BYNOE PROJECT

ANNUAL REPORT
EL30897
FOR THE PERIOD
22 MARCH 2016 TO 21 MARCH 2017

Report Type:	**Annual**
Tenements:	**EL30897**
Period:	**22 March 2016 – 21 March 2017**
Tenement Holder(s):	**Lithium Australia NL**
Operator:	**Lithium Australia NL**
Combined Report Number:	**N/A**
Report Date:	**8 May 2017**
Author:	**Lithium Australia NL (D Kettlewell)**
Lithium Australia Rpt No:	**2017-04**
Mineral Field:	
Sheet Name (250K):	**Darwin (SD52-04)**
Sheet Name (100K):	**Bynoe (5072)**
Location:	**Bynoe**

Distribution:
1. Lithium Australia NL
2. Department of Primary Industries and Resources

Lithium Australia NL Report No. 2017-04
Author: D Kettlewell
May 2017

CONTENTS

SUMMARY

		Page No
1.0	**Introduction**	**1**
2.0	**Geological Setting**	**1**
3.0	**Previous Exploration**	**1**
4.0	**Lithium Australia NL Work Completed 2016-2017**	**2**
	4.1 Review of Previous Explorer Work	**2**
	4.2 Southern Geoscience Consultants GIS Data Package	**3**
	4.2.1 Airborne Geophysical Data	**4**
	4.2.2 Ground Geophysical Data	**4**
	4.2.3 Advanced Spaceborne Thermal Emission and Reflection Radiometer Imagery	**4** **5**
	4.2.4 LandSat 8 Imagery	**5**
	4.2.5 HI-RES Imagery	**5**
	4.2.6 Geoscientific Data	**5**
	4.3 Proposed Exploration Program	**5**
	4.4 Aboriginal Areas Protection Authority	**7**
5.0	**Conclusions**	**8**
6.0	**Recommendations**	**9**
7.0	**References**	**10**

FIGURES

Figure 1: Bynoe Project EL30897 Location Map

Figure 2: Bynoe Pegmatite Field Location and Regional Geology (top) Leviathan Group (bottom)

Figure 3: Bynoe Project EL30897 Previous Exploration

Figure 4: Bynoe Project EL30897 RAB Drilling Depth to Soil/Saprock Interface

Figure 5: Bynoe Project EL30897 Southern Geoscience Consultant GIS Data Package Study Area

Figure 6: Bynoe Project EL30897 Comparison in resolution between a 400 m line spaced survey (left) 50 m line spaced survey (right)

Figure 7: Bynoe Project EL30897 ASTER Argillic Image Soil Sample Areas

Figure 8: Bynoe Project EL30897 ASTER FeO-MgOH Image Soil Sample Areas

Figure 9: Bynoe Project EL30897 ASTER RGB Image Soil Sample Areas

Figure 10: Bynoe Project EL30897 ASTER 321 Image Soil Sample Areas

Figure 11: Bynoe Project EL30897 LandSat 653 Image Soil Sample Areas

Figure 12a: Bynoe Project EL30897 K Anomalies Soil Sample Areas

Figure 12b: Bynoe Project EL30897 KTh Anomalies Soil Sample Areas

Figure 12c: Bynoe Project EL30897 K2Th Anomalies Soil Sample Areas

TABLES

Table 1: EL30897 Previous Explorer Exploration Summary

Table 2: EL30897 Previous Explorer Sampling Statistics

Table 3: EL30897 Previous Explorer Pegmatite Data

APPENDICES

Appendix 1: Figures and Tables

Appendix 2: Southern Geoscience Consultant GIS Data Package Digital Data (Attached DVD)

SUMMARY

The Bynoe Project consist of a single Exploration Licence 30897, approximately 38 km southwest of the Darwin, Northern Territory. Lithium Australia NL has 100% beneficial ownership of the tenement.

The density of the pegmatites within the licence area are controlled by the Burrell Creek Formation host rocks; the more psammite the host, the lower the density; the more pelite the host, the greater the density. The Leviathan Pegmatite Group lie predominantly within pelite rocks.

The pegmatites are generally tabular or pod-like, steeply dipping (predominately to the east), and striking generally north-northeast. The mapped sub-horizontal attitude of the pegmatites may represent a flexure in the overall steep dipping nature of the pegmatite bodies.

The Leviathan Pegmatite Group are zoned pegmatites with three to five zones, but the zonation is not concentric and even. Greisen zones have developed along shears which have promoted post-emplacement fluid activity. The typical mineralogy of the greisens is quartz-variable micas-cassiterite (± tantalum). The pegmatites have pervasive kaolinite alteration to at least 22 m, based on previous explorer RC drilling.

Work completed by the NTGS suggests the progress of highly fraction fluids which produced the Leviathan Pegmatite Group progressed from northwest to southeast.

The tenement area is covered predominately skeletal soils. The interbedded lithologies of the Burrell Creek Formation are clearly visible in satellite imagery is further evidence of shallow cover. Thicker cover is lies in the northern part of the tenement within tidal flats with mangroves in the headwaters of Bynoe Harbour. Laterite (ferricrete) increase towards the northeast corner of the tenement area. Soil and RAB drilling by Haddington defined the depth to the soil/saprock interface as 2.8 m and 0.36 m, respectively.

Based on the pegmatite exploration to date about strike length, width, and overall swam widths, 200 m x 50 m soil sampling grids should be detail enough to define swams. If individual pegmatites are the target, then 100-150 x m 20-30 m sample grids would be more appropriate.

ASTER imagery (AlOH, FeO-MgOH, ± RGB) clearly defines the thin skeletal soil cover over the out- to sub-cropping pegmatite host pelitic lithologies of the Burrell Creek Formation. ASTER (321) and LandSat (652) imagery clearly defines the vegetation coverage of the tenement area.

The radiometrics of this area is not detail enough to make any interpretations except on a regional scale.

A soil sampling program has been recommended to define the central zone of the tenement are where very little lithium exploration has been undertaken.

To allow exploration to commence, an Authority Certificate application was submitted to the Aboriginal Areas Protection Authority (AAPA) on 19 October 2016. At the date of this report, no Authority Certificate has yet been received. Ground work cannot commence until this certificate si received.

1.0 Introduction

The Bynoe Project is comprised of a single granted Exploration Licence 30897, granted on 22 March 2016 and covering approximately 62.7 km^2. The project is located approximately 38 km southwest of Darwin (Figure 1[1]). Lithium Australia NL (LIT) has 100% beneficial ownership of the tenement.

Access to the northern and southern parts of the tenement is along the Newdegate Road and South West Highway, respectively. Access to the main pegmatite areas of the tenement are along old station and partially overgrown, previous explorer tracks.

There are three small area excised from EL30897; MLN1148, ML29985, and housing area (Figure 1).

2.0 Geological Setting

The tenement is situated within the Darwin 1:250 000 and Bynoe 1:100 000 map sheet areas. The project area lies within the southern end of the Bynoe Pegmatite Field, Leviathan Pegmatite Group. The distribution of the pegmatites in the Leviathan Pegmatite Group is displayed in Figure 2. The pegmatites are hosted by the Finniss River Group, Burrell Creek Formation; an interbedded sequence of metamorphosed shale, siltstone, and greywacke. Approximately 3-4 km to the west is the Two Sister Granite which is the parent granite for the Bynoe Pegmatite Field.

3.0 Previous Exploration

There has been some effective exploration undertaken across the tenement area especially during the 1980s by Greenbushes Tin Ltd (Greenbushes) and Corporate Developments Pty Ltd (Corporate) in the 1990s. Although the exploration was centred around tin and tantalum potential of know and discovered pegmatites, this information has been useful in understanding the geology and structural setting of the region. Additional tantalum exploration undertaken by Haddington Resources Ltd (Haddington), on behalf of Arnhem Resources Pty Ltd and Australian Tantalum Pty Ltd from 2007-2012, defined the only lithium prospect in this part of the Bynoe Pegmatite Field; 7 Up. Much of this work has bene completed on the current EL30897.

Table 1 to Table 3 displays all regional work completed by previous explorers and Figure 3 displays the location of all rock chip, soil and drilling over the current EL30897. Figure 3 also displays all the mines and prospects of the tenement area and work completed at these sites is not shown due to the detail nature of the work. Based on previous explorer descriptions, some of the locations for the prospects as plotted by the NTGS were incorrect. The old mines and prospects that appear in Figure 3 are plotted as accurately as possible.

Exploration for gold, base metals, and uranium was also under taken with no anomalies being generated in the current tenement area.

[1] All Figures and Tables are contained in Appendix 1.

4.0 Lithium Australia NL Work Completed 2016-2017

Work completed during the 2016-2017 reporting period consisted of a full review of the previous explorer work and results achieved with a view to determining the veracity and coverage of any lithium exploration completed.

In addition, Southern Geoscience Consultants (SGC) was engaged to acquire all public domain geophysical and other geoscientific data to produce GIS data set covering the Bynoe Project area and environs.

Finally, by using the SGC data, the initial proposed exploration program was revised.

4.1 Review of Previous Explorer Work

Based on the completed exploration the density of the pegmatites is controlled by the host rocks. The more psammite the host, the lower the density; the more pelite the host, the greater the density. The Leviathan Pegmatite Group lie predominantly within pelite rocks.

Generally, the pegmatites are tabular or pod-like, steeply dipping (predominately to the east), and striking generally north-northeast. Several explorers have described some pegmatites as sub-horizontal, however the authors experience in the Arunta showed the sub-horizontal attitude may simply represent a flexure in the overall steep dipping nature of the pegmatite bodies.

The Leviathan Pegmatite Group are zoned pegmatites with three to five zones. It is clear the zonation is not concentric and even. It also appears that the white, bucky quartz blows may be the core of the pegmatites, although this has not been proven conclusively. Greisen zones have also developed along shears which have promoted post-emplacement fluid activity. The typical mineralogy of the greisens is quartz-variable micas-cassiterite (± tantalum). Although not definitive, lithium assays from greisen material are generally more elevated from other non-greisen samples. This observation is based on very limited amount of field observations and sampling.

Another feature of the pegmatites is their pervasive kaolinite alteration. The depth of the kaolinite alteration is at least to 22 m as defined in the RC drilling completed by Corporate in 1997. This will have implications for lithium exploration as the lithium will be depleted in the weathered pegmatite and thus will give a more subdued geochemical anomaly. Therefore, soil sampling is a means to determine a likely area/region for lithium mineralisation rather than pin point precise locations of lithium mineralisation.

The NTGS have undertaken down hole geochemical sampling of the pegmatite prospects which have been RC drilled. In the project area, this includes the Angers, Leviathan, and Centurion. Although these prospects are excised out of the EL30897, it is important to note that lithium concentration in ppm ranges from several 100 ppm to 1%. The work has also shown the variability of the Li across the zones of the pegmatite and the concentration along the contacts with the country rocks. Based on this work it has been interpreted that the progress of highly fraction fluids which produced the Leviathan Pegmatite Group progressed from northwest to southeast. This would mean the southern portion of the tenement south from the Northern Reward and Angers Prospect is area more likely to

contain Li-bearing pegmatites. Following on from this, the Annie River Group pegmatites, which is contiguous to the east of the Leviathan Pegmatite Group, are anomalous in lithium.

Much of the area is covered with variable kinds of cover. Predominately there is skeletal soil across most of the project area and this is evident in the aerial imagery. The interbedded lithologies of the Burrell Creek Formation are clearly visible as further evident the shallow cover. In the north, there are flood and tidal flats with mangroves due to the proximity of the northern part of the project area covering the headwaters of Bynoe Harbour. Here cover can be considerable. The limited RAB drilling has cover being 10-12 m in places. There are several low ridges which have outcrop/sub-crop of both pegmatites and country rocks so soil sampling would be effective across these.

Progressing north through the tenement and especially in the northeastern corner of EL30897, there is a general increase in the laterite (ferricrete) surface with a thickness of a few centimetres to 2 metres. Generally, the laterite cover lies over residual soils.

