lower priority compared to the other anomalies identified.*

*It is recommended that 25 sub-blocks be relinquished.*

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Appendix 2	EPM 12513 relinquished area historic stream sediment data

## **1 INTRODUCTION**

This report details information relating to work completed on the 25 sub-blocks relinquished from EPM 12513, “Ironstone Knob” effective 4th October 2012.

This tenement, along with a number of adjoining tenements, was purchased from Glengarry Resources Limited in September 2008. Exploration within the tenement has focussed on targeting epigenetic structurally controlled copper plus gold mineralisation.

## **2 LOCATION AND ACCESS**

EPM 12513 is situated 270 kilometres west of Townsville and 280 kilometres south-west of Cairns in North Queensland. The tenement is 25 kilometres west of the Lynd Junction where the Gregory Highway and the Kennedy Highway intersect. Access to the tenement is gained via the Gregory Highway north from Greenvale and then south at the Lynd Junction via the Kennedy Highway. Access around the tenement is via local station tracks.

The tenement covers part of 3 pastoral properties, namely Carpentaria Downs, Lyndhurst and Maitland Downs (Figure 1).

## **3 TENURE**

The ‘Ironstone Knob’ tenement was originally granted to Glengarry Resources Ltd for a five year term on 5 October 2004 and consisted of 144 sub-blocks which was reduced to 100 sub-blocks on the 12th November 2007. Kagara Limited acquired the tenement, consisting of the remaining 100 sub-blocks, along with a number of adjacent tenements from Glengarry in September 2008. Following a reduction of 30 sub-blocks on 4<sup>th</sup> October, 2009, EPM 12513 comprised 70 sub-blocks and was renewed for the five year period to 4<sup>th</sup> October 2014. A further 20 sub-blocks was relinquished in 2011. The current relinquishment of 25 sub-blocks, the subject of this report, is detailed in Table 1 and illustrated in Figure 2. The sub-blocks retained are detailed in Table 2.

Glengarry sold the uranium exploration rights over EPM 12513 to Mega Georgetown Pty Ltd (ACN 116 927 149), a wholly owned subsidiary of Mega Uranium Ltd, in January 2007. Under the terms of the agreement Mega Uranium has the sole right to carry out exploration for uranium on the tenement. Mega Uranium Ltd officially withdrew from the venture on 27<sup>th</sup> March, 2012.

**Table 1 EPM 12513 Relinquished sub-block details**

<b>BIM</b>	<b>BLOCK</b>	<b>SUB-BLOCKS</b>
TOWN	2452	R
TOWN	2523	D, Z
TOWN	2524	J, K, M, N, O, P, Q, R, T, Y, Z
TOWN	2525	F, G, H, L, M, N, R, S, V, W, X

**Table 2 EPM 12513 Retained sub-block details**

<b>BIM</b>	<b>BLOCK</b>	<b>SUB-BLOCKS</b>
TOWN	2451	Z
TOWN	2452	Q, V
TOWN	2523	E, J, K, O, P
TOWN	2524	A, F, L, S, U, V, W, X
TOWN	2525	J, K, O, P, Q, T, U, Y, Z

EPM 12513 is covered by native title claim QC 01/16, held by the Ewamian people.

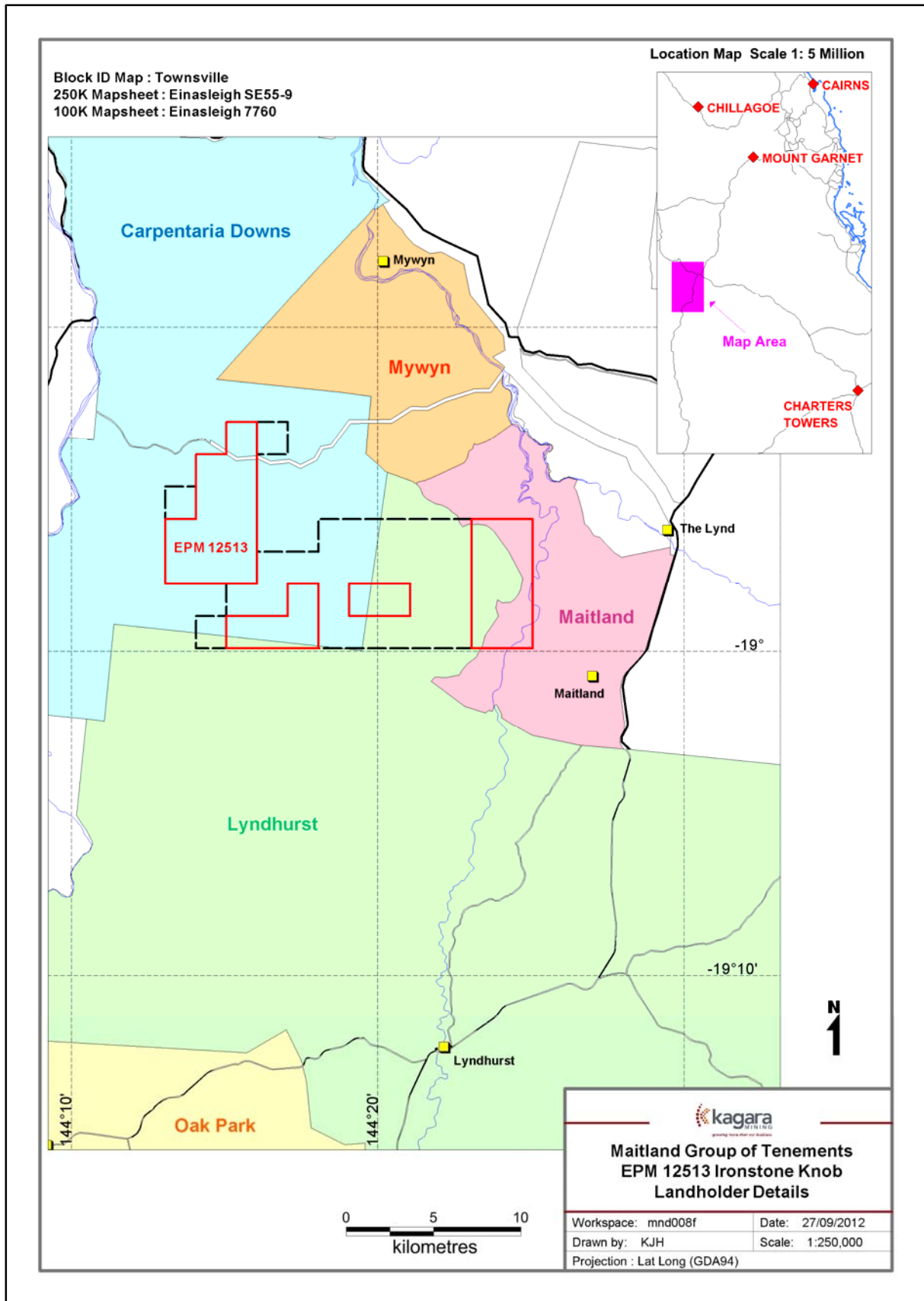


Figure 1 Landholder details

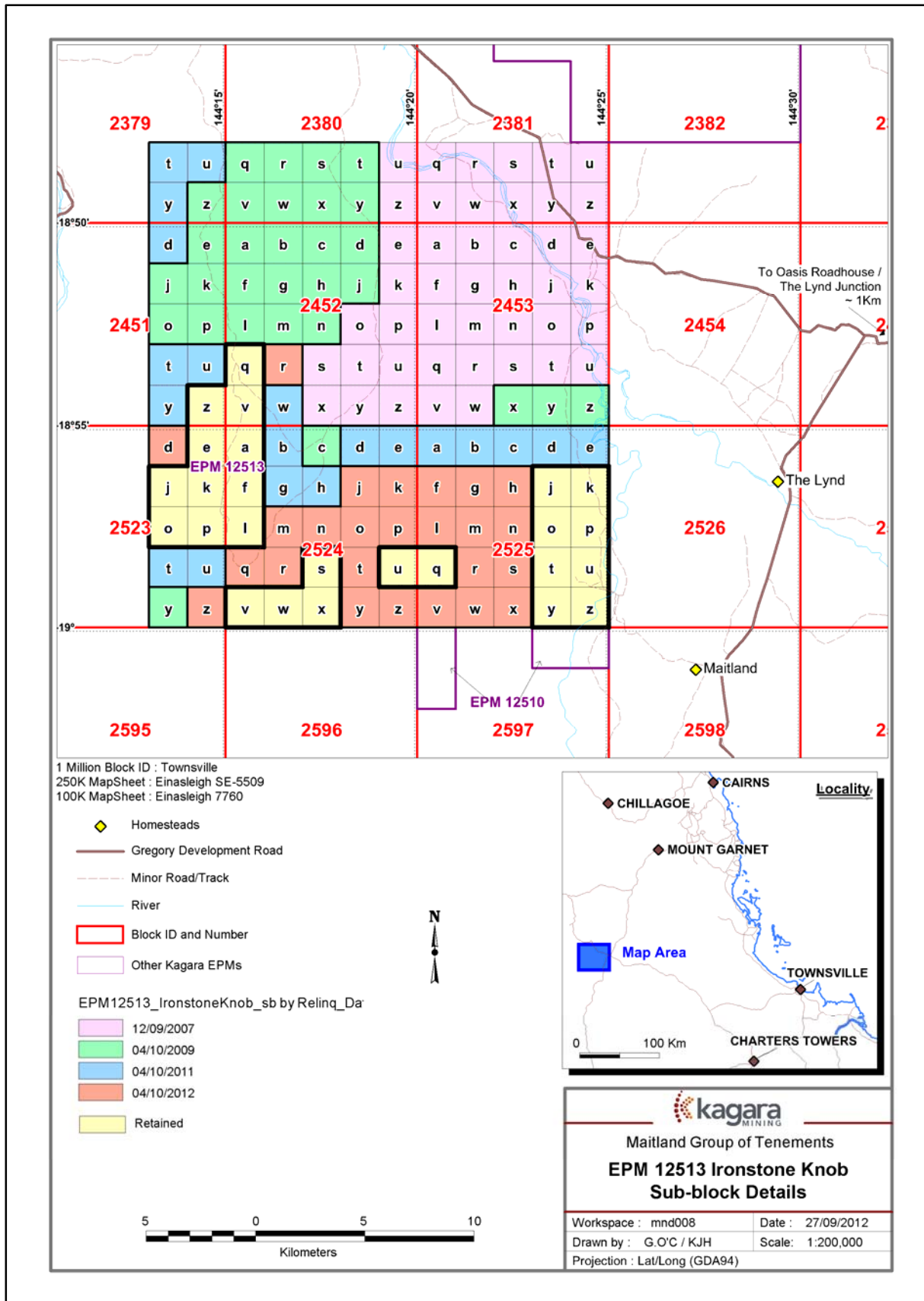


Figure 2 Tenement details



## 4 REGIONAL GEOLOGY

Refer to Figure 3 for the regional geology map.

