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**Anglo American Exploration Australia Pty. Ltd.
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**EPM15915
Dido Dam
Third Annual Report**

For the Period 30/10/2009 – 29/10/2010

Volume 1 of 1

Tenement: EPM15915
Tenure Holder: Anglo American Exploration (Australia) Pty Ltd
Tenement Operator: Anglo American Exploration (Australia) Pty Ltd
Compiled By: Kylie Dixon
Date: 19 November 2010

Distribution

***Department of Natural Resources and Mines Queensland - (1)
Anglo American Exploration (Australia) Pty Ltd – Perth Office (1)***

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SUMMARY

The tenement EPM15915, Dido Dam, is part of the Lynd Project and is located within the Georgetown Inlier, Queensland Australia. Anglo American Exploration Australia Pty Ltd (AAEA) was granted the Licence on 30th October 2007 for a period of five years.

AAEA is seeking to discover significant NiS deposits in the Lynd area using a variety of magmatic NiS related empirical criteria and models.

The tenement area consists dominantly of Cambrian to Ordovician metasediments intruded by a Silurian mafic complex with minor Quaternary cover. The targets are Voisey’s Bay style NiS and the area has not seen NiS exploration. Anglo American has the rights to proprietary technology that we believe will be able to detect massive NiS at great depths.

Work completed in the third year of the tenement has consisted of a Spectrem Airborne Geophysics Survey including Electromagnetic (EM), Magnetics (TMI), DTM and Radiometrics.

Keywords

Geographical (Greenvale)
Commodities (nickel, copper)
Ages (Proterozoic)
Geological Province (Georgetown Inlier, Tasman Orogenic Zone)

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1. INTRODUCTION

EPM15915, Dido Dam, is part of the Lynd Project, located approximately 30 km northwest of Greenvale and 220km northwest of Townsville. Access to the tenement is from Townsville via the Gregory Development Rd that links Charters Towers to the Lynd Junction and then various station tracks. The tenement is situated on the Einasleigh (SE55-09) 1:250,000 map sheet and the Conjuboy (7,860) 1:100,000 map sheet.

Anglo American Exploration Australia Pty Ltd (AAEA) was granted the tenement on 30th October 2007 for a period of five years. EPM15915 covers an area of approximately 185 km² within the Georgetown Inlier.

This report summarises the exploration activities conducted on EPM15915, during the reporting period 30th October 2009 to 29th October 2010.

2. TENURE

The tenement EPM15915, was granted to AAEA on 30th October 2007 and consists of 57 graticule blocks covering an area of 185km². The tenement details are in *Table 1* below and the tenement location plan is presented as *Figure 1*.

Table 1: Tenements Details					
Tenement	Holder	Date Granted	Expiry Date	Area Km²	No Sub Blocks
EPM15915	AAEA	30/10/2007	29/10/2012	185	57

Table 2 (below) and *Figure 2* details the 57 sub blocks that comprise the lease.

Table 2: Sub-blocks that comprise EPM15915.			
1:1,000,000 Plan Name	Primary Number	Graticular Section	No of Blocks
Townsville	2385	z	1
	2457	ehjkmnopqrstuvwxyz	17
	2558	abfglmqr	9
	2527	z	1
	2528	dehjklnopqrstuvwxyz	19
	2529	abfglmqr vw	10
		TOTAL	

3. REGIONAL GEOLOGY

EPM15915, is part of the Lynd Project which is located in northeast Queensland along the Tasman Orogenic zone, on the south eastern margin of the predominantly Palaeoproterozoic to Early Mesoproterozoic Georgetown Inlier. At this location, Palaeoproterozoic rocks of the Georgetown inlier are in faulted contact with younger Ordovician to Carboniferous sediments of the Broken River Province further east (Fergusson *et al.*, 2007). Recent work has replaced the western contact of the Tasman Orogenic zone from the Burdekin River Fault westward along the Lynd Mylonite Zone; the area between the two structural elements is named the Greenvale Province (Nishiya *et al.*, 2003 and Fergusson *et al.*, 2007).