Trail soil and laterite sampling undertaken over Beata's and Hatcher's by Corporate showed that provided residual soils are taken, lithium anomalism occurs juxtaposed to the underlying pegmatite from which the anomalism was derived. Laterite samples were more variable than soils showing that their distance from the postulated source rocks could be 10s of metres. Laterite samples were taken from surface to 0.2 m, while soil samples we taken at an average depth of 0.3 m.

Work undertaken by Haddington including detail rock chip sampling, soil sampling, and RAB drilling across suspected pegmatite trends to define pegmatites under cover. By using soils and RAB, Haddington defined a further 22 pegmatite targets within EL30897, 20 of which had lithium anomalism. The depth to soil/saprock interface, the preferred Haddington sample medium for the RAB drilling was 2.8 m for soils it was 0.36 m. Figure 4 displays the depth to soil/saprock interface. Nearly all anomalies were across multiple RAB/soil lines and almost all were associated with pegmatite sub-crop or float.

Based on the pegmatite exploration to date about strike length, width, and overall swam widths, 200 m x 50 m sampling grid should be detail enough to define swams. If individual pegmatites are the target, then 100-150 x m 20-30 m sample grids would be more appropriate.

4.2 Southern Geoscience Consultants GIS Data Package

Southern Geoscience Consultants (SGC) were engaged to use the publicly available geophysical and other geoscientific data to produce GIS data sets for the Bynoe Project area (Figure 5).

Phase 1 consisted of research and establishment of what data was available and Phase 2 was to download, subset, and process the available magnetic, radiometric, digital elevation map, and other data as appropriate. The processed products that were delivered were assessed in the terms of their quality, usefulness, and limitations depending on the data resolution and the geological setting of the project area. Comments about each dataset are outlines below.

4.2.1 Airborne Geophysical Data

The Bynoe Project area is covered by 500 m line spaced government magnetic and radiometric data, sufficient for interpretation at only approximately 1:50,000. Despite the low resolution, the radiometrics data indicate that there may be a relationship between known lithium-tin-tantalum deposits/occurrences and the periphery of potassium anomalies, which could be mapped more closely with more detailed data. In particular, the potassium/thorium ratio could be used to indicate feldspar-rich zones of the pegmatite intrusives. Integrating this with information from satellite imagery, especially Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) AlOH mineral index products would greatly assist with targeting.

High resolution magnetic and radiometric data can provide a good understanding of the structure and lithology, such as faults, underlying source rocks and alteration zones, that can control pegmatite intrusions. The first and the second order derivatives with automatic gain control (AGC) filter applied are expected to be some of the most useful magnetic images.

This information can be used to generate and prioritise new lithium exploration targets. A low-level survey with a flight line spacing of 25 m would provide sufficient detail for approximately 1:5,000 scale geological interpretation. The images in Figure 6 illustrate the difference in resolution between a 400 m line spaced survey and 50 m line spaced survey.

The geology in the area is reasonably exposed with relatively thinner vegetation cover so radiometric and satellite data should work reasonably well.

4.2.2 Ground Geophysical Data

There is only a single gravity collection point within the project area. The available gravity satellite data (GRACE or WGM2012) with 2 km and 4 km grid cells was reviewed, however the wavelengths are so long over study area, that it this data would not assist interpretation or targeting work.

4.2.3 Advanced Spaceborne Thermal Emission and Reflection Radiometer Imagery

The ASTER imagery over the Bynoe Project was prepared from the CSIRO mosaic of visible and near-infrared (VNIR)/short wave infrared (SWIR) reflectance data (30 m resolution), in turn composed from individual ASTER scenes. Products include red-green-blue (RGB) colour composite images from ASTER VNIR/SWIR bands, images of AlOH mineral abundance — masked and non-masked (also based on CSIRO geoscience products) and RGB colour composite images of AlOH, Ferric-oxide, MgOH, and Argillic group abundances.

Although the ASTER instrument does not have either the spatial or spectral resolution to directly indicate the lithium-bearing mica mineralogy, AlOH index products can point to places with anomalous abundance of (general) mica group minerals, and possibly find pegmatite dyke swarms. Such pegmatite swarms might or might not be lithium bearing.

The ASTER imagery clearly maps the regional structural grain, as well as drainage patterns throughout the area. Fine tuning the processing and imaging of the data over the local study area would enhance the geological and regolith boundaries, structural information, and any signature related to the pegmatites.

4.2.4 LandSat 8 Imagery

LandSat 8 imagery is based on a recent single scene, which is selected during the dry season. Unlike ASTER, the LandSat 8 works well only in the VNIR region, there is not enough SWIR data for a more direct indication of mineralogy. The LandSat 8 data is of a very high quality and clearly shows will define the geological and regolith boundaries. In this respect, LandSat imagery is complimentary to high resolution magnetic and radiometric data for complex structural mapping. Similar to ASTER, the LandSat 8 imagery benefits from the relatively sparse vegetation cover, and will assist in the complex structural interpretations and targeting process.

LandSat products include RGB colour composites of individual bands as well as RGB composites of Minimum Nosie Fraction (MNF) transformed bands for the best structural contrast. Again, fine tuning the processing and imaging of the data over the local study area will enhance the geological and regolith boundaries, structural information, and any signatures related to the pegmatites.

4.2.5 HI-RES Imagery

There is 1 m pixel RGB imagery available over the Bynoe area. It is the highest (spatial) resolution dataset available here and is useful in following outcropping structures of interest, once they are identified and targeted by other means.

4.2.6 Geoscientific Data

The public domain geoscientific data collated was obtained from the Department of Primary Industries and Resources (DPIR) and included; drill hole collar, geochemical point data, 1:100,000 and 1:250,000 geological raster/vector mapping, mineral occurrences, and 1:250,000 topocadastral data.

4.3 Proposed Exploration Program

Based on previous exploration and nature of the pegmatite occurrences within EL30897, the following exploration program is proposed;

1. Foot reconnaissance of the areas not sampled by Haddington and Corporate to define residual soil levels and inspect pegmatites mentioned, but not properly defined or sampled previously.

2. Investigation into the possible use of satellite spectral imaging to locate partially buried pegmatites is recommended. This may better define pegmatite trends and allow targeted soil sampling program, rather than just a blanket-style approach.

3. Locate the Haddington RAB holes along several traverse lines and take a soil samples at the RAB hole sites. The Haddington RAB samples were all taken in the soil-saprock interface and if LTI soil samples have a similar tenure in assay as the RAB samples then this will eliminate potentially 17 part lines and 749 soil samples from the program.

4. Depending on the result of 1 and 2, undertake a 200 m x 50 m soil sampling program over the areas determined viable for soil sampling. This will not include areas of mangroves in the northwest and deeper cover in the central western and southwest of the tenement. Based on these restrictions the program will generate approximately 3,400 samples. Further soil sampling reductions can be achieved by only concentrating on areas which have not been covered by Haddington RAB and soils. This would reduce to approximately 2,500 samples.

5. Depending on the residual soil cover, some of the program may have to be finished by RAB drilling. A Toyota mounted RAB rig would be preferred as this would not require any access tracks or pads. This sampling would only be warranted if the initial soil sampling was encouraging or, after reconnaissance, it was determined that this would be the only viable sampling technique.

6. Much of the Leviathan Pegmatite Group pegmatites are locked up in MLN1148 granted to Australia New Zealand Resources Corporation Pty Ltd on 21 June 2013 and the known lithium anomalous prospects of Angers and Hatcher's under application ML22985 held by Outback Metals Pty Ltd. This company was the subject of a compulsory acquisition by Graham Chrisp's South Cove Ltd in early 2015. If the sampling of EL30897 proves positive, it is recommended that negotiations to allow LIT to sample these mining lease.

After receiving the SGC GIS data package, the initial exploration program was revised. Using the recently acquired airborne geophysical data, the ASTER AlOH images clearing define areas of thinly covered bedrock. The AlOH mineral group images have been used to determine the out- to sub-cropping pegmatite host pelitic lithologies of the Burrell Creek Formation which lie under thin alluvial and/or colluvial cover. In all accompanying figures, these areas have been designated ASTER Soil Areas 1 to 7. The numerous pegmatite sills, dykes, and veins and accompanying quartz-feldspar reefs and greisen contact zones are not clearing visible, the extensive kaolinite alteration can be mapped using the Argillic data (Figure 7) while the FeO-MgOH data (Figure 8) maps out the rock/regolith interface. Although it is subtle, the AlOH RGB image also maps out the pegmatite host sequence (Figure 9).

The thickening of the vegetation, progressing north from Fog Bay Road into the intertidal mangroves does not appear to have a significant degradation on the effectiveness of the ASTER in determining thin cover over the host lithologies. The 321 ASTER image clearly defines the water courses and the mangrove areas (dark red) in the northern portion of the tenement area (Figure 10). The lighter the red, the sparser the vegetation.

The 652 LandSat image (Figure 11) can be interpreted in a similar way, although there appears to be more thick cover in the central northern portion of EL30897 than the 321 ASTER image. As a baseline interpretation, it appears that the thickest vegetation is restricted to the water courses and mangrove areas, as would be expected. The more mottled the colouration, the ore likely hood the cover is thin. Regardless of the interpretation of the remote sensing data, ground truthing of this area will still need to be undertaken before any soil sampling is started.

Topography has a role to play in interpretation of remote sensing data, especially ASTER where gentle to moderate slopes can broaden an alteration halo due to transportation of weathering products downslope. This may help to explain the coincident vegetation and FeO-MgOH anomalism.

The radiometrics of this area is not detail enough to make any interpretations except on a regional scale. The K (Figure 12a), KTh (Figure 12b), and K2Th (Figure 12c) images are all based on the 1981 Northern Territory Geological Survey 500 m line spaced Litchfield North airborne magnetic/radiometric survey. They do show a couple of coincident highs which may represent previously unmapped granite stocks in the Welltree Metamorphics to the northwest and Burrell Creek Formation to the in the central, south. Both areas are contained within the revised proposed exploration program.

Based on the ASTER and LandSat data a revised soil sampling program was proposed;

1. Foot reconnaissance of the seven ASTER soil areas to define residual soil levels and inspect outcrop/sub-crop of any pegmatites mentioned by previous explorers, but not adequately sampled.

2. Locate the Haddington RAB holes along several traverse lines and take a soil samples at the RAB hole sites. The Haddington RAB samples were all taken in the soil-saprock interface and if LTI soil samples have a similar tenure in assay as the RAB samples then this will eliminate potentially 17 part lines and 749 soil samples from the program.

3. Depending on the result of 1 and 2, undertake a 200 m x 50 m soil sampling program over the areas determined viable for soil sampling. This will not include water courses and mangrove areas in the northern portion of EL30897. Based on these restrictions, coverage from previous explorers Haddington and Corporate, and the portions of ASTER Soil Areas 2, 5, 6, and 7 will not be sampled due to drilling by previous explorers the program will generate approximately 2,000 samples. A reduction of approximately 1,000 soil samples from the original soil sampling proposal.

4.4 Aboriginal Areas Protection Authority

To allow exploration to commence, an Authority Certificate application was submitted to the Aboriginal Areas Protection Authority (AAPA) on 19 October 2016, with the Authority Certificate quote being accepted on 1 November 2016. Field work was completed during March-April 2017. At the date of this report, no Authority Certificate has yet been received. The licence area does not lie in any current application, registered, or determined Native Title Claim.

5.0 Conclusions

Based on the work completed to date, the following was noted concerning the Ravensthorpe Project and environs pegmatites:

1. The density of the pegmatites is controlled by the host rocks; the more psammite the host, the lower the density; the more pelite the host, the greater the density.

2. The Leviathan Pegmatite Group lie predominantly within pelite rocks.

3. The pegmatites are generally tabular or pod-like, steeply dipping (predominately to the east), and striking generally north-northeast.

4. The mapped sub-horizontal attitude of the pegmatites may represent a flexure in the overall steep dipping nature of the pegmatite bodies.

5. The Leviathan Pegmatite Group are zoned pegmatites with three to five zones, but the zonation is not concentric and even.

6. Greisen zones have developed along shears which have promoted post-emplacement fluid activity. The typical mineralogy of the greisens is quartz-variable micas-cassiterite (± tantalum).