EPM 12513 is located in the south-eastern reaches of the Palaeoproterozoic to Early Palaeozoic Georgetown Inlier which occupies about 30,000 square kilometres of the Cairns-Townsville hinterland in north-eastern Queensland. The three provinces that comprise the inlier, from west to east, are the Mesoproterozoic Croydon Province, the Palaeoproterozoic Etheridge Province (Withnall, 1997) and the Neoproterozoic to Early Palaeozoic Greenvale Province (Fergusson *et al.*, 2007). The Etheridge Province includes the Forsayth and Yambo subprovinces. In the south-eastern part of the Georgetown Inlier, the Lynd Mylonite Zone forms the contact between Forsayth Subprovince Einasleigh Metamorphics and the Greenvale Province. The south-eastern margin of the Greenvale Province is defined by the Burdekin River Fault along which Early Palaeozoic assemblages are juxtaposed against younger rocks.

Widespread igneous rocks within the Georgetown Inlier include Mesoproterozoic granitoids and felsic ignimbrites, particularly evident in the Croydon Province, Silurian granitoids which dominate through the central and eastern parts of the inlier, and Carboniferous intrusive and extrusive rocks, particularly the Lochaber Ring Complex, centred about 20 kilometres west of EPM 12513, and the extensive Newcastle Range Volcanics and associated intrusive phases to the west and northwest of Einasleigh. Early Ordovician granitic rocks of the Lynwater Complex intrude the Oasis Metamorphics (Fergusson, *et al.*, 2007) immediately to the east of EPM 12513.

EPM 12513 includes Einasleigh Metamorphics schists and gneisses and, in the eastern reaches, Oasis Metamorphics of the Greenvale Province, Silurian granite and Quaternary cover. Following is a summary of characteristics of the Einasleigh Metamorphics and the Greenvale Province assemblages.

The Einasleigh Metamorphics is the dominant metamorphic assemblage in the eastern part of the Forsayth Subprovince and displays a complex metamorphic and depositional history. These tightly folded rocks range in metamorphic grade from greenschist to granulite facies, with metamorphic grade increasing to the east which, according to Black *et al.*, 2005, probably reflects uplift in the east and westward tilting of the region after *ca* 400 Ma. The Einasleigh Metamorphics is sub-divided into three formal members (Seymour, 2008):

1. A thick basal calc-silicate gneiss assemblage of quartz-plagioclase-hornblende-diopside plus epidote, garnet and magnetite. Locally this unit represents a contact metamorphic aureole associated with the deeper intrusions of Siluro-Ordovician granites;
2. A thin iron rich (strongly magnetic) leucogneiss consisting of quartz-plagioclase-magnetite-pyrite and biotite;
3. A thick sequence of pelitic to psammitic metasediments referred to as biotite gneiss.

In the Greenvale Province, several domains are recognized from west to east away from the Lynd Mylonite Zone and the Proterozoic craton, according to Fergusson *et al.* (2007), and these are:

1. The Lynd Domain which lies between the Lynd Mylonite Zone and the Balcooma Mylonite Zone and includes the upper amphibolite grade Neoproterozoic Oasis

Metamorphics biotite and calc-silicate schists and gneisses which were intruded by the Early Ordovician Lynwater Complex;

2. The Cambro-Ordovician amphibolite grade Balcooma Metavolcanics, comprising mostly felsic volcanic facies and siliciclastic sediments, which are bound to the west by the Balcooma Mylonite Zone and to the east by the Early Silurian Dido Tonalite and host the Balcooma group of volcanogenic massive sulphide deposits;
3. The Lucky Creek Metamorphic Group, comprising greenschist to amphibolites facies mafic to silicic volcanics and the greenschist facies Paddys Creek Phyllite, which lies to the east of the Dido Tonalite and bound to the east by the Nickel Mine Fault;
4. The Halls Reward Domain which consists of amphibolites facies Halls Reward Metamorphics and the Boiler Gully Complex, the latter of which includes mafic and ultramafic units which host the Greenvale lateritic nickel-cobalt deposits.

Assemblages in the Greenvale Province are multiply deformed with early deformation and metamorphism of the Oasis Metamorphics and the Halls Reward Metamorphics, respectively in the western and eastern domains of the province, possibly related to the Late Cambrian Delamerian Orogeny according to Fergusson *et al.* (2007). They also consider that contractional deformation, related to the Early Silurian Benambran Orogeny, is responsible for multiple deformation and metamorphism in the province and reactivation of domain-bounding faults.

#### **4.1 Regional mineralisation**

The Georgetown Inlier is well represented with a variety of mineral deposits styles including;

- Laterite nickel (Greenvale)
- VHMS (Balcooma)
- Breccia pipe gold (Kidston)
- Hydrothermal/epithermal quartz vein – precious metals (Croydon, The Oaks and Percyvale goldfields)
- Epigenetic uranium (Maureen)
- ?IOCG-style copper (Kaiser Bill and Einasleigh)
- ?BHT zinc-lead (Chloe-Stella-Jackson)
- Shear-hosted copper-molybdenum (Maitland)

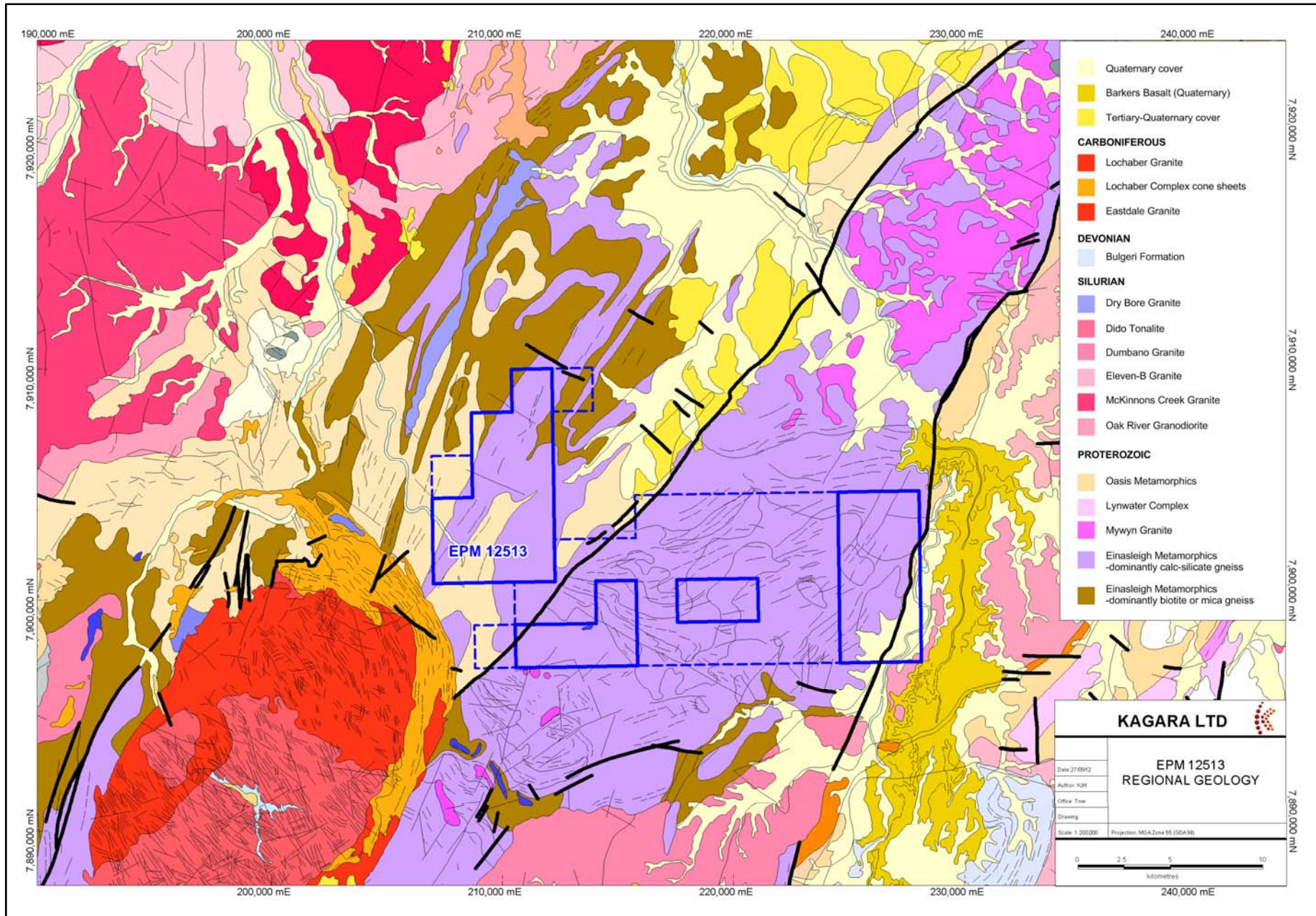


Figure 3 Regional Geology

## 5 TENEMENT GEOLOGY

Simplified geology within and immediately adjacent to EPM 12513 is presented in Figure 4.