The roughly N-S trending Balcooma Mylonite Zone and Nickel Mine Fault divide the Greenvale Province between the Lynd Mylonite Zone and the Burdekin River Fault further (Fergusson *et al.*, 2007). Early Palaeozoic metamorphic units and intrusions make up the majority of rocks in the Greenvale province (Whitnall *et al.*, 1991). The stratigraphy is younging towards the East from the Cambrian (486±5 to 477±6 Ma) Oasis Metamorphics and Lynwater complex west of the Balcooma Mylonite zone; the Ordovician (471±4 Ma) Balcooma Meta Volcanic Group and Silurian (431±7 Ma) Dido Tonalite East of the Balcooma Mylonite Zone (Whitnall *et al.*, 1991; Fergusson *et al.*, 2007). An increase in age is documented through the stratigraphy further east with the Ordovician Lugano Metamorphics, Cockiespring Tonalite, Eland Metavolcanics and Paddys Creek Phyllite west of the Nickel Mine Fault; through to the Cambrian Halls Reward Metamorphics located between the Nickel Mine Fault and the Burdekin River Fault (Fergusson *et al.*, 2007; Nishiya *et al.*, 2003).

The older units in the Greenvale province; Oasis Metamorphics, Lynwater Complex and Halls Reward Metamorphics, have been affected by amphibolite grade metamorphism related to the Cambrian Delamerian Orogeny (Fergusson *et al.*, 2007). Deposition of the Balcooma Volcanic group took place in a back-arc setting (Whitnall *et al.*, 1991). Subsequent amphibolite grade metamorphism during the Silurian to Early Devonian deformed the Balcooma Volcanic Group (Whitnall *et al.*, 1991). The emplacement of the Dido Tonalite is associated with this Silurian deformation event (Whitnall *et al.*, 1991). Later deformation produced the predominantly N-S trending foliation found in the Greenvale Province (Fergusson *et al.*, 2007).

The rocks exposed in the central NNE-SSW trending axis on tenement EPM15915 are the Silurian Dido Tonalite (Whitnall *et al.*, 1991). Several gabbroic intrusions of unknown age have been located within the Dido Tonalite and on the tenement EPM15646. Metasediments of the Lugano Metamorphics and Eland Metavolcanics are the most eastern exposed rocks on tenement EPM15646. However, lithological contacts are not exposed and the location of the western

contact of the Dido Tonalite with the Balcooma Mylonite Zone is uncertain due to a significant amount of Tertiary cover in the area. The 250,000 scale government mapped geology is included as *Figure 3*.

4. EXPLORATION RATIONALE

The Lynd project, which incorporates EPM15915, was first identified in December 2004 during a country-wide data gathering and consolidation exercise that was constructed to specifically highlight areas within Australia that maybe prospective for magmatic Cu-Ni+/-PGE systems. This exercise incorporated regional geological, geochemical, DEM, magnetic, gravity and seismic tomographic data.

The combined datasets identified approximately 100 targets across Australia that were subsequently ranked using criteria that included the location of intersections of major structures with coincident Ni±Cu anomalies and permissive geology. The Lynd project was one of the top ten ranked targets identified as having potential to host a Cu-Ni+/-PGE system based on a bullseye magnetic feature located on a craton margin directly related with known layered mafic intrusions.

In 2005, Consultants at GeoDiscovery Group were asked to review the available geology and geochemistry in the Lynd area with the aim of locating specific Cu-Ni+/-PGE targets. Mafic and ultramafic lithologies identified during this study corresponded to favourable (although limited) geochemical data and indicated the potential for Ni-Cu mineralisation.

As a consequence the targets selected within this tenement have taken into account mapped geology as well as regional magnetic and gravity features that are suggestive of a buried, layered mafic complex.