7. The pegmatites have pervasive kaolinite alteration to at least 22 m, based on previous explorer RC drilling.

8. Work completed by the NTGS suggests the progress of highly fraction fluids which produced the Leviathan Pegmatite Group progressed from northwest to southeast.

9. The tenement area is covered predominately skeletal soils. The interbedded lithologies of the Burrell Creek Formation are clearly visible in satellite imagery is further evidence of shallow cover. Thicker cover is lies in the northern part of the tenement within tidal flats with mangroves in the headwaters of Bynoe Harbour. Laterite (ferricrete) increase towards the northeast corner of the tenement area.

10. Soil and RAB drilling by Haddington defined the depth to the soil/saprock interface as 2.8 m and 0.36 m, respectively.

11. Based on the pegmatite exploration to date about strike length, width, and overall swam widths, 200 m x 50 m soil sampling grids should be detail enough to define swams. If individual pegmatites are the target, then 100-150 x m 20-30 m sample grids would be more appropriate.

12. ASTER imagery (AlOH, FeO-MgOH, ± RGB) clearly defines the thin skeletal soil cover over the out- to sub-cropping pegmatite host pelitic lithologies of the Burrell Creek Formation.

13. ASTER (321) and LandSat (652) imagery clearly defines the vegetation coverage of the tenement area.

14. The radiometrics of this area is not detail enough to make any interpretations except on a regional scale.

6.0 Recommendations

Based on the exploration so far completed, EL30897 has the potential to host economic lithium mica and spodumene lithium deposits. The following work is planned for the 2017-2018 reporting year;

1. Complete the target generation using the SGC GIS data package and complete ground truthing of any warranted targets.

2. Foot reconnaissance of the seven ASTER soil areas to define residual soil levels and inspect outcrop/sub-crop of any pegmatites mentioned by previous explorers, but not adequately sampled.

3. Locate the Haddington RAB holes along several traverse lines and take a soil samples at the RAB hole sites. The Haddington RAB samples were all taken in the soil-saprock interface and if LIT soil samples have a similar tenure in assay as the RAB samples then this will eliminate potentially 17 part lines and 749 soil samples from the program.

4. Depending on the result of 1 and 2, undertake a 200 m x 50 m soil sampling program over the areas determined viable for soil sampling. This will not include water courses and mangrove areas in the northern portion of EL30897. Based on these restrictions, coverage from previous explorers Haddington and Corporate, and the portions of ASTER Soil Areas 2, 5, 6, and 7 will not be sampled due to drilling by previous explorers the program will generate approximately 2,000 samples. A reduction of approximately 1,000 soil samples from the original soil sampling proposal.

7.0 References

Ĉerný, P., 1982: Anatomy and classification of granitic pegmatites, *In* "Granitic Pegmatites in Science and Industry", Ĉerný, P., (ed), Mineral Association of Canada, Short Course Handbook 8, 39p.

Frater, K. M., 2005: Tin-Tantalum Pegmatite Mineralisation of the Northern Territory, Northern Territory Geological Survey, Report 16, 185p.

Goldberg, A., Glass, L. M., and Hollis, J. A., 2010: Litchfield North Special, 1:250,000 Interpreted Geological Series, Part Sheets; SD52-03, SD52-04, SD52-07, and SD52-08, Northern Territory Geological Survey.

Jacobson, M., Calderwood, M., and Grguric, B., 2007: A Guidebook to the Pegmatites of Western Australia, 394p.

Pietsch, B. A., 1986: 1:100,000 Geological Map Series Explanatory Notes, Bynoe 5072, Northern Territory Geological Survey, 35p.

Pietsch, B. A., and Stuart-Smith, P. G., 1987: Geological Map Series Explanatory Notes, Darwin SD52-04, Northern Territory Geological Survey, 57p.

APPENDIX 1

Figures and Tables


680000E
690000E
700000E
710000E
8620000N
8610000N
8600000N
8590000N
8580000N
0 2 4 6 8 km
Scale 1:200,000
MGA Zone 52 (GDA94)
DARWIN
PALMERSTON
COX PENINSULA
SHOAL BAY PENINSULA
DARWIN INTERNATIONAL AIRPORT
East Point
Fannie Bay
Wagait Beach
West Pt
Mandorah
Emery Point
Larrakeyah
Talc Head
Plater Rock
Stevens Rock
Weed Reef
Swires Bluff
Wickham Point
North Shell Is
Old Man Rk
Frances Bay
Darwin
East Arm
Winnellie
Berrimah
Knuckey Lagoon
CHARLES DARWIN NP
Belyuen
Channel Island
BLACKMORE HILL
KINGS TABLE
PEAK HILL
HAYCOCK HILL
MIDDLE ARM
West Arm
Woods Inlet
Corrawara
Waterlily Creek
Cox Peninsula Road
Kiara Rock
Brown Point
OBSERVATION HILL
Bynoe Mine
Bulldog Pass
Blackmore River
Darwin River
Tumbling Waters
Leviathan Mine
Annie Creek Mine (abandoned)
Sabine Mine
Picketts Mine (abandoned)
KANGAROO FLATS TRAINING AREA (PROHIBITED AREA)
MT PEEL
LAGOON HILL
MT ALARIE
TIDY HILL
FOG BAY
WILD HORSE PLAIN
BLACKMORE RIVER CONSERVATION RES
FM
GM
FL
GL
Legend
EL30897
Excised from EL30897
Mining Lease
Lithium Australia NL
BYNOE PROJECT
EL30897
Locarion Map
Figure 1