The area is dominated by the Einasleigh Metamorphics which is part of the Mid Proterozoic Etheridge Group. The Einasleigh Metamorphics can be subdivided into three main units consisting of thick basal calc-silicate gneiss, a thin iron-rich leucogneiss, and thick upper unit dominantly consisting of biotite gneiss.

The basal calc-silicate gneiss assemblage consists of banded quartz-plagioclase-microcline-clinopyroxene-hornblende  $\pm$  garnet  $\pm$  epidote  $\pm$  magnetite and forms the eastern half of the tenement. Stephens (1995) suggests that the original geology could have been sourced from both igneous and sedimentary origins with silica contents and petrology descriptions suggesting dacitic to andesitic affinities. The magnetic response is variable and is typically revealed as a mottled pattern of medium to high magnetic intensity.

The middle leucogneiss unit assemblage consists of quartz-plagioclase-magnetite  $\pm$  biotite  $\pm$  pyrite, and occurs in the western portion of the tenement near the Maclean Prospect as layers up to 100 metres thick. This lithology has been interpreted by Stephens (1995) as being possibly derived from an acid volcanic source with varying additions from a sedimentary source.

The upper unit of the Einasleigh Metamorphics consists of thick sequence of pelitic – psammitic metasediments with the dominant lithology being a quartz-feldspar-biotite gneiss. The biotite gneiss displays low magnetic signature and is the dominant lithology in the western portion of the tenement.

The north-northeast trending Lynd Mylonite Zone forms the eastern boundary of the Einasleigh Metamorphics with the Cambrian (?) Oasis Metamorphics juxtaposed along the mylonite zone on the eastern side. Within the tenement the mylonite zone occurs as a series of prominent cherty ridges with localised haematite matrix breccias. The Far East Fault Mylonite Zone occurs as the significant north-east trending feature which traverses through the centre of the Einasleigh Metamorphics and EPM 12513, separating the basal calc-silicate gneiss on the east from the upper biotite gneiss on the western side.

The Einasleigh Metamorphics are intruded by a number of granitoids within the local area. The Mywyn Granite of Mid Proterozoic (?) age occurs as a north-east trending lozenge shaped body on the north-eastern boundary of the tenement. The Silurian Dry Bore Granite occurs as a north-east trending elongate intrusion approximately 13 kilometres long and 0.75 kilometres wide, immediately east of the Pinnacles prospect. The Silurian Eleven-B Granite and Oak River Granodiorite form a western boundary for the Einasleigh Metamorphics in this local area. The southern boundary of the Einasleigh Metamorphics is formed by the Silurian Dumbano Granite. On the eastern margin of the Lynd Mylonite zone the Silurian McKinnons Creek Granite intrudes the Oasis Metamorphics. The Lochaber Granite and associated rhyolitic cone sheets of early Carboniferous age form a circular feature just outside the south-western corner of the tenement.

The Tertiary McBride Basalt occurs as a thin (<15m) cover adjacent to the Einasleigh River on the eastern margin of the tenement with other minor isolated patches to the north.

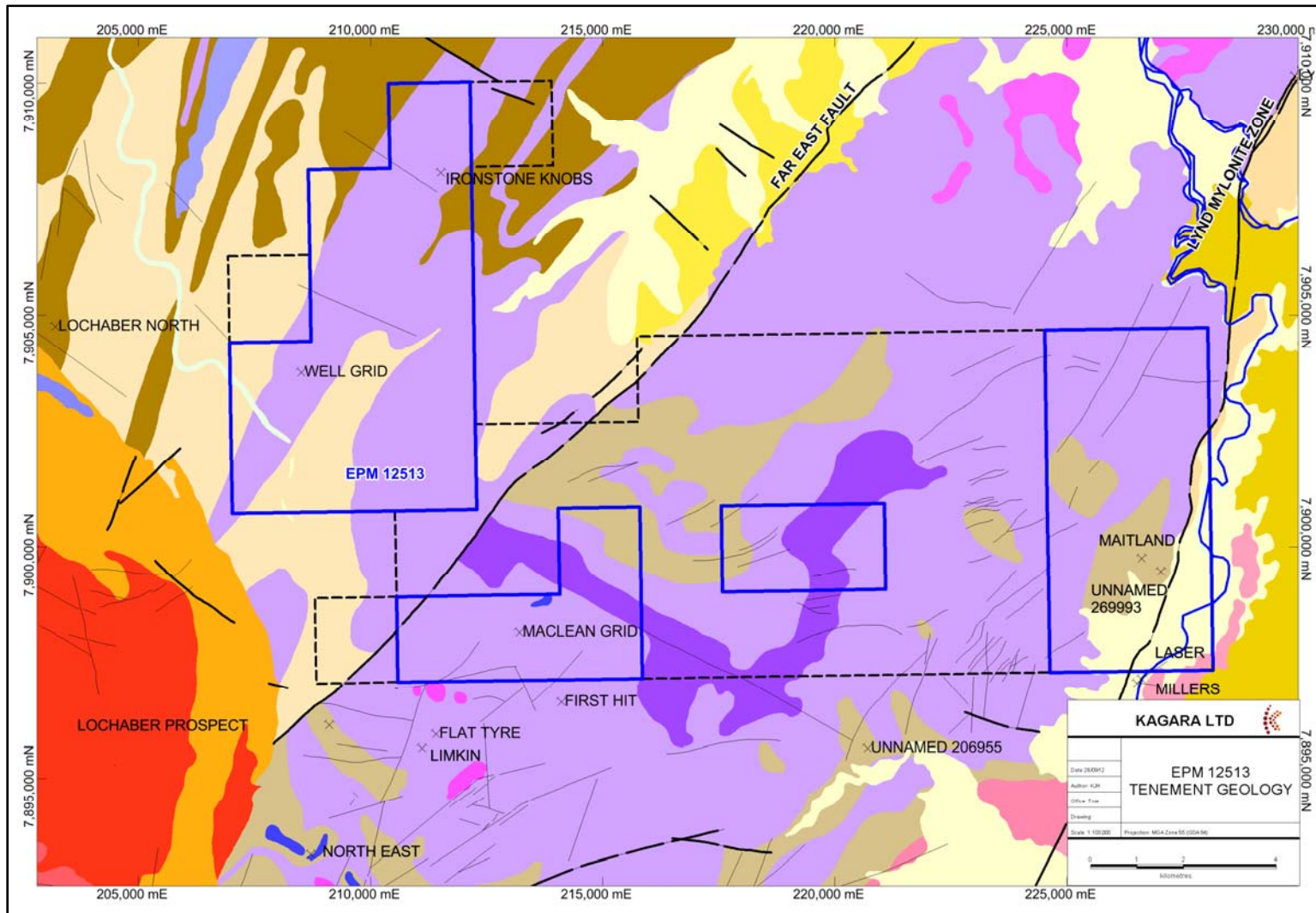


Figure 4 Local geology and mineralisation



- Ironstone Knobs – 0.4m @ 290ppm Cu, 10ppm Pb, 5,200ppm Zn, 2ppm Ag & <0.1g/t Au from 37m in IKD3
- Well – 2m @ 425ppm Cu, 375ppm Pb, 1,350ppm Zn from 59m in WP5
- Maclean – 108m @ 100ppm Cu, 163ppm Pb and 1,942ppm Zn from surface in MP6

The tenement is considered most prospective for “Maitland-style” shear-hosted copper (molybdenum) mineralisation and “Einasleigh-style” ?IOCG copper and ?BHT zinc-lead-silver mineralisation. Some potential exists for buried intrusive/breccia-hosted gold mineralisation.

There are no recorded mineral occurrences over the sub-blocks for relinquishment.

## **6 PREVIOUS EXPLORATION**

A number of different companies have carried out exploration work within the confines of the current EPM. A summary of this previous exploration is detailed in Hurd (2012) and summarised in Table 3 below.

**Table 3 Summary of Previous Exploration**

<b>Company</b>	<b>Period</b>	<b>Area of Work</b>	<b>Exploration Activity</b>
Chillagoe Company Ltd	1909	Maitland	Drilling and mine production
Carpentaria Exploration Company	1964 – 1966	Maitland	Mapping, SP, costeaning, percussion and diamond drilling
Trans Australian Explorations	1969	Maitland region	Ground radiometrics, mapping, IP, ground magnetics
Laskan Minerals (Alkane)	1969 – 1970	Maitland region	Mapping, stream sediment and soil sampling, IP, SP, ground magnetics, costeaning, diamond drilling
Australian Anglo American Ltd	1973 – 1974	Maitland region	Uranium exploration; airborne radiometrics/magnetics, ground scintillometer surveys, mapping, stream sediment sampling, soil and rock chip sampling
Otter / Getty JV	1976 – 1983	Maitland, Ironstone Knobs, Well, MacLean	Stream sediment sampling, rock chip sampling, soil sampling, percussion drilling, diamond drilling, mapping, IP, ground magnetics, ground scintillometer
Marathon Petroleum Australia	1979 – 1980	Regional	Photogeological interpretation, rock chip sampling, stream sediment sampling
Battle Mountain	1987 – 1988	Regional	Stream sediment sampling, rock chip sampling
Kidston Gold Mines (Placer)	1988 – 1991	Pinnacles, Maitland, Well East	Stream sediment sampling, rock chip sampling, mapping, ground magnetics, percussion drilling
BHP Minerals	1993 – 1995	Ironstone Knobs, Well, Maclean, Pinnacles	Aeromagnetics, GEOTEM, stream sediment sampling, rock chip sampling, soil sampling
Glengarry Resources	2005 – 2008	Maitland, Maitland South	Rock chip sampling, soil sampling, stream sediment sampling, mapping, IP, EM, ground magnetics, RAB, RC and DDH drilling
Mega Georgetown	2007 – 2012	Regional	Aeromagnetics/radiometrics survey



## 7 WORK COMPLETED ON RELINQUISHED SUB-BLOCKS

### 7.1 2005 Reporting Period

Exploration activities undertaken during the 2005 reporting period included open file data compilation, re-processing of historical regional GEOTEM data, field reconnaissance plus selective stream, soil and rock chip sampling.