The aim of the work proposed is to determine if the appropriate processes have occurred to produce a magmatic NiS deposit and then to locate the focal point of magmatism whereby massive NiS has collected in traps.

The exploration target is a Voisey’s Bay style NiS Deposit and the area has not seen NiS exploration. AAEA has the rights to proprietary technology that the company believes will be able to detect massive NiS at significant depths.

5. PREVIOUS EXPLORATION

During the 2007 to 2008 field season, AAEA completed: a ground geophysics survey - Induced Polarisation (IP) and Resistivity data collected along one 1300m long line using a dipole length of 100m; the collection of 307 soils samples from 13 traverses from 600m x 200m spaced centres and 4 rock chip samples; 27 RAB drill holes for 647 metres were drilled with samples submitted for analysis for major elements including PGE's. There were several notable highlights from the drilling program that included: the presence of visible native copper in drill hole LYRB08-124; an intersection from LYRB08-123 of 29 m @ 212 ppm Cu, 123 ppm Ni, 25 ppb Pt and 32 ppb Pd from an mafic/ultramafic lithology; and an intersection from LYRB08-130 of 26m @ 26.9 wt.% FeO and 1.8 wt.% TiO₂.

During the 2008 to 2009 field season, AAEA completed: a 1:50,000 scale geological data compilation, put together to gain an insight into the local geology and acquire an understanding of the dimensions and geological setting of the mafic intrusives from within the Lynd Project; a petrology study on rock chips from the RAB drilling from 2008 (end of hole samples) was completed and it was found that the basement geology was dominated by medium grained, foliated diorites and tonalites, most RAB holes contained chips of finer grained gabbros and metagabbros (amphibolites) which were interpreted as mafic dykes with rare ultramafic rocks consisting of wehrlites, pyroxenites and hornblendites.

A PhD study led by student Fiona Best under the supervision of Prof. Tony Crawford at CODES, University of Tasmania, was commissioned by AAEA in 2009 and incorporates rock chip and RAB drill samples collected from EPM15915 since 2007. The PhD research is currently in its second year and aims to determine the petrology, composition and age of the various mafic intrusions in tenements EPM15915, EPM15646, EPM 16070 and tenement application EPM18110 and their relationship with the Dido Tonalite and other intermediate-mafic-ultramafic intrusions across the broader southern Georgetown Inlier. This research is being used by AAEA to modify and enhance its exploration models for Ni-Cu-PGE mineralization in the Georgetown Inlier.

6. EXPLORATION CONDUCTED

Work carried out on EPM15915, during the third year of the tenement has consisted of a Spectrem Airborne Geophysics Survey covering the entire tenement. This exploration complies with the authorised activities specified for the permit.

6.1 Aerial Geophysics – Spectrem Air Survey

In late 2009, Spectrem Air Limited conducted an Airborne Electromagnetic (EM), Magnetics (TMI), DTM and Radiometric survey over the Lynd - Block 1 area. A total of 5,070 line km was surveyed for the whole of The Lynd - Block 1 area and ~1229 line km was surveyed within EPM15915 (covering all of the tenement). The digital data, details of the survey, the system specifications, standard Spectrem Air data processing stream and an atlas of images are described and presented in Appendix I.

The results of the survey highlighted a number of dipole features, identified in several EM channels on EPM15915. These could be considered to be possible kimberlite or lamproite intrusions capable of hosting diamonds. The importance of these targets is given weight by the discovery by AAEA of three micro-diamonds in termite mound samples collected from tenement EPM15646 approximately four kilometres south of EPM15915 in 2009. Reports of alluvial micro-diamonds in the Georgetown Inlier have been made by previous prospectors in the region: Diamonds, diamond indicator minerals and a review of exploration for diamonds in Queensland, however a kimberlite source has never been located. AAEA plan to test the dipole features on EPM15915 after geophysical processing of the Spectrem EM data is completed.