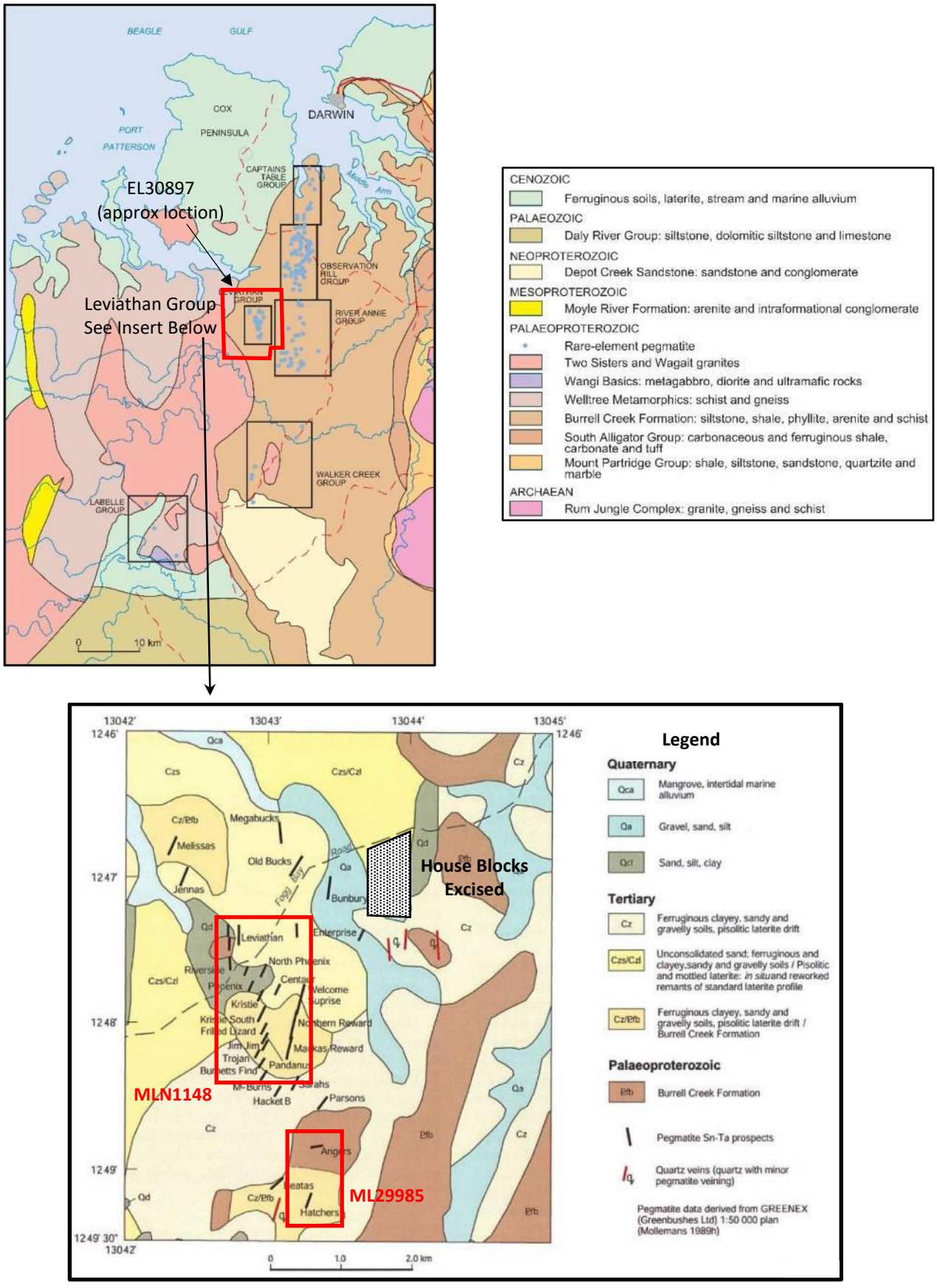
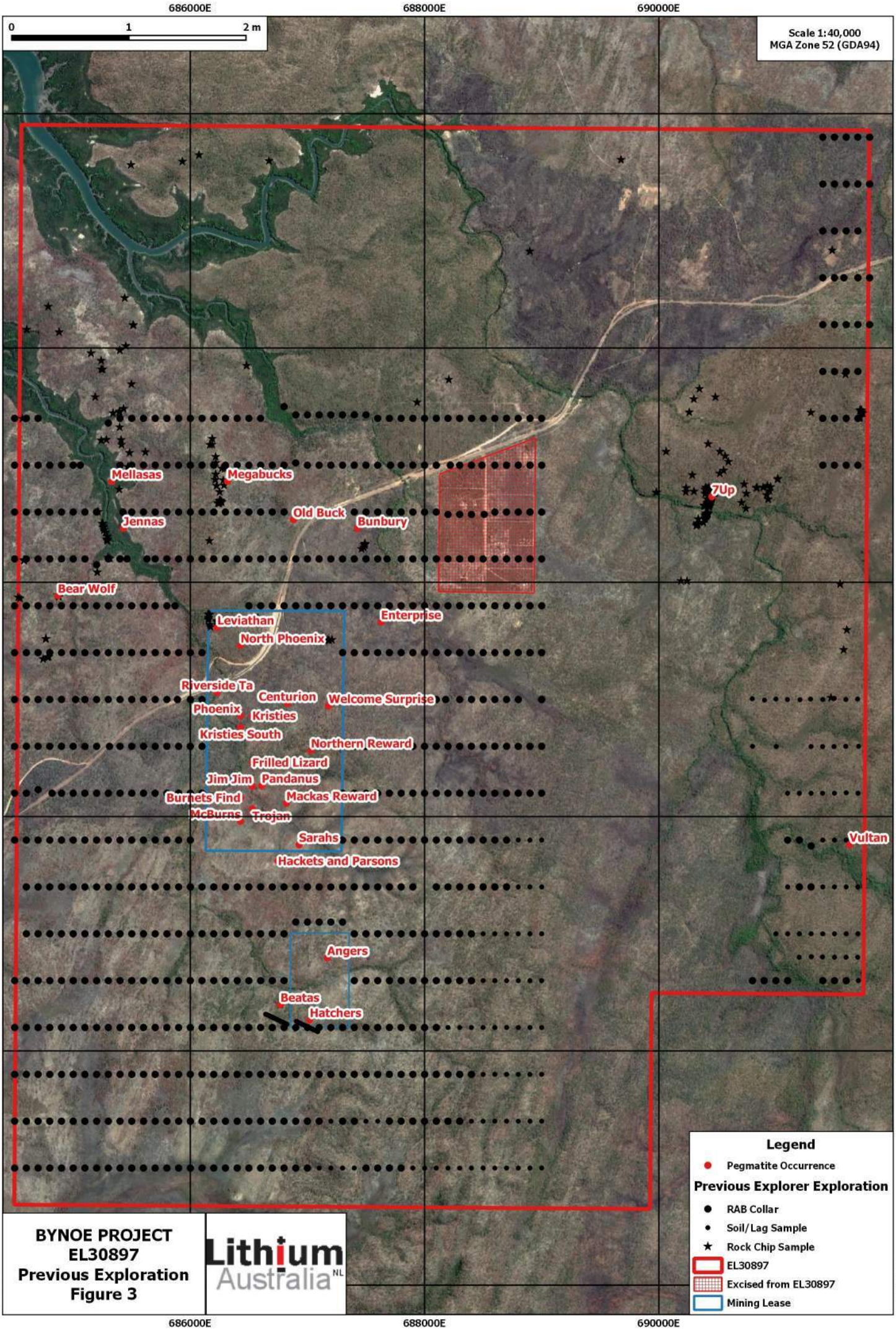
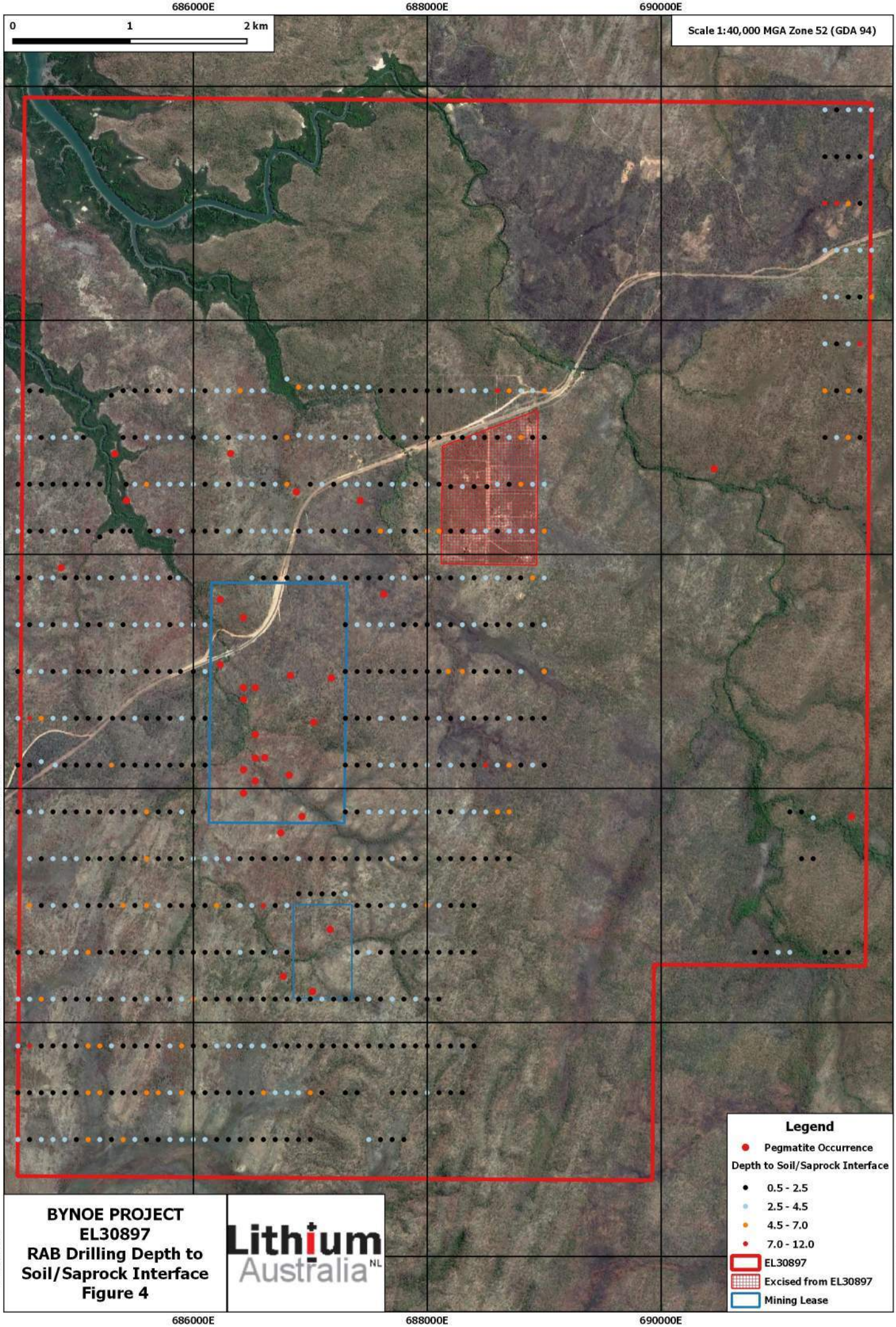
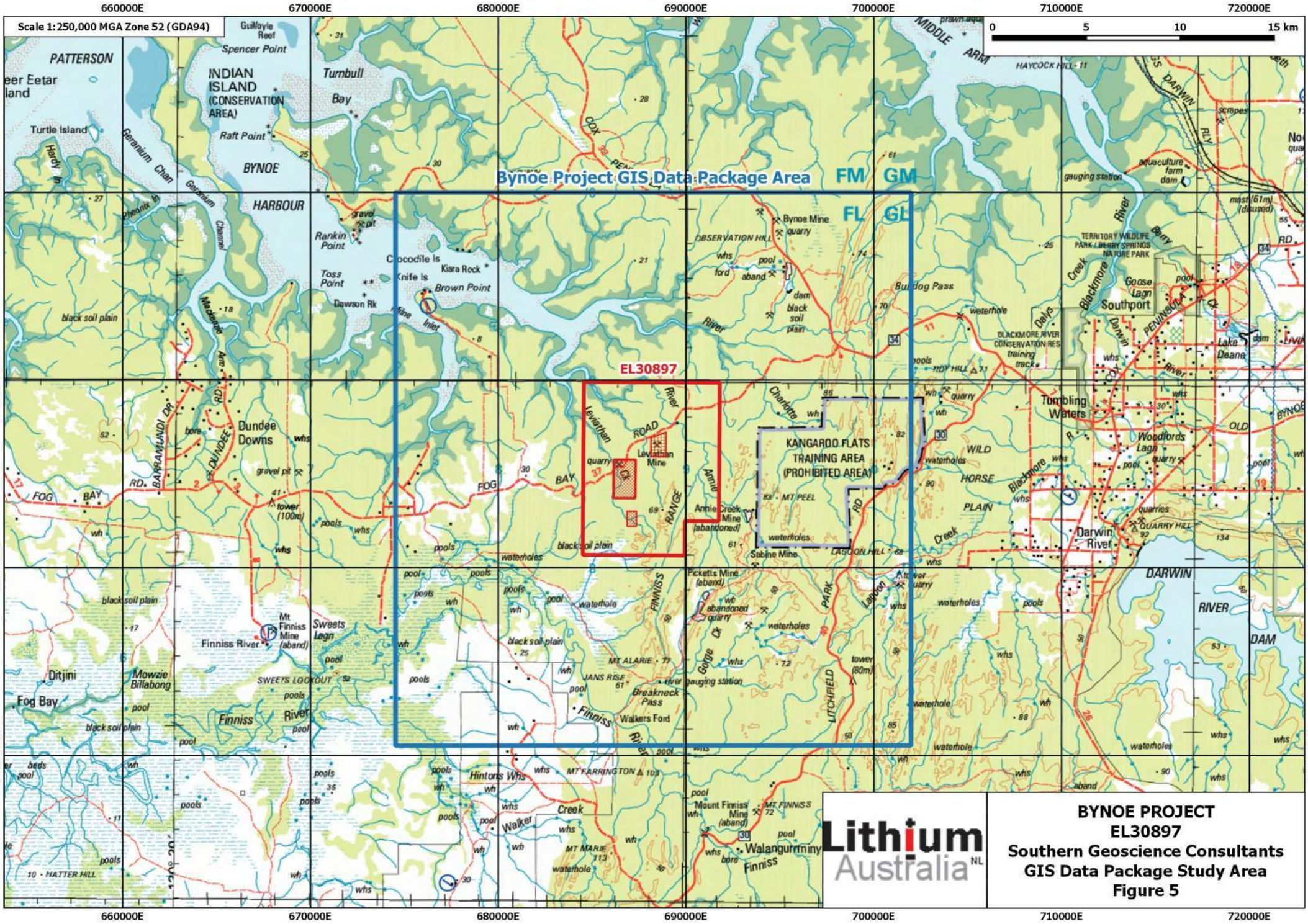


Figure 2: Bynoe Pegmatite Field Location and Regional Geology (top) Leviathan Group (bottom)


686000E
688000E
690000E
0
1
2 m
Scale 1:40,000
MGA Zone 52 (GDA94)
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
Mellasas
Megabucks
Jennas
Old Buck
Bunbury
7Up
Bear Wolf
Leviathan
Enterprise
North Phoenix
Riverside Ta
Centurion
Welcome Surprise
Phoenix
Kristies
Kristies South
Northern Reward
Frilled Lizard
Jim Jim
Pandanus
Burnets Find
Mackas Reward
McBurns
Trojan
Sarahs
Vultan
Hackets and Parsons
Angers
Beatas
Hatchers
Legend
Pegmatite Occurrence
Previous Explorer Exploration
RAB Collar
Soil/Lag Sample
Rock Chip Sample
EL30897
Excised from EL30897
Mining Lease
BYNOE PROJECT
EL30897
Previous Exploration
Figure 3
Lithium Australia NL


686000E
688000E
690000E
0
1
2 km
Scale 1:40,000 MGA Zone 52 (GDA 94)
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
Legend
Pegmatite Occurrence
Depth to Soil/Saprock Interface
0.5 - 2.5
2.5 - 4.5
4.5 - 7.0
7.0 - 12.0
EL30897
Excised from EL30897
Mining Lease
BYNOE PROJECT
EL30897
RAB Drilling Depth to
Soil/Saprock Interface
Figure 4
Lithium
Australia NL


Scale 1:250,000 MGA Zone 52 (GDA94)
0 5 10 15 km
660000E
670000E
680000E
690000E
700000E
710000E
720000E
8600000N
8590000N
8580000N
8570000N
Bynoe Project GIS Data Package Area
EL30897
FM
GM
FL
GL
KANGAROO FLATS TRAINING AREA (PROHIBITED AREA)
PATTERSON
INDIAN ISLAND (CONSERVATION AREA)
Turtle Island
Raft Point
BYNOE HARBOUR
Turnbull Bay
Rankin Point
Crocodile Is
Knife Is
Kiara Rock
Brown Point
Toss Point
Dawson Rk
Bynoe Mine quarry
OBSERVATION HILL
Bulldog Pass
Dundee Downs
Leviathan Mine
Annie Creek Mine (abandoned)
Sabine Mine
Pickett's Mine (aband)
Mt Finniss Mine (aband)
Finniss River
Sweets Lagn
Ditjini
Fog Bay
Mowzie Billabong
Breakneck Pass
Walkers Ford
Hintons Whs
Walker Creek
Mount Finniss Mine (aband)
Walangurrminy
Tumbling Waters
Woodlords Lagn
Darwin River
DARWIN RIVER DAM
Goose Lagn
Southport
Lake Deane
TERRITORY WILDLIFE PARK / BERRY SPRINGS NATURE PARK
BLACKMORE RIVER CONSERVATION RES
Lithium Australia NL
BYNOE PROJECT
EL30897
Southern Geoscience Consultants
GIS Data Package Study Area
Figure 5