Glengarry collected seven rock chip samples (QR00412-418) over relinquished sub-block "Z" (BIM TOWN/Block 2523) in the south-western portion of the tenement and one sample (QR00426) from relinquished sub-block "M" (BIM TOWN/Block 2524). These samples were analysed for Au, Ag, As, Ba, Bi, Cu, Fe, Mo, Pb, Sb, U, W and Zn. The best results were returned from sample QR00412 with 0.58g/t Au, 8.4g/t Ag, 930ppm Ba, 7010ppm Cu, 16ppm Pb and 42ppm Zn. Sample QR00414 was collected at the same location also with anomalous results; 0.43g/t Au, 3.5g/t Ag and 3190ppm Cu. The samples comprised gossanous quartz-pegmatite and saccharoidal quartz float along the southern margin of the EPM and were not followed up as all further work by Glengarry focussed on the Maitland deposit and the immediate area around Maitland.

The location of these rock chip samples is shown in Figure 6 below. Full assay results and location details are detailed in Appendix 1.

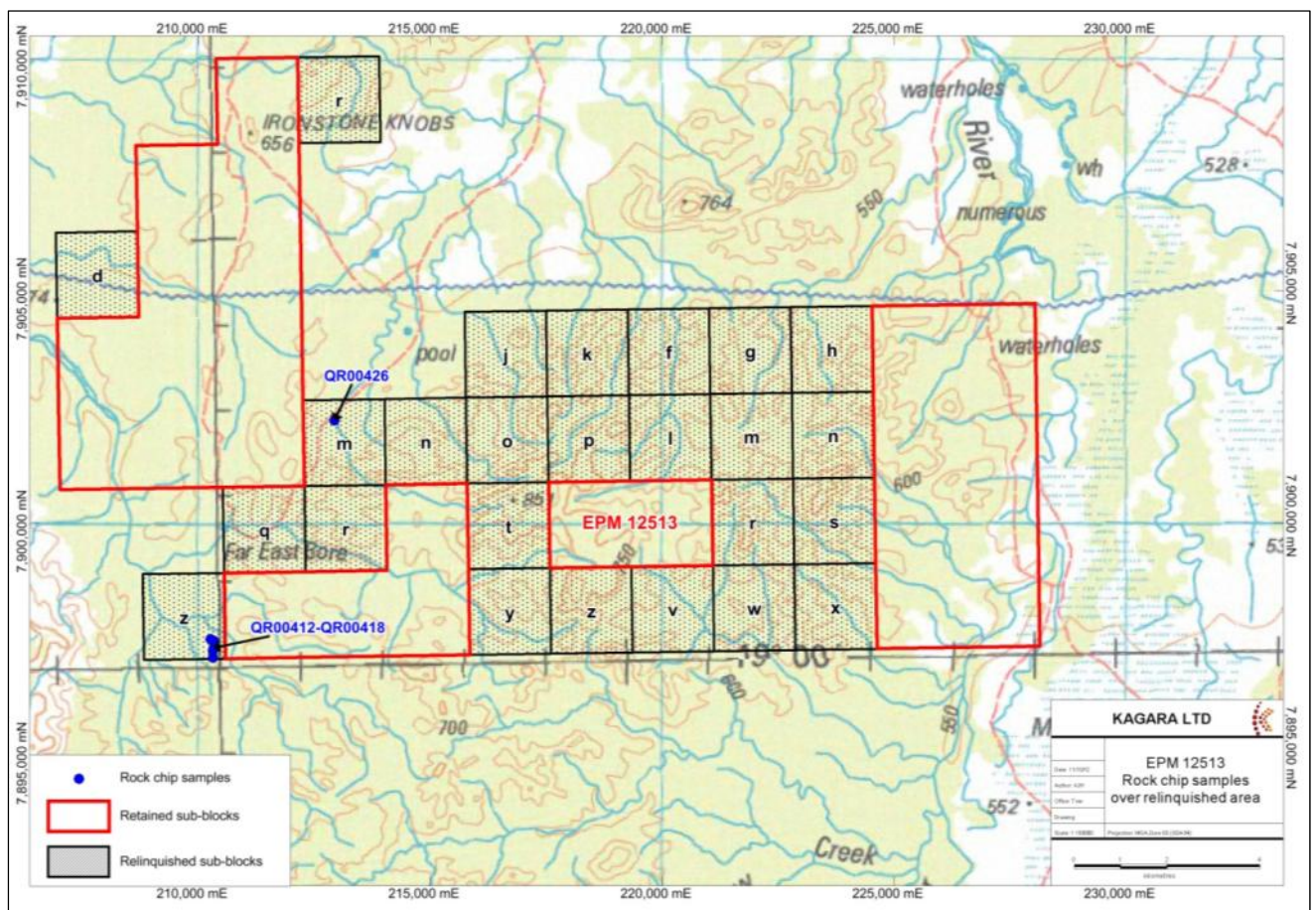
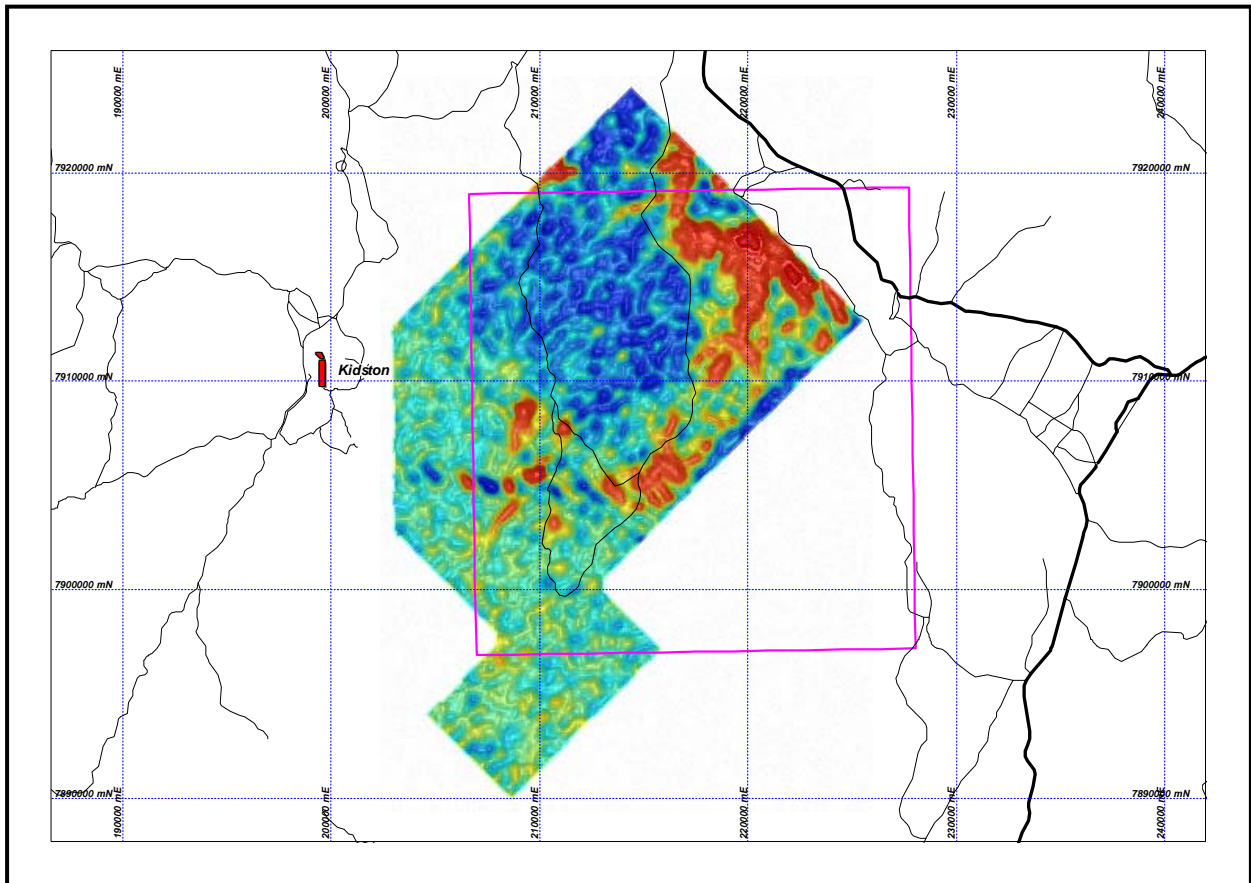


Figure 6 Rock chip sample locations over relinquished area

BHP-Billiton's airborne GEOTEM data, collected in 1994, was acquired and reprocessed by consultant geophysicist Graham Elliott ahead of field reconnaissance activities over the western Ironstone Knobs gossan outcrops. Figure 7 shows the aerial extent of the GEOTEM data currently available from the Queensland Government's open file exploration datasets.