7. PROPOSED FUTURE EXPLORATION

Exploration efforts on EPM15915 in the fourth year of the permit will include further interpretation, depth slice processing and target generation from the Spectrem Aerial Geophysics Survey with any positive EM anomalism to be followed up with ground EM surveys and drill testing. Year four expenditure is estimated at \$50,000.

8. CONCLUSION

During the third year of the tenement included an extensive Airborne EM Survey including Magnetics (TMI) and EM Radiometrics. Exploration proposed for the fourth year of the tenement will include interpretation further interpretation, depth slice processing and target generation from the Spectrem Aerial Geophysics Survey.

9. REFERENCES

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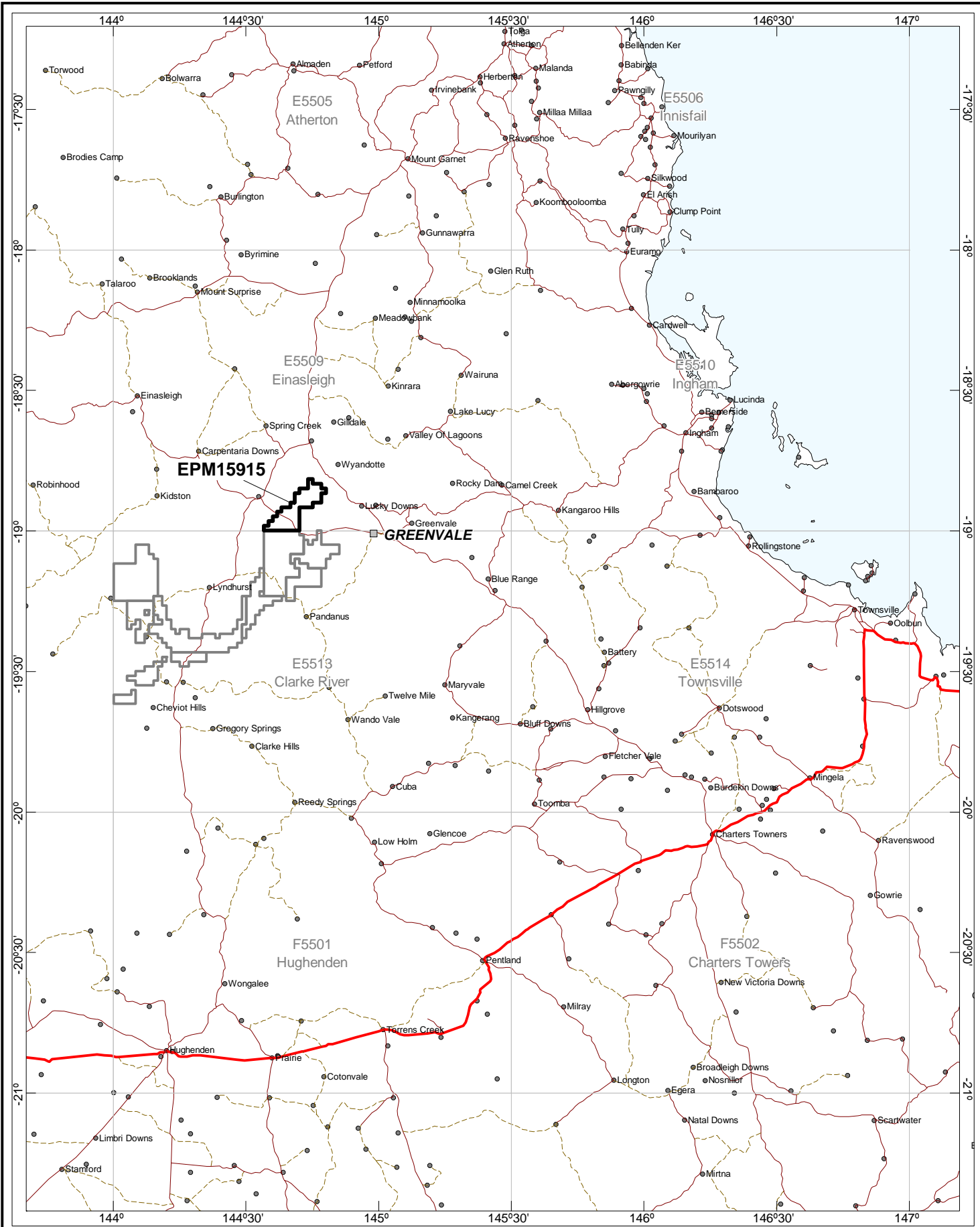
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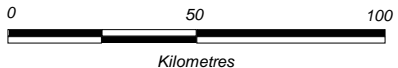
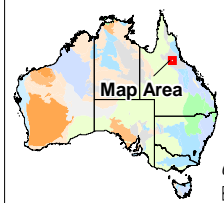
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LOCATION MAP