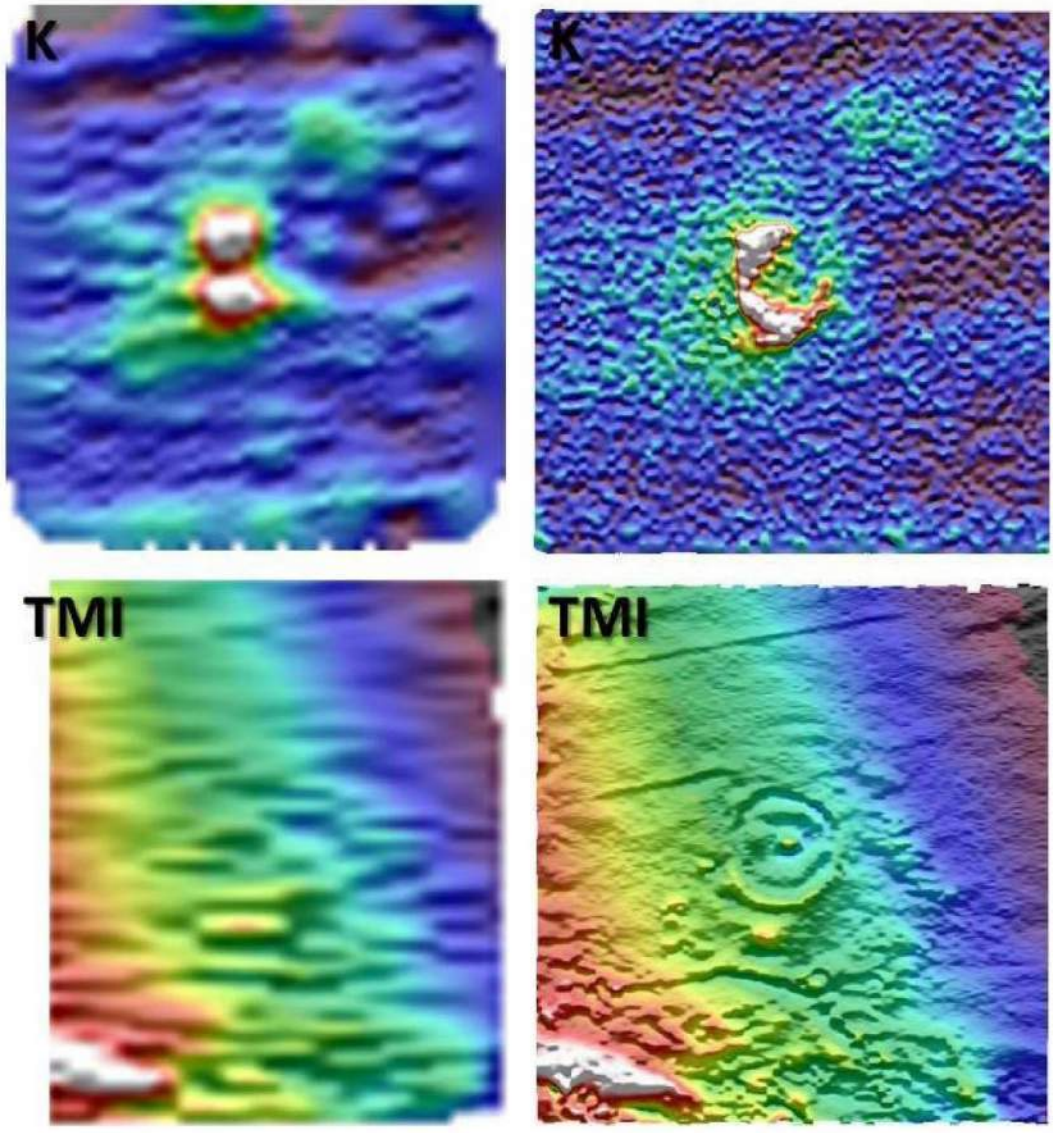
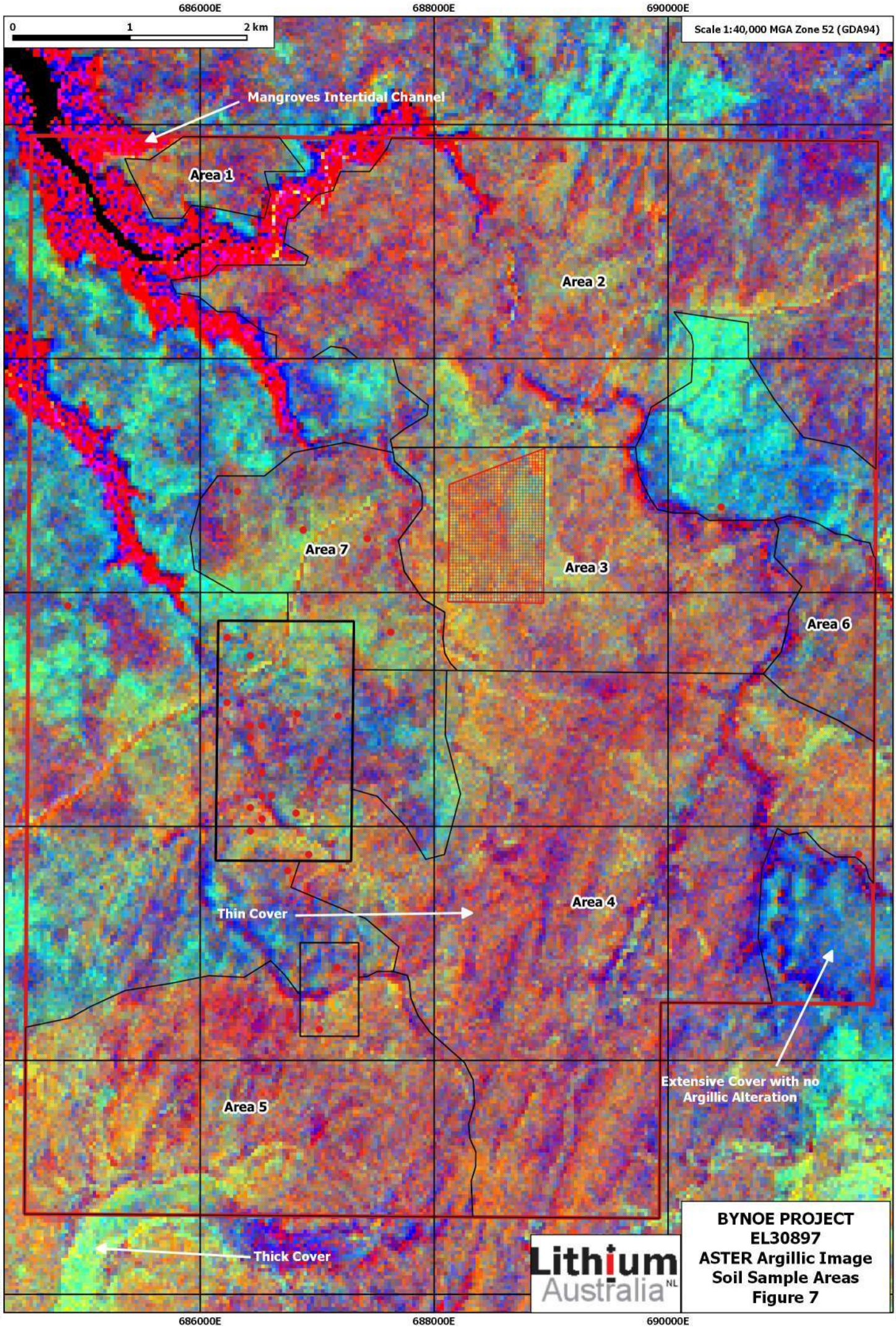
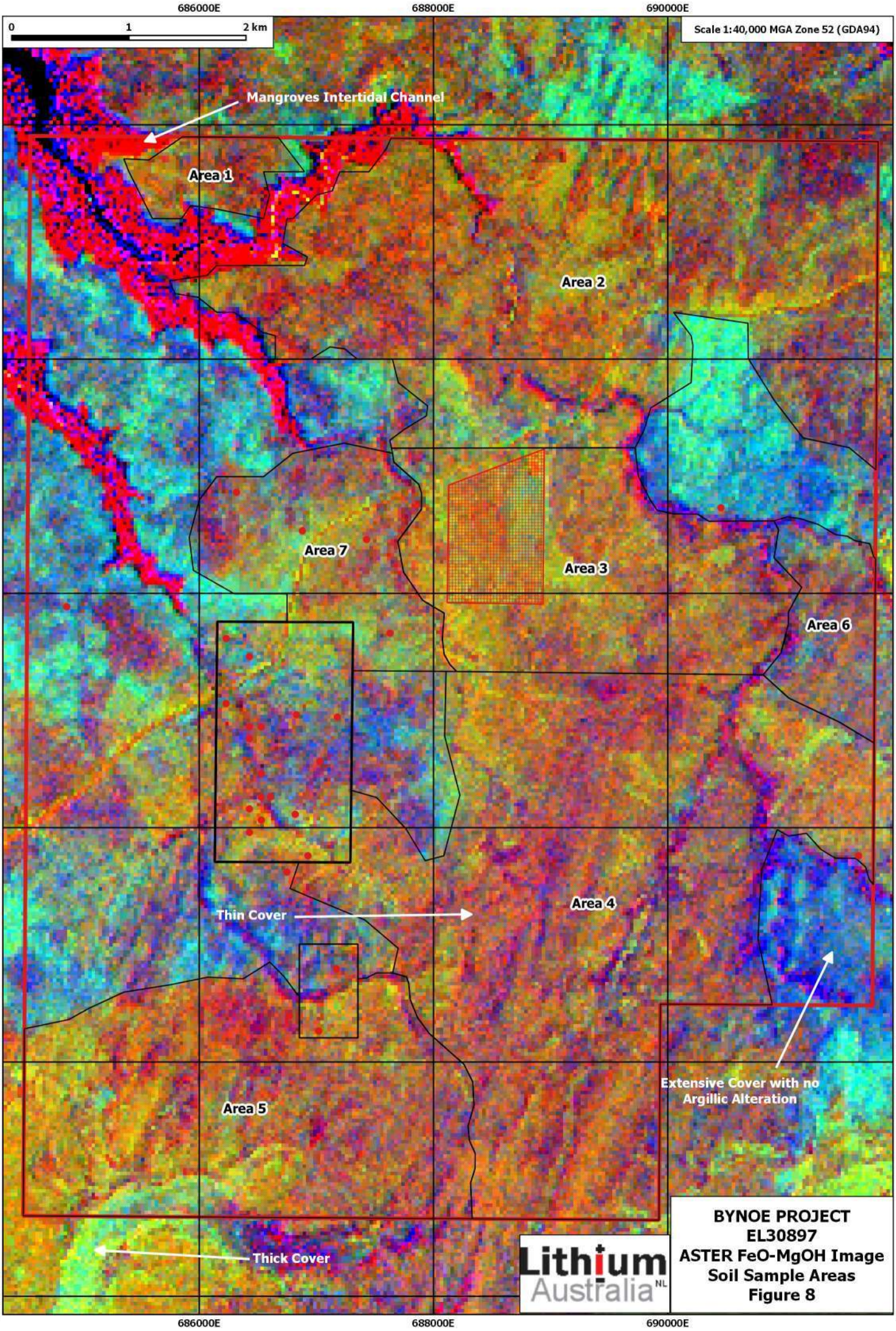
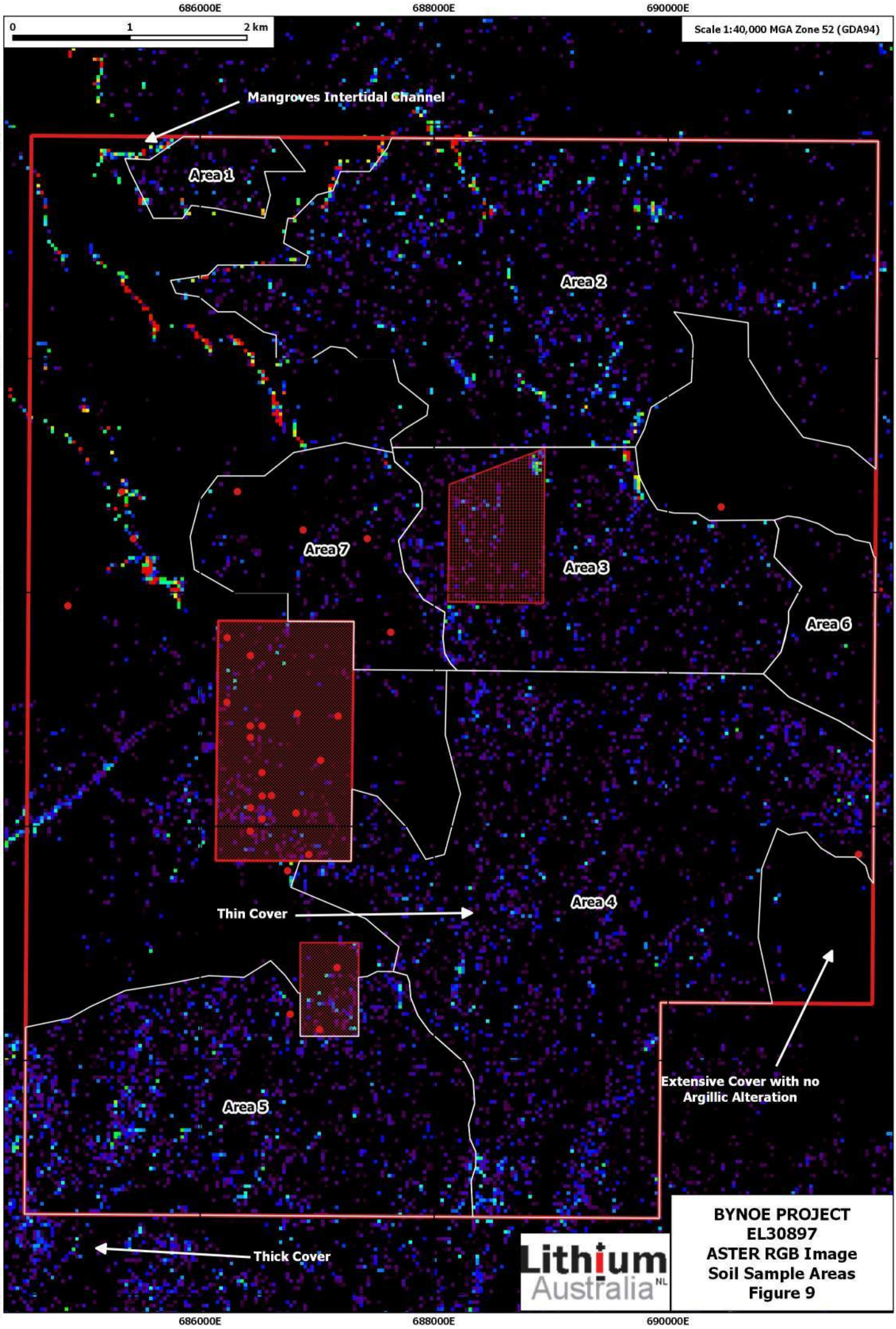
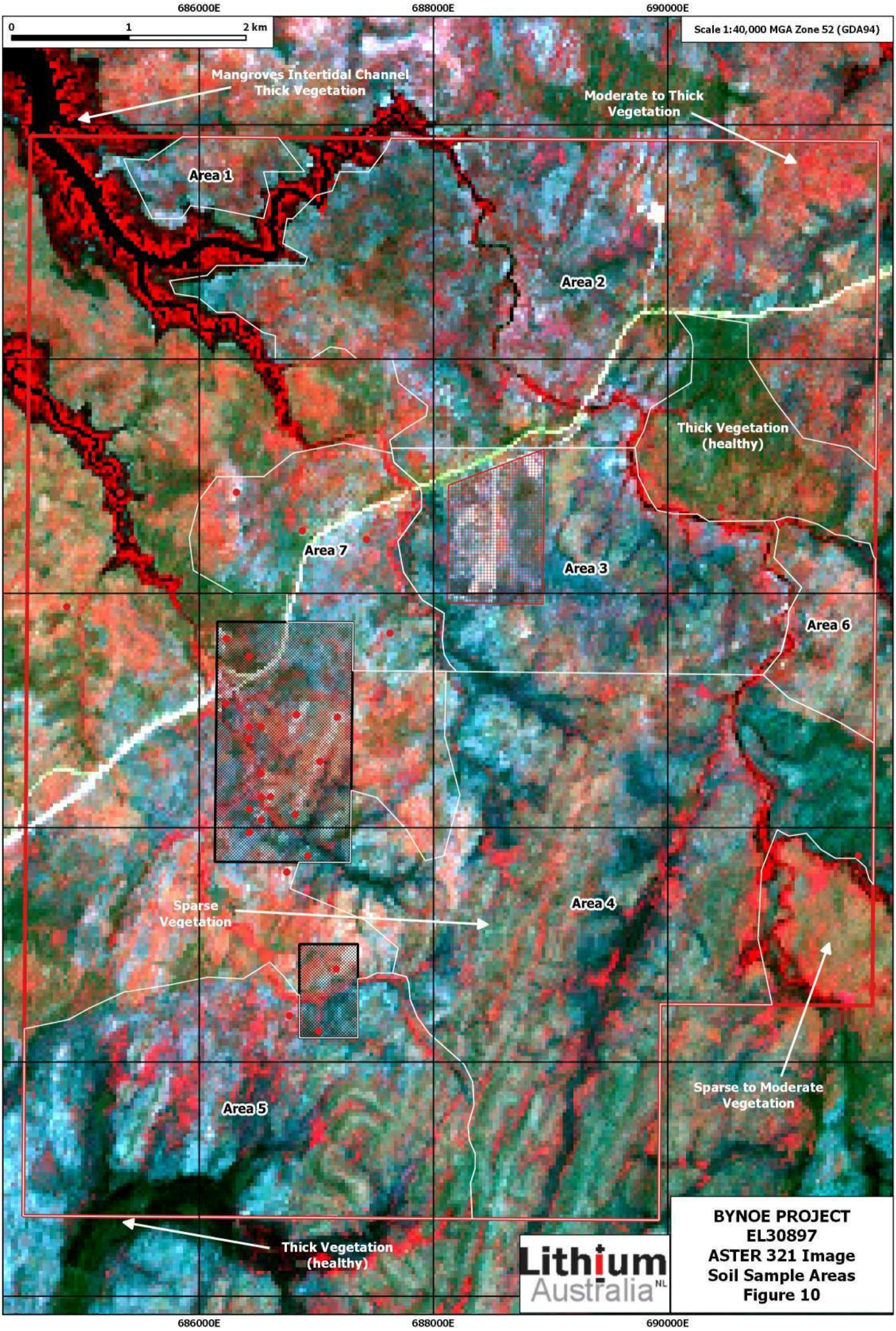