**Figure 7 Reprocessed BHP-Billiton GEOTEM data, Channel 13 (Seymour, 2005). Tenement shown is original grant (2004).**

An aggregate 58 anomalies were identified by Elliott, see Figure 8 below.

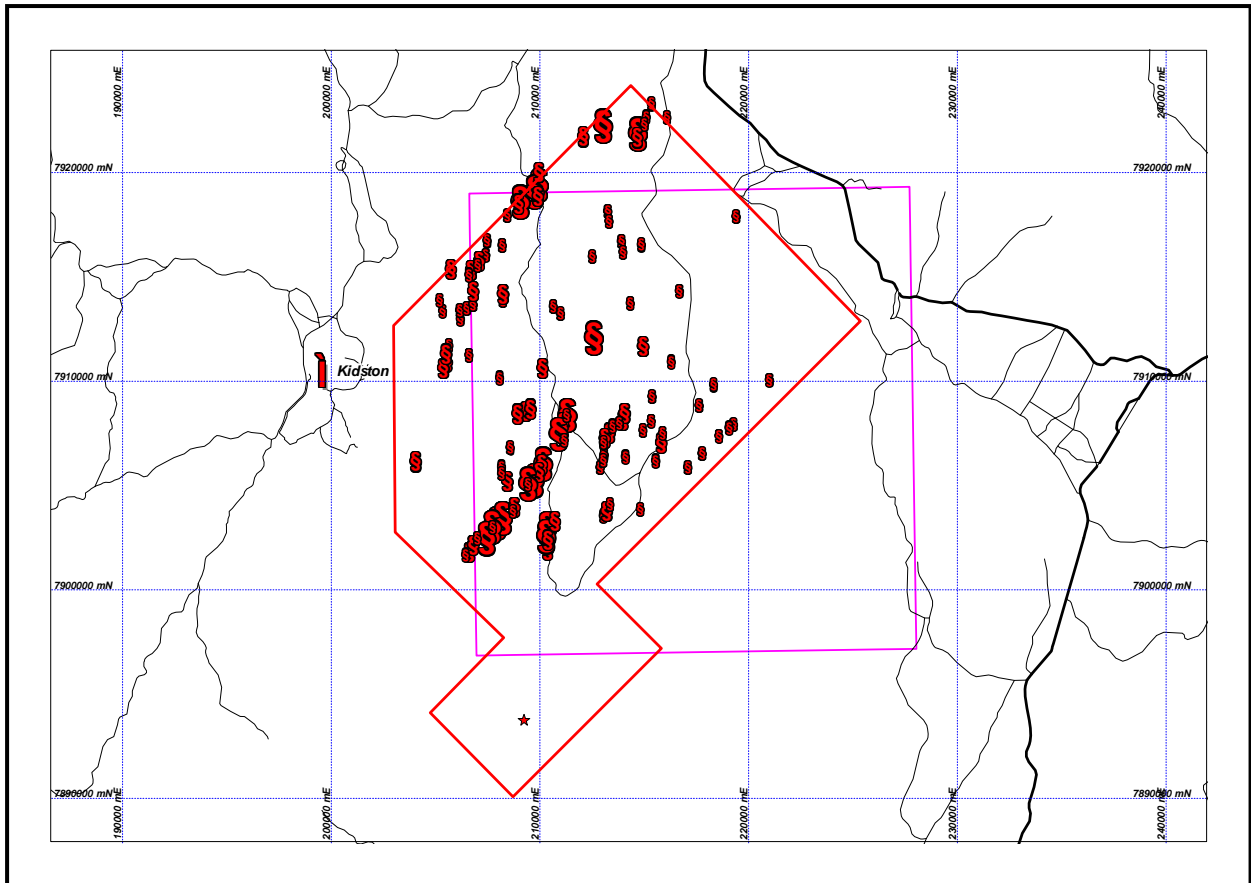


Figure 8 GEOTEM anomalies (Seymour, 2005). Tenement shown is original grant (2004).

## 7.2 2006 - 2008 Reporting Periods

Glengarry's exploration programs over EPM 12513 between 2006 and 2008 focused on the Maitland Copper Prospect and the Maitland South Prospect with no work completed over the relinquished sub-blocks.

### 7.2.1 Mega Georgetown Pty Ltd

An aeromagnetic/radiometric survey was flown by Mega Georgetown over the majority of EPM 12513 as part of a regional survey during 2007. This survey was carried out by UTS Geophysics (A877) with a flight line spacing of 100 metres and a nominal height of 40 metres. This survey data has previously been submitted to the Department of Natural Resources and Mines and is not included in this report.

## 7.3 2009 Reporting Period

During the first year of ownership of EPM 12513 by Kagara, the main focus of work was to compile historic exploration data and formulate it into a single coordinate system (MGA94\_55) to allow a digital interpretation of past activities. The review aimed to determine the potential of the tenement to host prospective base metal mineralisation.

Ground inspections over the main prospect areas were carried out by Kagara geologists during this reporting period. Two percussion drill holes (MP12 and MP13) completed by Getty Oil Development in 1980 are located on relinquished sub-block "R" (BIM TOWN/Block 2524) at the Maclean prospect. Both of these holes were located on the ground as well as a number of grid pegs. The drill holes and

grid pegs were picked up by GPS in MGA94 coordinates. A number of grid pegs consisted of short (<0.5m) star pickets with a tag detailing the local coordinates. The majority of pegs were wooden (1m) pegs with no identification. See Table 4 below for the GPS co-ordinates of the two drillholes located over the relinquished area.

**Table 4 GPS co-ordinates for drillholes at Maclean located on the relinquished area**

Hole ID	Easting (MGA94_55)	Northing (MGA94_55)	Location Accuracy
MP12	212 732	7 899 310	GPS ±3m
MP13	212 776	7 899 430	GPS ±3m

These vertical drill holes were both drilled to a maximum depth of 50m and were designed to target IP anomalies. The best gold result returned was 1m @ 0.18g/t from 32m (MP12). The best zinc result is 1m @ 255ppm Zn from 5m (MP13); however Pb and Cu results were very low and the elevated zinc levels are probably due to enrichment in the regolith profile. The best copper result was 2m @ 270ppm Cu from 23m (MP13). These results did not warrant follow-up.

### 7.3.1 Mega Georgetown Pty Ltd

Mega Georgetown Pty Ltd (Mega Uranium) completed processing and interpretation of the data from the airborne high resolution radiometric and magnetic survey collected during the 2008 reporting period.

This survey identified six radiometric anomalies (G003, G018 and G020-23) within the relinquished sub-blocks; details of these anomalies are presented in Table 5 with locations shown in Figure 9. These anomalies were considered low priority. Follow-up ground work, including ground radiometric surveys and geological mapping were only carried out over the G003 anomaly.

The G003 anomaly is a small bulls-eye anomaly of just above background radioactivity. A sub-vertically dipping, north-south striking sequence of metamorphic rock occurs in the anomaly area.

**Table 5 Mega Georgetown airborne radiometric anomalies within the relinquished area**

Prospect	East	North	Originator	Arad eU	Arad eTh	Priority	Field Check	Comment
G003	213,600	7,900,688	GD	6.7	16.4	3	Yes	
G018	220,839	7,903,999	GD	4.6	9.6	3	No	
G020	221,789	7,899,795	GD	7	15.1	3	No	
G021	223,913	7,899,701	GD	6.4	11.9	3	No	
G022	224,341	7,898,895	GD	6.8	11.5	3	No	
G023	223,902	7,897,779	GD	7	16.8	3	No	