REGION: GEORGETOWN
 PROJECT: LYND
 DRAWING No: AUS_QLD_LYN_TN_12710.wor

AUTHOR:
P Polito

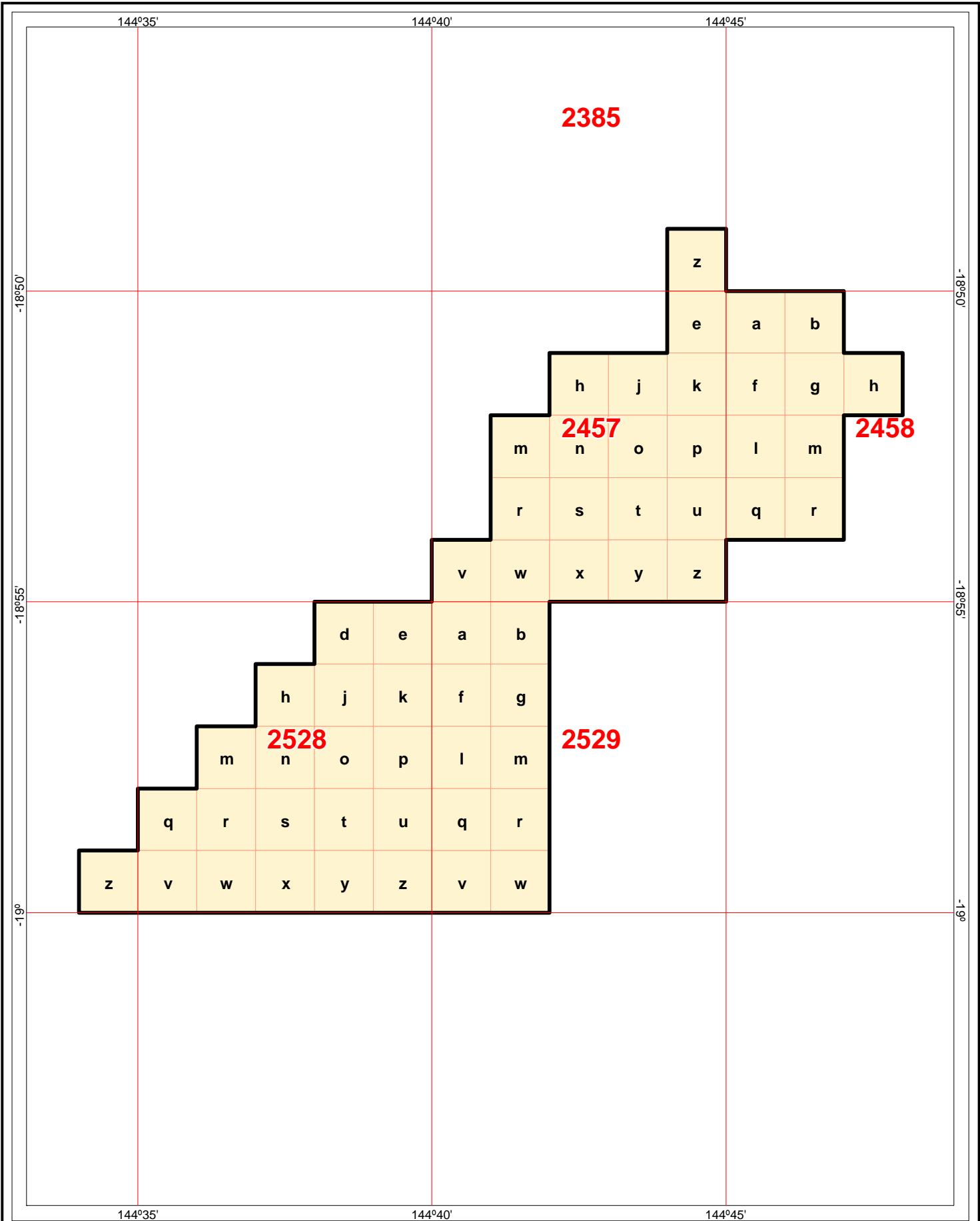
COMPILED BY:
C Lucy

DATE:
19/11/2009

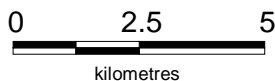
PROJECTION:
Long/Lat (WGS 84)

SCALE:
1:2,000,000

Figure 1
LYND PROJECT