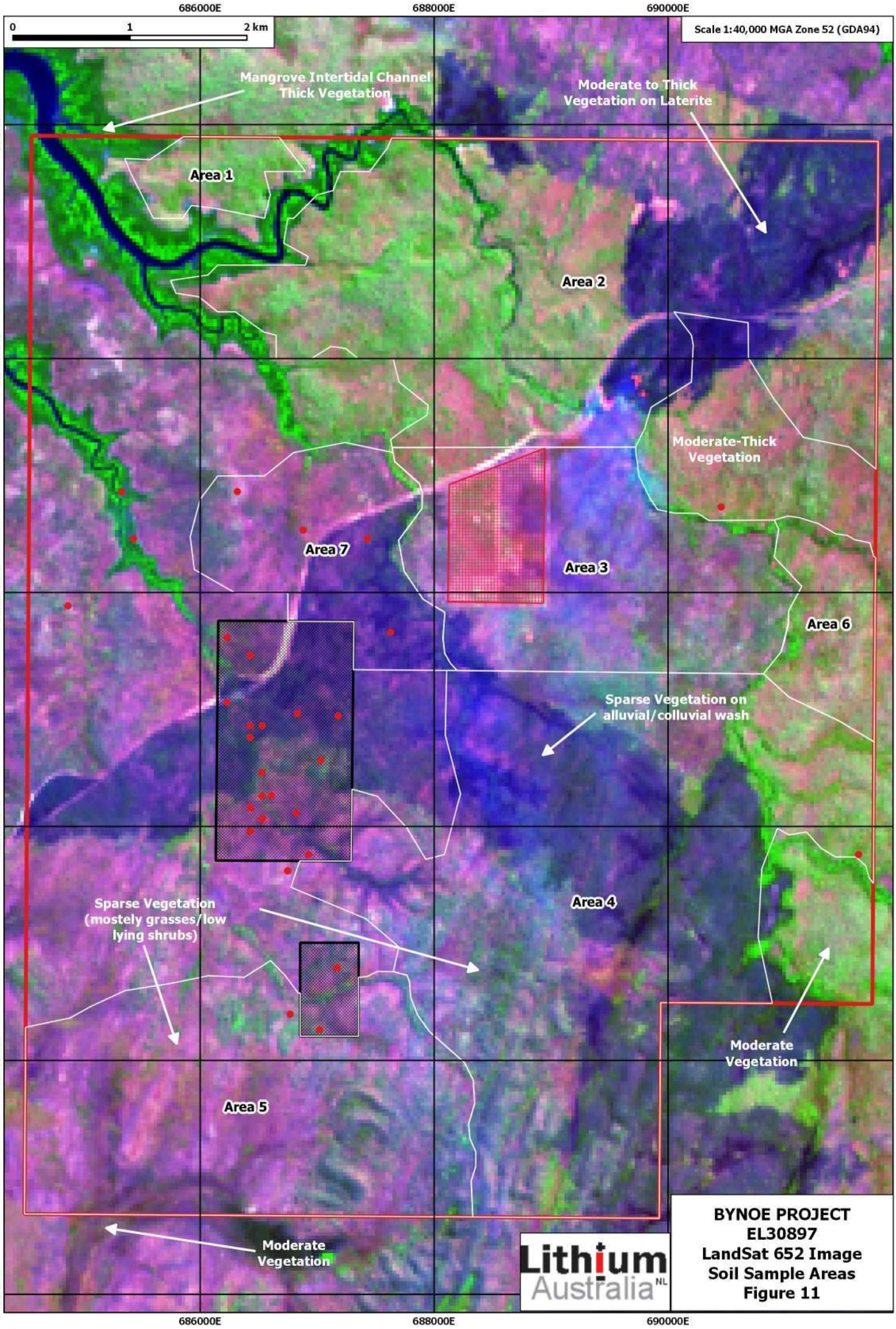
Figure 6: Comparison in resolution between a 400 m line spaced survey (left) and 50 m line spaced survey (right).