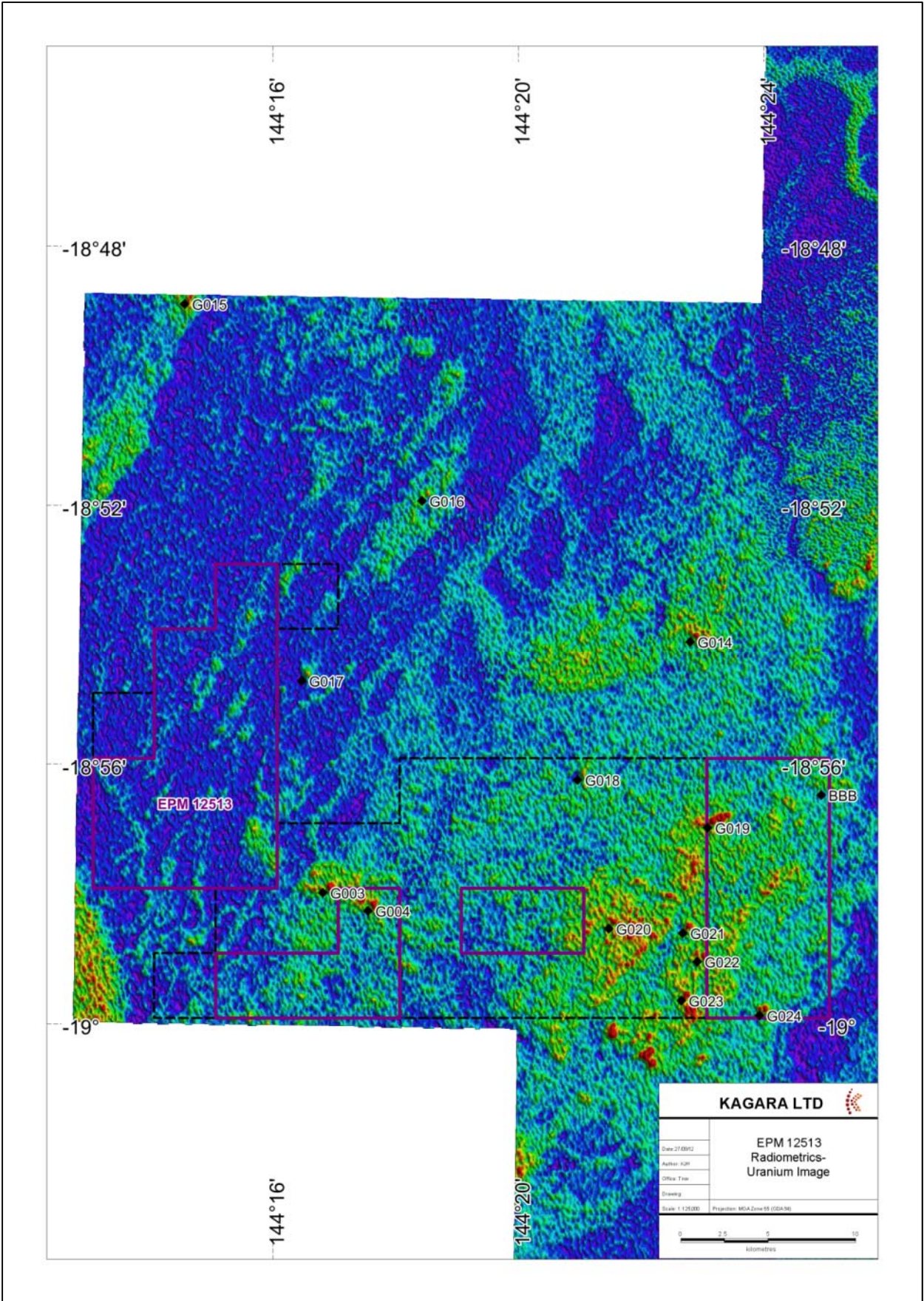


Figure 9 Uranium image showing radiometric anomalies within relinquished sub-blocks

## 7.4 2010 Reporting Period

Kagara generated and analysed the aeromagnetic data collected by Mega Georgetown (2007) during the 2010 reporting period. Mega Georgetown Pty Ltd did not carry out any uranium exploration over this tenement during this period.

### 7.4.1 Aeromagnetics

The data from the Mega Georgetown aeromagnetic survey was processed by Mike Sexton (Consultant Geophysicist to Kagara) to obtain the following data sets:

- Total Magnetic Intensity (TMI) *Figure 10*
- Reduced To Pole (RTP) *Figure 11*
- Half Vertical Derivative – Reduced To Pole (Half VD\_RTP) *Figure 12*
- First Vertical Derivative – Reduced To Pole (1VD\_RTP) *Figure 13*

Images of these datasets showing the relinquished sub-blocks are presented in Figures 10-13 below.