EPM15915
TENEMENT LOCATION PLAN



LOCATION MAP



REGION: Georgetown Region
 PROJECT: The Lynd
 DRAWING No: Dido_Dam.wor

AUTHOR:
 R Goodgame

COMPILED BY:
 C Lucy

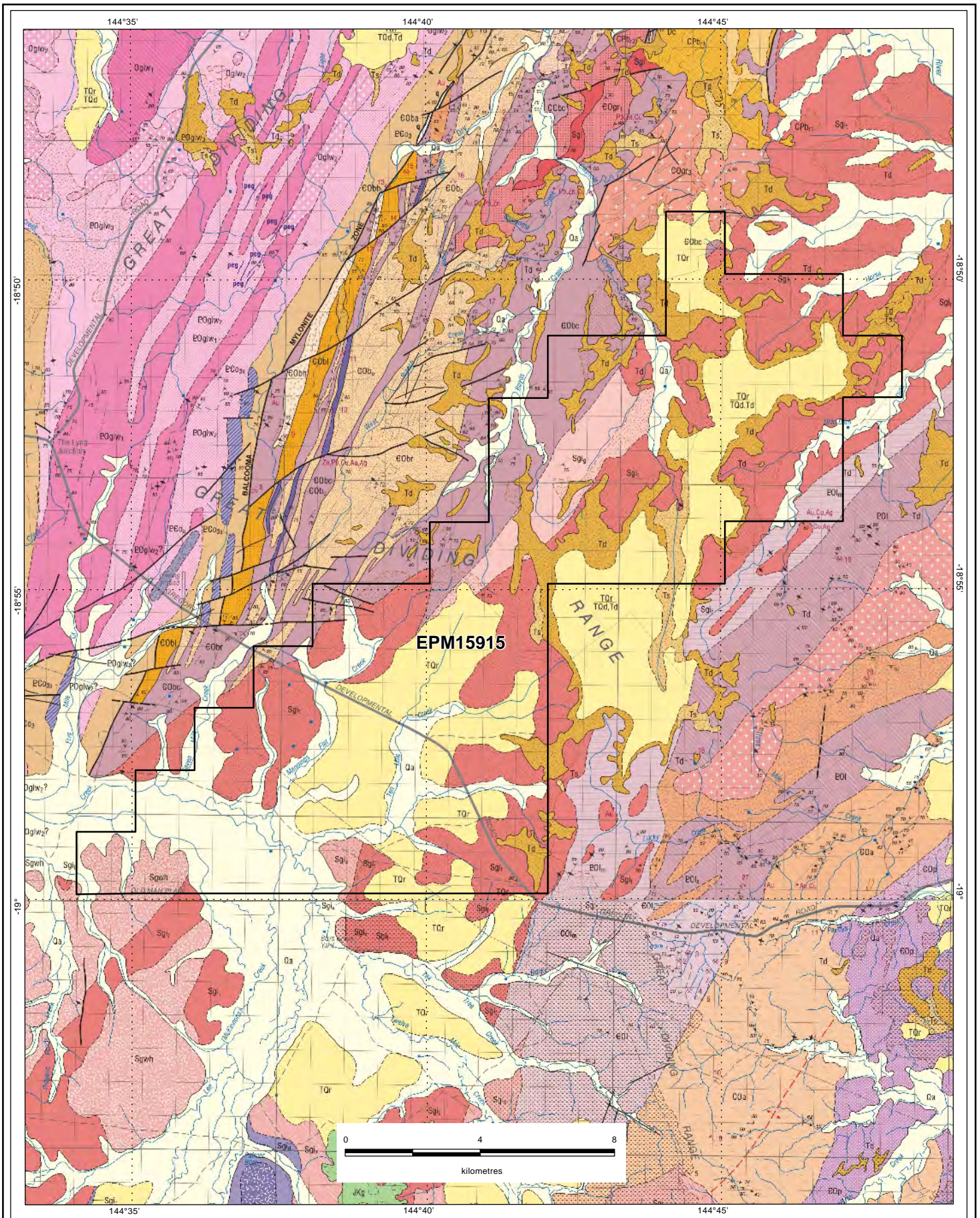
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PROJECTION:
 Long/Lat (AGD66)