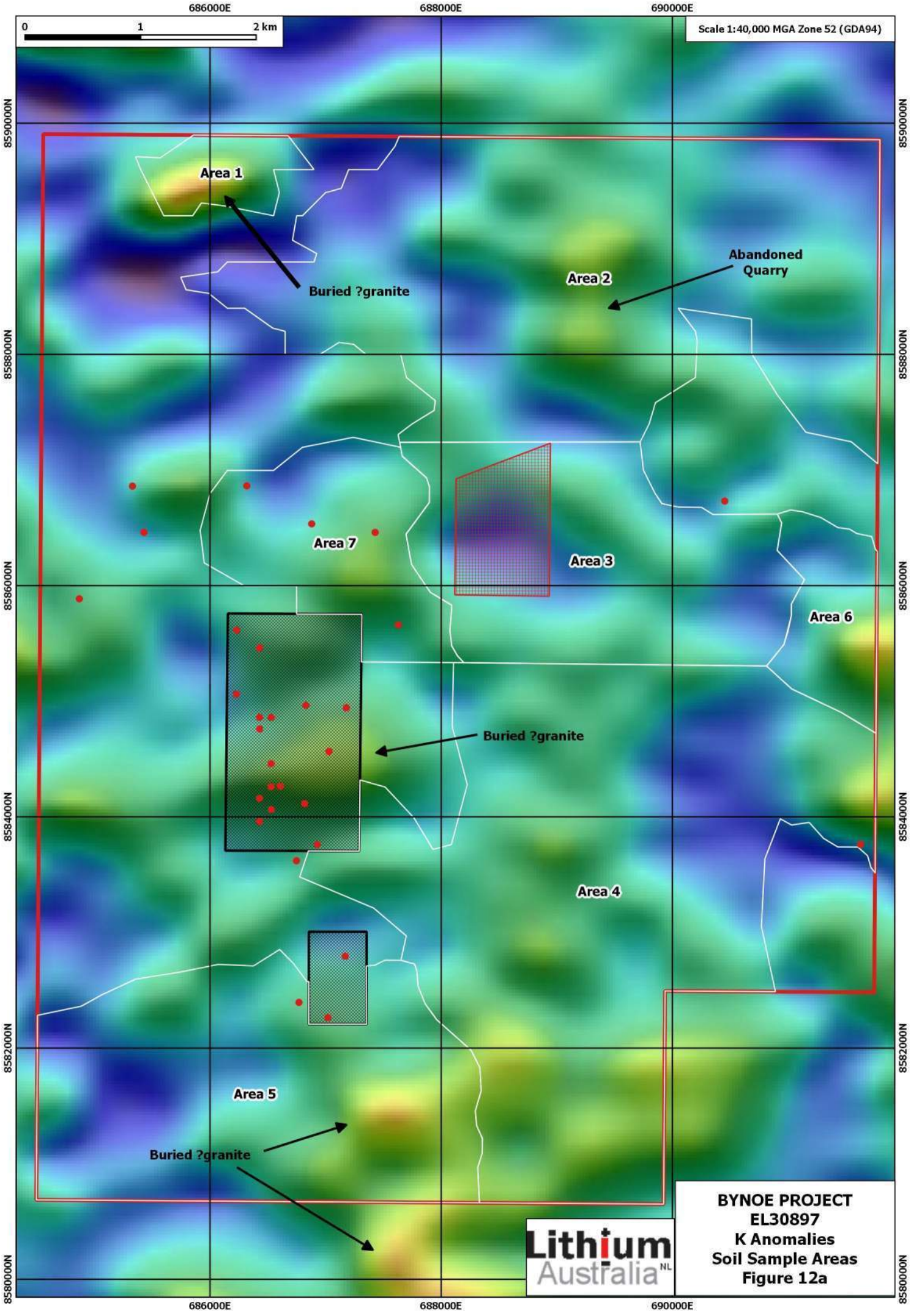

686000E
688000E
690000E
0
1
2 km
Scale 1:40,000 MGA Zone 52 (GDA94)
Mangroves Intertidal Channel
Area 1
Area 2
Area 7
Area 3
Area 6
Area 4
Thin Cover
Area 5
Extensive Cover with no Argillic Alteration
Thick Cover
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
Lithium Australia NL
BYNOE PROJECT
EL30897
ASTER Argillic Image
Soil Sample Areas
Figure 7

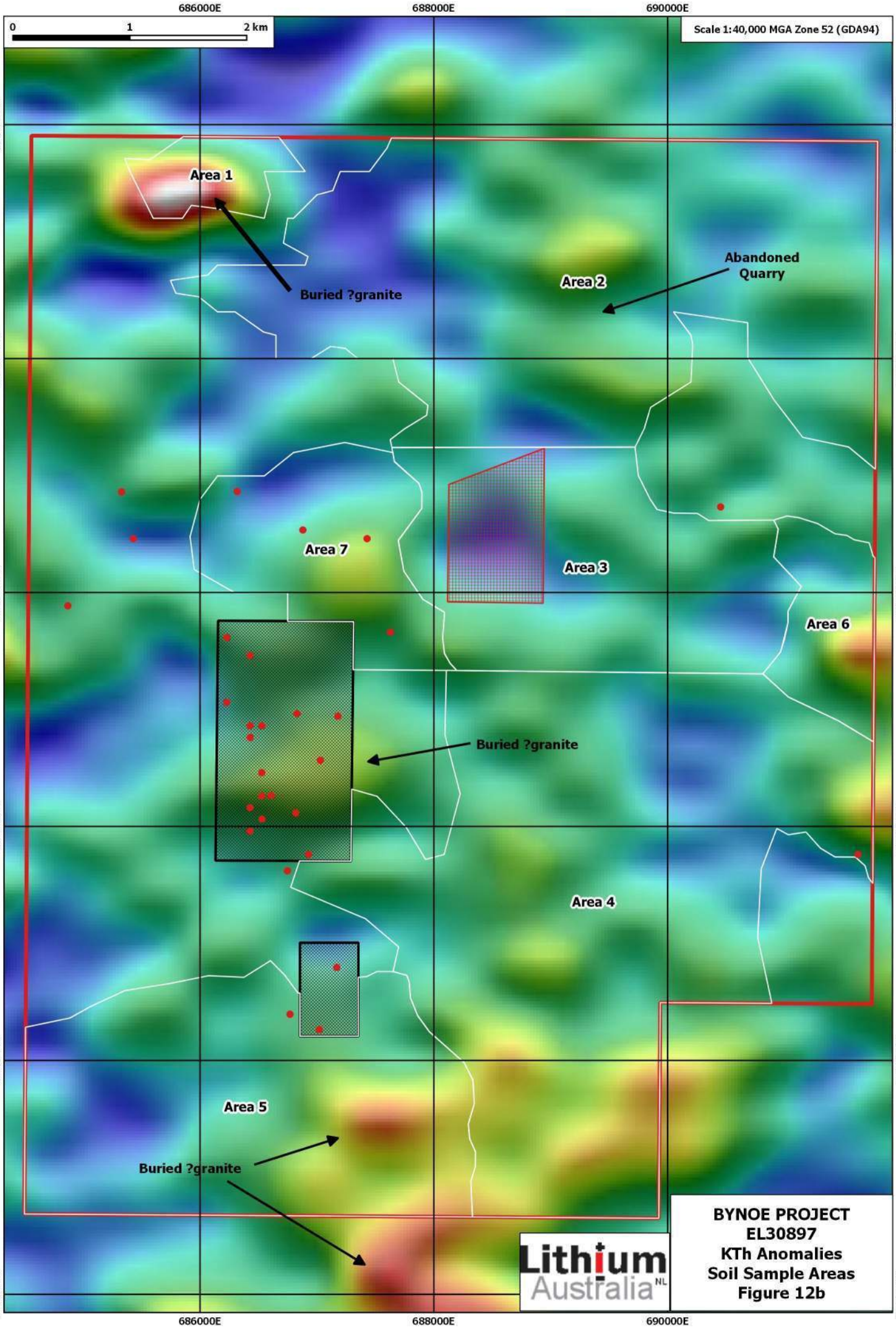

686000E
688000E
690000E
0
1
2 km
Scale 1:40,000 MGA Zone 52 (GDA94)
Mangroves Intertidal Channel
Area 1
Area 2
Area 7
Area 3
Area 6
Area 4
Thin Cover
Area 5
Extensive Cover with no Argillic Alteration
Thick Cover
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
BYNOE PROJECT
EL30897
ASTER FeO-MgOH Image
Soil Sample Areas
Figure 8
Lithium Australia NL


686000E
688000E
690000E
0
1
2 km
Scale 1:40,000 MGA Zone 52 (GDA94)
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
Mangroves Intertidal Channel
Area 1
Area 2
Area 3
Area 4
Area 5
Area 6
Area 7
Thin Cover
Thick Cover
Extensive Cover with no Argillic Alteration
Lithium Australia NL
BYNOE PROJECT
EL30897
ASTER RGB Image
Soil Sample Areas
Figure 9


686000E
688000E
690000E
0
1
2 km
Scale 1:40,000 MGA Zone 52 (GDA94)
Mangroves Intertidal Channel
Thick Vegetation
Moderate to Thick
Vegetation
Area 1
Area 2
Thick Vegetation
(healthy)
Area 7
Area 3
Area 6
Sparse
Vegetation
Area 4
Sparse to Moderate
Vegetation
Area 5
Thick Vegetation
(healthy)
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
Lithium
Australia NL
BYNOE PROJECT
EL30897
ASTER 321 Image
Soil Sample Areas
Figure 10


686000E
688000E
690000E
0
1
2 km
Scale 1:40,000 MGA Zone 52 (GDA94)
Mangrove Intertidal Channel
Thick Vegetation
Moderate to Thick
Vegetation on Laterite
Area 1
Area 2
Moderate-Thick
Vegetation
Area 7
Area 3
Area 6
Sparse Vegetation on
alluvial/colluvial wash
Sparse Vegetation
(mostly grasses/low
lying shrubs)
Area 4
Moderate
Vegetation
Area 5
Moderate
Vegetation
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
Lithium
Australia NL
BYNOE PROJECT
EL30897
LandSat 652 Image
Soil Sample Areas
Figure 11


686000E
688000E
690000E
0
1
2 km
Scale 1:40,000 MGA Zone 52 (GDA94)
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
Area 1
Buried ?granite
Area 2
Abandoned
Quarry
Area 7
Area 3
Area 6
Buried ?granite
Area 4
Area 5
Buried ?granite
Lithium
Australia NL
BYNOE PROJECT
EL30897
K Anomalies
Soil Sample Areas
Figure 12a


686000E
688000E
690000E
0
1
2 km
Scale 1:40,000 MGA Zone 52 (GDA94)
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
Area 1
Buried ?granite
Abandoned
Quarry
Area 2
Area 7
Area 3
Area 6
Buried ?granite
Area 4
Area 5
Buried ?granite
Lithium
Australia NL
BYNOE PROJECT
EL30897
KTh Anomalies
Soil Sample Areas
Figure 12b

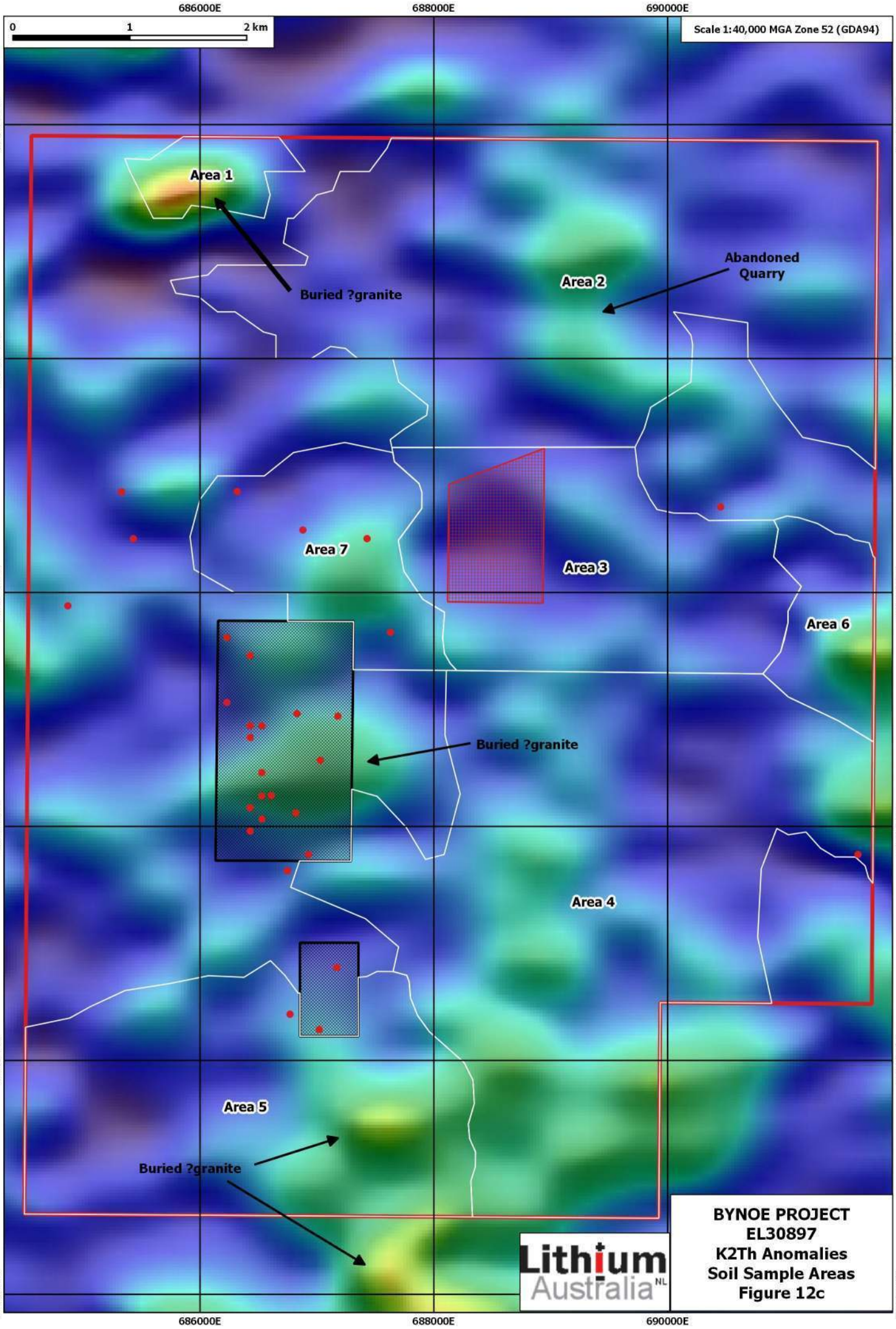

686000E
688000E
690000E
0
1
2 km
Scale 1:40,000 MGA Zone 52 (GDA94)
8590000N
8588000N
8586000N
8584000N
8582000N
8580000N
Area 1
Buried ?granite
Abandoned Quarry
Area 2
Area 7
Area 3
Area 6
Buried ?granite
Area 4
Area 5
Buried ?granite
Lithium Australia NL
BYNOE PROJECT
EL30897
K2Th Anomalies
Soil Sample Areas
Figure 12c