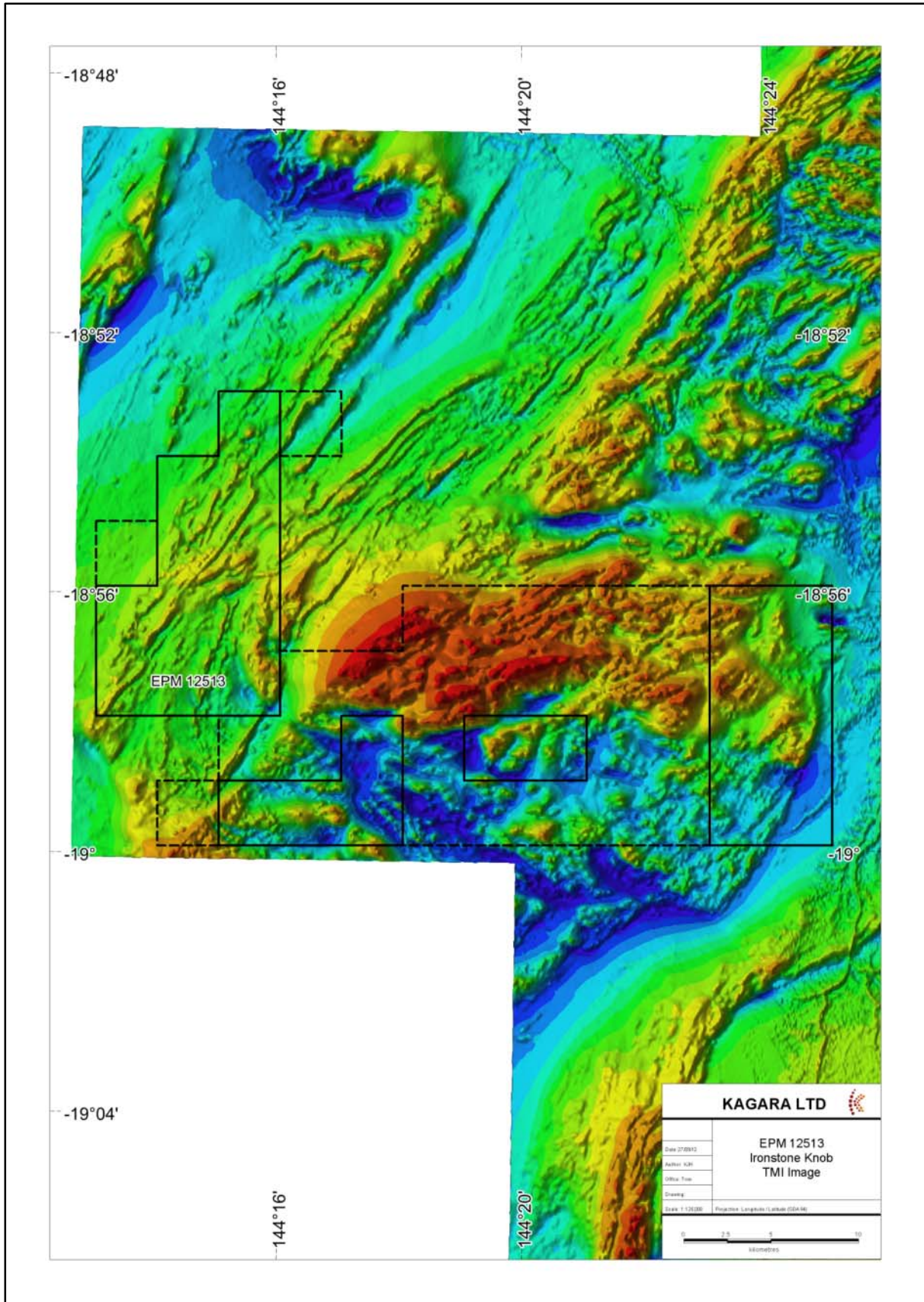


Figure 10 Total Magnetic Intensity (TMI) image

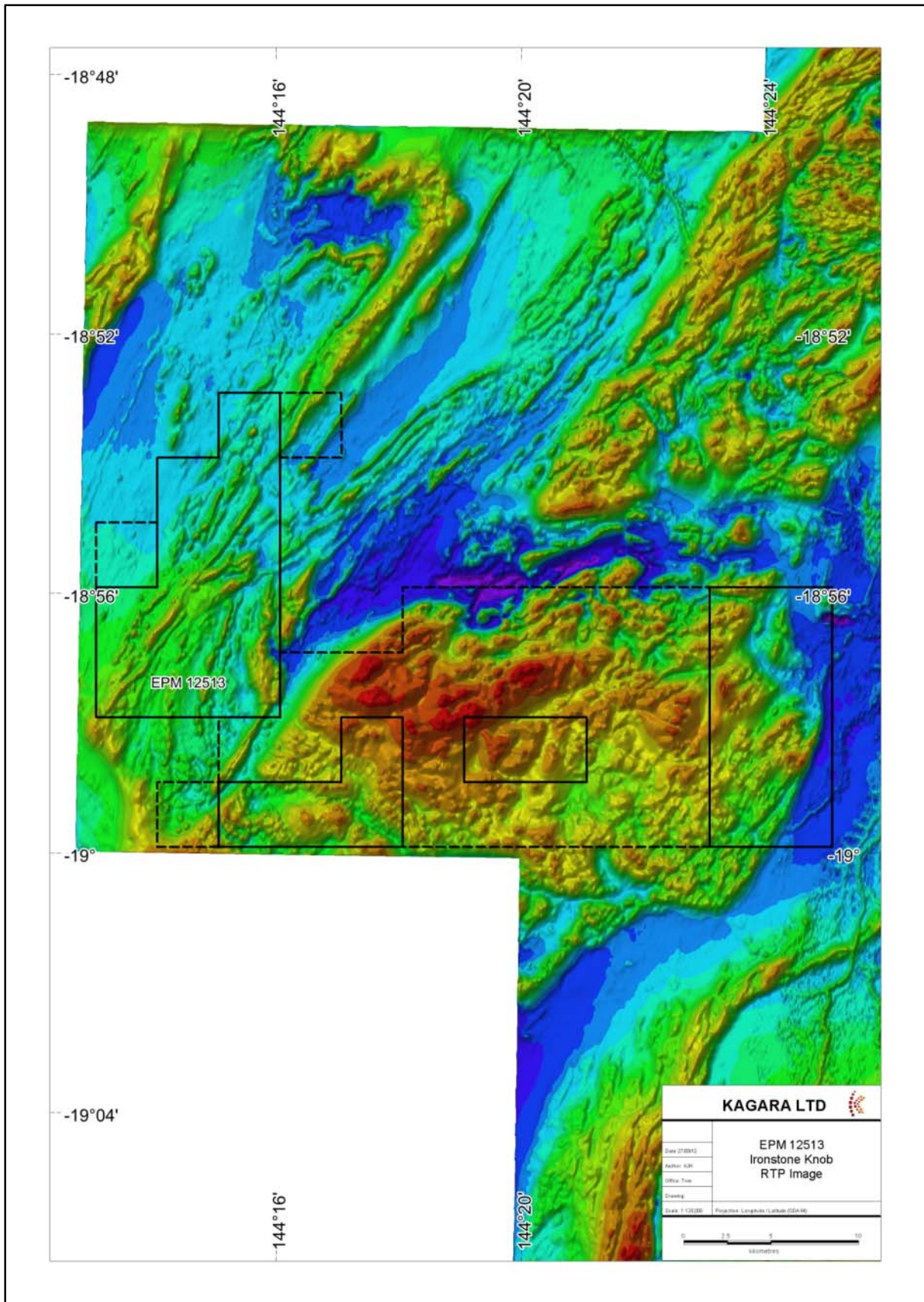


Figure 11 Reduced to Pole (RTP) image



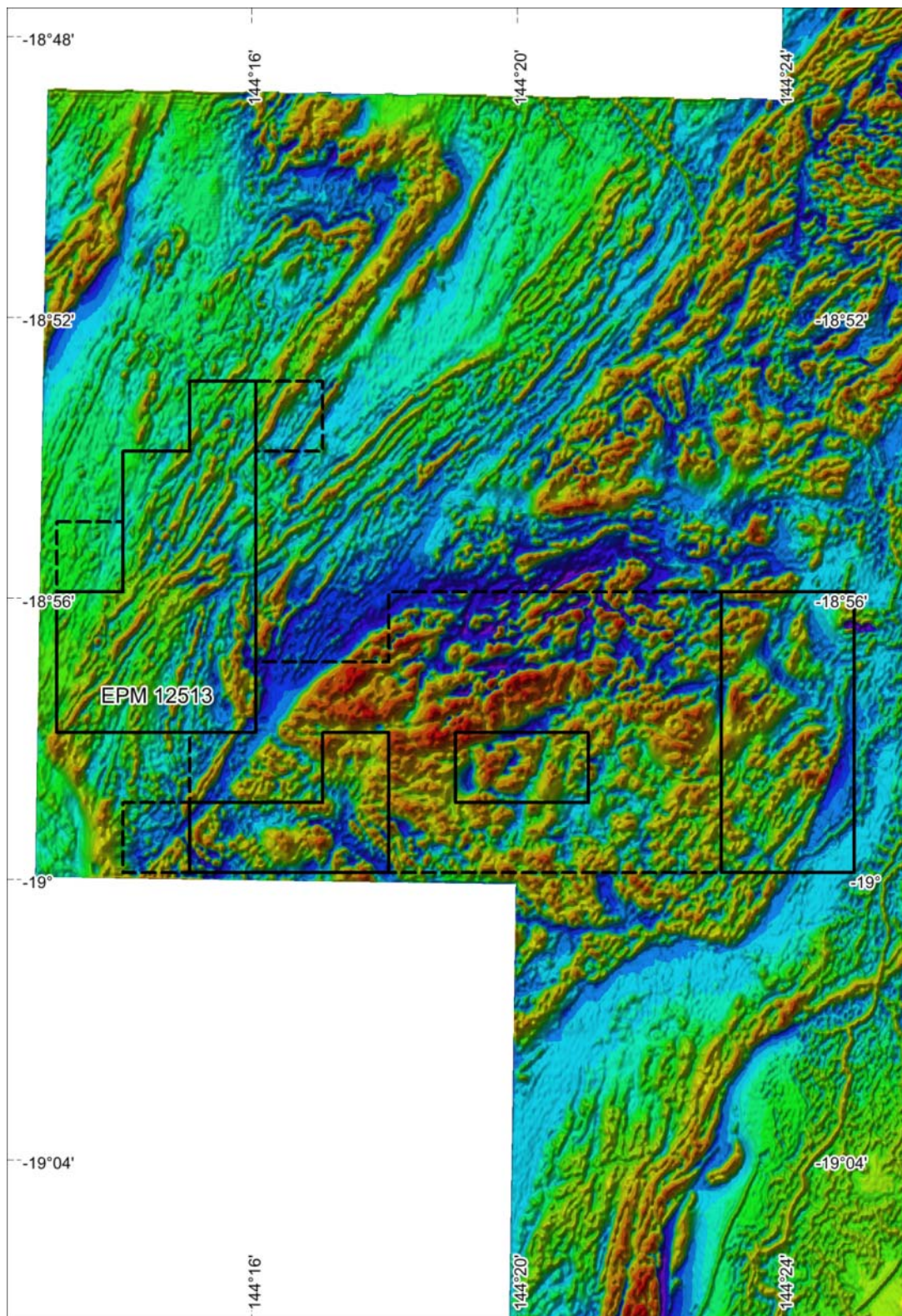


Figure 12 Half Vertical Derivative - Reduced to Pole (Half VD\_RTP) image

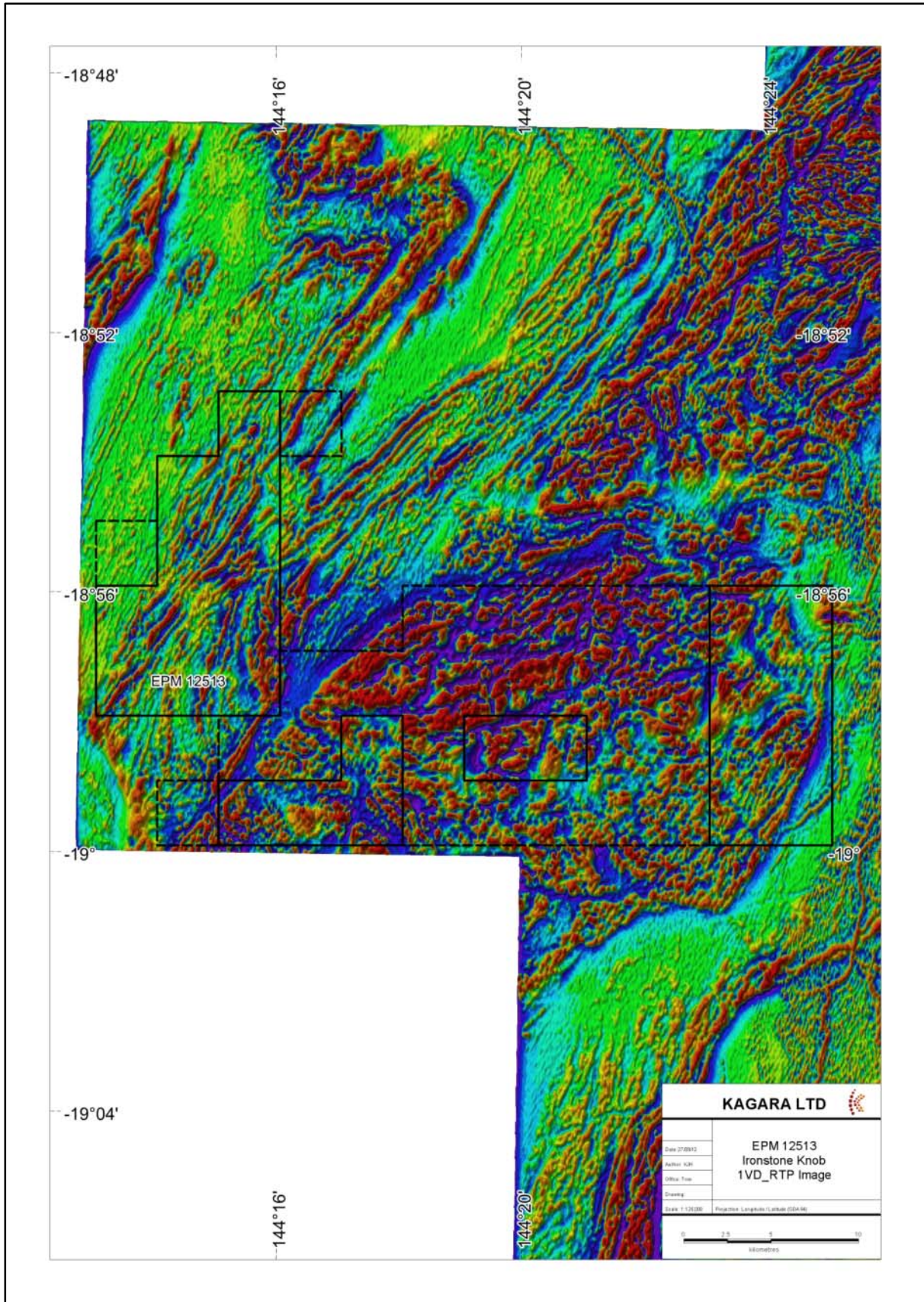


Figure 13 First Vertical Derivative – Reduced to Pole (1VD\_RTP) image

## 7.5 2011 Reporting Period

Work conducted by Kagara during the 2011 reporting period included a compilation of data pertaining to EPM 12513 located in historic open file reports and review. Informal meetings with representatives of the Traditional Owners, the Ewamian People were conducted during the reporting period.

No field work was conducted over this tenement during the 2011 reporting period mainly due to an unusually prolonged and intense wet season (November to April). In particular, the aftermath of Cyclone Yasi on February 3<sup>rd</sup> 2011 left the area inaccessible for several months due to saturated ground and fallen trees over tracks, confirmed by a post-cyclone field inspection of the main access routes.

### 7.5.1 Review

Historic tenements overlying Kagara's current tenement, EPM 12513 were identified and open file reports pertaining to these tenements were downloaded from the QDEX website. A total of 43 historical company reports were summarised, providing a detailed account of the historic tenements, previous explorers, work completed and results achieved.

Images and maps of interest were geo-referenced for validation and targeting purposes. Significant features, such as mapped gossans and geophysical anomalies were digitised into MapInfo. Additional information on details of the surface geochemical samples and drillholes including geological data were added to the current database.