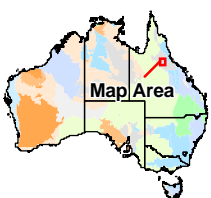
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Figure 2

**EPM15915
 TENEMENT GRATICULARS**



LOCATION MAP



REGION: GEORGETOWN

PROJECT: LYND

DRAWING No: AUS_OLD_LYN_GE_13088.wor

AUTHOR:
K Dixon

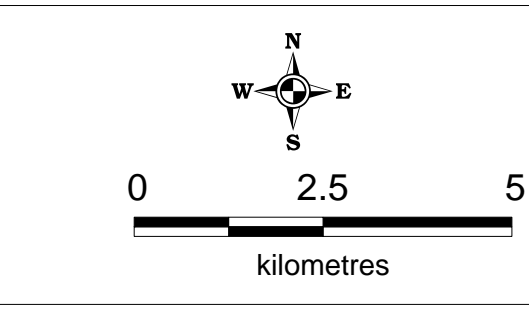
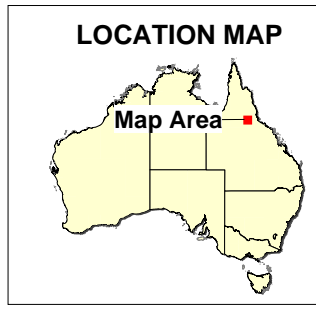
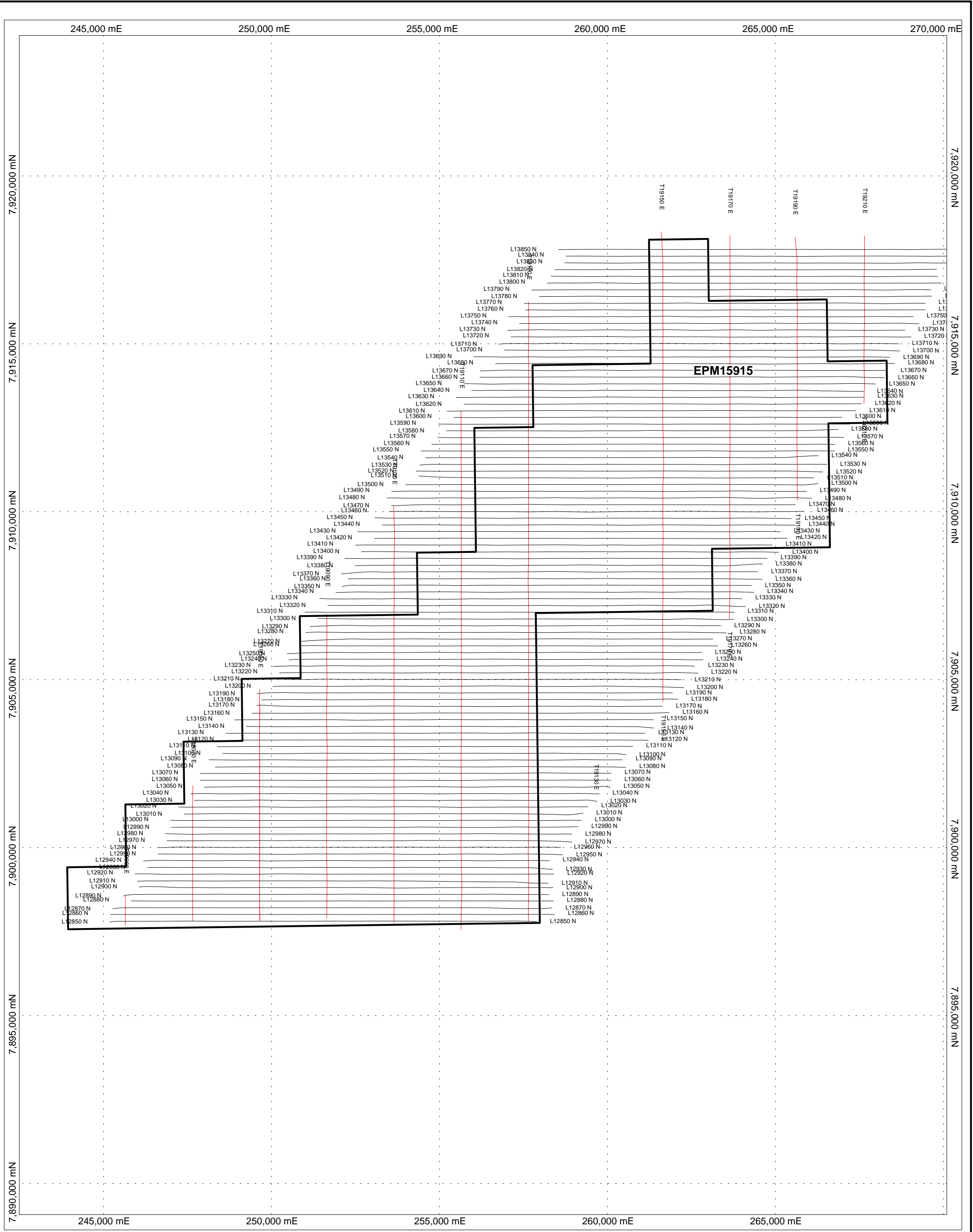
COMPILED BY:
C Lucy

DATE:
17/08/2010

PROJECTION:
Long/Lat (WGS 84)

SCALE:
1:150,000

Figure 3
LYND PROJECT
EPM15915
1:100,000 SURFACE GEOLOGY



		AUTHOR: KD
LYND BLOCK 1 - EPM15915 SPECTREM AERIAL GEOPHYSICS SURVEY Flight Lines		COMPILED BY: KD
REGION: QUEENSLAND LYND		DATE: Nov 2010
DRAWING NO:		PROJECTION: MGA94 Zone 55
		SCALE:

APPENDIX I

SPECTREM AIR LIMITED
SPECTREM SURVEY
OF
THE LYND- BLOCK 1 AREA
FOR EPM15915
(AUSTRALIA)

AERIAL GEOPHYSICS

Flight Survey Details,
Image Atlas &
Digital Data