A review of the prospectivity of the tenement was undertaken subsequent to the compilation of the new information. One gold target which is based on stream pan concentrate sample, Q10767p, is located within the relinquished sub-blocks. This sample was collected by Battle Mountain Australia in 1988. The pan concentrate sample returned a gold value of 127.3 µg per litre. Follow-up by Battle Mountain did not reveal a gold source; however there doesn't appear to be any subsequent systematic work carried out and there may be potential remaining for gold mineralisation in this area.

## 7.6 2012 Reporting Period

A detailed assessment of results from historical stream sediment sampling programs was completed to identify prospective areas for follow-up detailed stream sediment sampling, geological mapping and XRF Niton soil sampling. This assessment covered the entire tenement including a buffer of approximately 5 kilometres surrounding the EPM. Several anomalies are located on the relinquished sub-blocks; these are shown in Figure 14 and discussed in detail below.

Two lead anomalies and one copper anomaly occur to the north-west of Maitland on the relinquished sub-blocks. The western-most lead anomaly comprises three minus 80 mesh samples taken by Battle Mountain Australia in 1988. Lead values are 38ppm, 40ppm and 41ppm with a drainage area of approximately 1.5 x 2 kilometres. These levels of lead are within the 98<sup>th</sup> percentile and thus considered very highly anomalous with respect to the entire dataset. However, there is probably limited potential for mineralisation in this location as there are no coincident anomalous levels of copper or zinc.

The eastern-most lead anomaly comprises one minus 80 mesh sample taken by Battle Mountain Australia in 1988. The sample returned 33ppm lead which is considered highly anomalous (95<sup>th</sup>

percentile). The stream sediment sample lies to the north of the tenement boundary; however it has drained from the south, positioning the potential source for the anomaly on the tenement. Similar to the other lead anomaly, there are no associated coincident elements.

The copper anomaly (Otter Copper) in the north-east portion of the tenement comprises one 95<sup>th</sup> percentile copper value of 72ppm collected by Otter-Getty in 1980. The anomaly is based upon this one sample point and it appears that Kidston followed the anomaly upstream with only background level results, thus this anomaly is considered low priority.

Three samples of elevated copper (65ppm, 70ppm and 85ppm) lie directly to the north of the Maclean prospect within the relinquished area; the source is interpreted to be the Maclean prospect which is located on the retained sub-blocks. Similarly, there are also several elevated zinc values occurring in this area with 240ppm and 299ppm.

A copper anomaly is located across partially relinquished ground, approximately two kilometres to the north of the Maclean prospect. The majority of the anomaly lies on the retained sub-blocks; however the western-most anomalous sample potentially drains from the relinquished sub-blocks. This sample was taken by Otter-Getty in 1980 and returned 75ppm copper which is within the 95<sup>th</sup> percentile of copper values within the dataset. The fraction size was not recorded by Otter-Getty for this program, however the dataset was found to be comparable to the minus 80 mesh fraction.

One sample located two kilometres to the east of Well East collected by Otter-Getty in 1980 returned 140ppm zinc and 55ppm copper. No other elements were reported and this anomaly may warrant follow-up due to coincident copper-zinc.

These anomalies located over the relinquished sub-blocks are considered lower priority compared to the remaining anomalies identified on the retained ground.

No field work was completed over the relinquished sub-blocks during the 2012 reporting period.

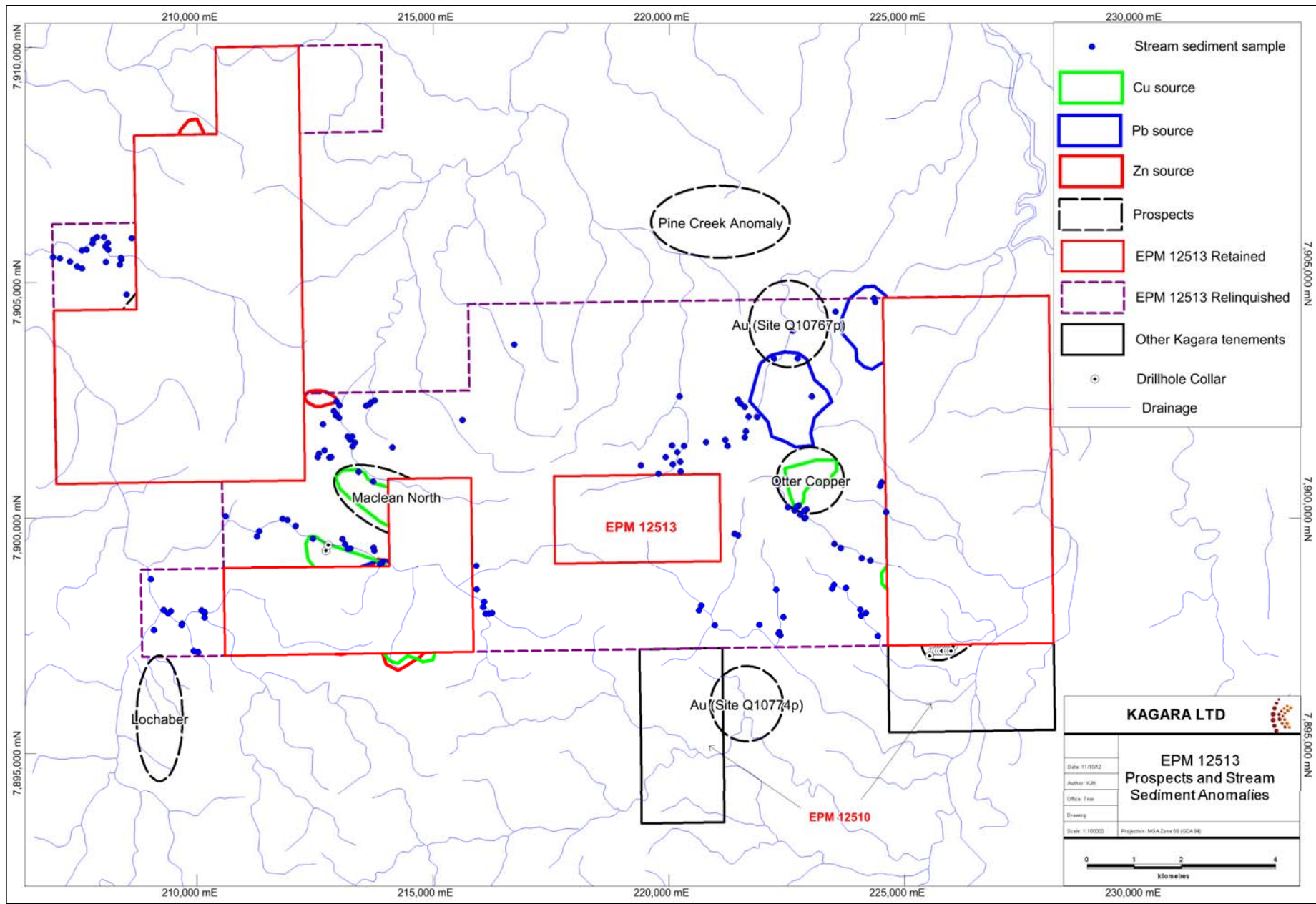


Figure 14 Location of stream sediment anomalies and prospects

## **8 CONCLUSIONS AND RECOMMENDATIONS**

The presence of Kagara's Maitland Copper Resource and favourable litho/structural Einasleigh Metamorphic stratigraphy indicate that EPM 12513 remains prospective for base metals and gold mineralisation.

Since the tenement was granted in 2004, the work completed has indicated low potential for base metals, gold or uranium mineralisation on the 25 sub-blocks for relinquishment. There are no recorded mineral occurrences over these sub-blocks and it is recommended that these 25 sub-blocks be relinquished. The retained area covers the Maitland deposit, the Ironstone Knobs, Well and Maclean prospects and several high priority stream sediment anomalies identified during the 2012 reporting period.

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# **APPENDIX 1**

**EPM 12513 Relinquished area  
Rock Chip Sample data  
2005**

Company	Sample ID	Sample Type	East (MGA94)	North (MGA94)	Date Sampled	Au ppm	Ag ppm	Ars ppm	Ba ppm	Bi ppm	Cu ppm	Fe pct	Mo ppm	Pb ppm	Sb ppm	U ppm	W ppm	Zn ppm
GLENGARRY	QR00412	RKCHIP	210315	7897256	15/07/2005	0.576	8.4	3	930	32	7010	3.82	6	16	1	5	5	42
GLENGARRY	QR00413	RKCHIP	210318	7897103	15/07/2005	0.002	0.2	5	820	1	25	2.73	2	5	1	5	5	4
GLENGARRY	QR00414	RKCHIP	210315	7897256	15/07/2005	0.430	3.5	2	1180	11	3190	3.74	3	7	1	5	5	13
GLENGARRY	QR00415	RKCHIP	210335	7897313	15/07/2005	0.008	0.5	2	980	1	309	1.49	2	7	1	5	5	9
GLENGARRY	QR00416	RKCHIP	210351	7897457	15/07/2005	0.014	0.4	2	2520	1	279	2.85	1	15	1	5	5	7
GLENGARRY	QR00417	RKCHIP	210351	7897457	15/07/2005	0.001	0.1	1	1260	1	3	0.44	0.5	9	1	5	5	8
GLENGARRY	QR00418	RKCHIP	210266	7897502	15/07/2005	0.004	0.1	2	1470	1	180	0.97	2	5	1	5	5	1
GLENGARRY	QR00426	RKCHIP	212932	7902205	15/07/2005	0.001	0.1	4	4310	1	6	0.77	0.5	9	1	5	5	7

## **APPENDIX 2**

**EPM 12513 Relinquished area  
Historic Stream Sediment data**