Table 1: EL30897 Previous Explorer Exploration Summary

Tenement	From	To	Holder	Operator	Commodities	Work Completed	Report Number(s)	Comments
EL2088	21/2/83	20/6/89	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Sn,Ta	mapping/rock chips/costeans - Leviathan Mine	CR1984-0076	Minor auger program to test alluvials failed to define economic Sn/Ta.
						auger/further costeans - Leviathan Mine; recon south/west of mine	CR1985-0109	
						detail geological mapping/further costeans - Leviathan Mine	CR1986-0069	
						costeans to trace pegmatite - Leviathan Mine	CR1987-0105	
						alluvial testing - Leviathan Mine	CR1988-0066	
						mapping/costeans at 11 old mines/prospects (Burnett's Find, Frilled Lizard, Jim Jim, Kristie's, Kristie's South, McBurns, North Phoenix, Pandanus, Phoenix, Riverside, Trojan		
						alluvial testing of creeks draining Booths, Hang Gong, Johnstons, Lees, Little		
						further auger - Leviathan Mine; further costean/auger at Kristie's and Pandanus prospects; Sn-Ta alluvial resources were defined in creeks	CR1989-0086	MLN1061 was applied for to cover Sn-Ta areas, but was withdrawn in 1990.
EL2155	17/10/84	16/10/89	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Sn,Ta	mapping/costeans at Vultans Prospect	CR1986-0039	Renamed Isabel's in rpt.
EL3490	16/7/84	15/7/90	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Sn,Ta	mapping/costeans at Old Buck's Mine and Old Buck's West prospect; Identified 3 x pegmatites east of Old Buck's Mine	CR1985-0216	
						costeans at Old Buck's Mine and Megabucks	CR1986-0224	Renamed Old Buck's West to Megabucks.
						auger at Old Buck's Mine and Megabucks; mapping at Bunbury (Prospect 1), Enterprise (Prospect 2), and Prospect 3	CR1988-0089	Mapping at Bunbury/Enterprise/Prospect 3 was not reported.
						regional recon and mapping; costean at Centaur (Centurion) and Welcome Surprise	CR1988-0268	
						auger at Centaur (Centurion) and Welcome Surprise	CR1989-0540	
						SOG took over Greenbushes and after reviewing data surrendered EL3490	CR1991-0141	
EL4082	21/6/83	20/6/89	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Sn,Ta	potential for alluvial Sn-Ta deposits in the creeks and rivers which drain the Leviathan Mine and other small mines	CR1984-0148	
						restating previous reports objectives	CR1985-0107	
						Megabucks prospect contained in EL4082; defined a number of new pegmatites; beach samples were taken to test for alluval Sn-Ta with results inconclusive	CR1985-0165	Megabucks NTGS position is incorrect.
						off-shore sampling of sand banks in rivers; no land-based work	CR1986-0220	
						Megabucks was the focus of all exploration; additional exploration was conducted to the west of the main Megabucks which was already reported for EL3490	CR1987-0202	
						mapping of the discovered pegmatites to west of Megabucks which was disappointing due to the small size of the pegmatites	CR1988-0179	There are no pegmatite assays, but sampling is mentioned in the rpt.
						mapping/costean of Jennas and mapping/auger of Melissas prospects with results indicating low Sn-Ta; additional alluvial sand sampling downgraded the potential	CR1989-0500	Prospects were pegged under MLN1061.
EL5096	3/4/87	2/4/91	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Sn,Ta	costean of Angers, Beatas, Hackett & Parsons, Northern Reward, Macka's Reward / auger at Macka's Reward with follow-up required for all except Hachett & Parsons (?)	CR1988-0097	
						costean of Hatchers and Sarah's / auger of Northern Reward with further work required for Hatchers and Northern Reward	CR1989-0247	
						no work completed while legal action over MCN1061 application is determined	CR1990-0470	Corporate Developments took legal action over MCN1061 app.
						due to legal action lose the EL5096 was surrendered	CR1991-0373	Without MCN1061 no further work was justified.
EL5271	13/8/87	12/8/90	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Sn,Ta	mapping of Vulcan and costean of Vulcan Alluvials / Both required additional work	CR1988-0286	
						costean of Vulcan and auger of Vulcan Alluvials did not define any economic grades	CR1989-0601	
						additional mapping did not define further pegmatites worth sampling /review downgraded project so it was surrendered	CR1990-0680	Recommendation to keep drainage under MC, but this didn't eventuate.
EL5687	21/1/88	*20/1/93*	Kakadu Resources Ltd	Kakadu Resources Ltd	Sn,Ta,Au	airphoto interp/mapping/pet/scoping study for Lost Chinaman prospect; potential for mineral sands from Lost Chinaman and gold mineralisation in quartz vn in schist	CR1989-0092	Excludes Lost Chinaman Prospect, under MNC391-392.
						reinterp of radiometrics to update structural/conceptual models was completed; pegmatites zone defined/recon soil traverses for gold defined low level anomaly	CR1990-0142	Radiometrics used to define pegmatite zone?
						soil/rock chip sampling defined weak gold anomalism with the known pegmatites/Sn-Ta exploration halted due to slump in price	CR1992-0172	Soil samples from colluvium and not residual soil horizon.
			Terra Resources NL	Terra Resources NL		soil-laterite/stream seds returned a very modest gold anomaly (14-87 ppb)	CR1993-0184	
						soil/rock chips around exposed pegmatites defined the Lost Chinaman MNC are the best possibility for both Au and Ta	CR1994-0497	No assays or plans with the report.
EL6805	1/6/90	*5/1/96*	J Benger	Corporate Developments Pty Ltd	Ta,Au,Sn	review of previous work for Ta followed by mapping/structural assessment of mineralised pegmatite swams to prioritise target areas	CR1991-0006	
						mapping/pan cons failed to define any areas of unknown Ta/Greenbushes MCN1061 covers most of the Ta-bearing rocks	CR1991-0403	No work done in current EL30897.
						mapping/checking Greenbushes data by rock chips-auger-pan cons/no new pegmatites were defined and known ones verified/alluvial Sn-Ta testing gave anomalies	CR1992-0582	Only gold assays in rpt.
						resource figures for Leviathan Group based on mostly Greenbushes work/defined laterite profiles which are high in heavy minerals/further testing of alluvials	CR1993-0456	
						auger/loaming of creeks for alluvial Ta deposits/laterite sampling Leviathan-Leviathan South defined further Ta/Sn anomalies	CR1994-0532	
						laterite sampling to trace the Ta-Sn mineralisation away from Leviathan/Leviathan South was completed with mixed results	CR1995-0543	Results not in rpt. Wolf/Bear prospect locations not given.
						further follow-up of laterite/cobble/alluvial loams did not define any free dig Ta mineralisation	CR1996-0258	No work on hard rock.
EL8015	10/8/93	9/8/99	Corporate Developments Pty Ltd	Corporate Developments Pty Ltd	Sn,Ta	reviewed Greenbushes and Corporate Developments work/defined the Welcome Stranger-Macka's Reward-Northern Reward-Pandanus pegmatites as targets	CR1993-0539	Good summary of resource figures.
						auger to firm up previous explorer resource figures/revised res est/pre-feasibility was completed and determined the breakeven was 0.94-1.02 kg/m3 Sn equivalent	CR1994-0720	Sn price $5,600/t.
						revised resources estimates taking into account auger drilling/EL8015 was rebirthed into EL9061	CR1996-0257	
SEL9061	4/1/96	3/1/04	Corporate Developments Pty Ltd	Corporate Developments Pty Ltd	Sn,Ta,Nb	RC drill at Old Buck's, Macka's Reward-Northern Reward-Welcome Stranger/definition of pegmatites under Old Buck's, Mack's Reward,Welcome Surprise	CR1997-0124	Re-established Greenbushes grids instead of GPS co-ordinates.
						mapping/pan cons of Bear & Wolf/prospect 300 m SSE of NTGS positon/Northern Reward pegmatite dip determined form drilling as 045E	CR1999-0060	
				Julia Corporation Ltd	Sn,Ta,Nb	lit review/digital topo-aeromag-rad ordered	CR2001-0141	No real work completed due to change in operator.
					Ta,Sn	gridding/detail mapping/costeans/soils/RC/SG samples for Leviathan (+S), Centurion (Centaur), Northern Reward, Trojan, Hacket & Parsons, Pandanus, Angers, Beata's/mixed results	CR2001-0330	Li assays completed for all explorarion.
				Corporate Developments Pty Ltd	Ta,Sn	review of previous years work by Corporate/NTC application and the legal proceedings over this NTC application meant no field work was completed	CR2003-0050	
						summary of work completed over tenement/no new work	CR2004-0237	Tenure surrended due ot NTC application.
EL24639	9/12/05	1/2/10	Arnhem Resources Pty Ltd	Haddington Resouces Ltd	Ta	soil/RAB program to define 'blind' pegmatites/determined above 45 m ASL suitable for soil sampling/Leviathan Area 400m x 100m grid/Li anomalism related to pegmatites/45 new targets/	CR2006-0564	Li RAB anoalism is quite broad and related to exposed/buried pegs.
						A1, A2, A7-A9, Bynoe Harbour, Melissa's, Janna's, A10-A19, A22-A23, A25, A28-A29, & A31 tragets in EL30897		
					U	mapping/rock chips/soil/stream/radiometrics/aeromagnetics/defined 11 rad (R1-R11) & 3 aeromag (M1-M3) anomalies for U/Only R5-R6 in EL30897/no U anomalism	CR2007-0629	
					Sn	mpaaing/rock chip smapling of A10, A12-A13, A7 (Georgia's), Jenna's-Melissa's, Leviathan Mine/poor rokchip results	CR2008-0920	Haddingtn pulled out.
						no work completed/aeromag acquired from Geoscience Austrlalia	CR2010-1169	
EL24773	11/1/06	29/8/12	Australia Tantalum Pty Ltd	Haddington Resources Ltd	Ta,Li	rock chips/soil/RAB defined 5 anomalies of which A3 (7 Up) and A28 in EL30897	CR2007-0010	Anomalies A4-A6 are in excised house blocks.
					U	mapping/radiometris/aromagnetics/FR1-FR4 anomalies/field checking downgraded U potential	CR2008-0015	
					Ta	mapping/rock chips of A3 (7 Up) and Bunbury/Good Li results from A3 (7 Up)/Bunbury excised by houseing blocks	CR2009-0027	Altura is renamed Haddington.
			Altura Mining Ltd	Altura Mining Ltd	Li	rock chips/mapping/further work at A3 (7 Up)	CR2010-0006	
					Ta,Li	planned RC drilling for A3 (7 Up), but cancelled as needed more than one target	CR2012-0004	No field work.
						downgraded project are review/project surrendered	CR2012-0657	No field work.
EL29700	27/2/13	*1/5/15*	Au Exploration Pty Ltd	Au Exploration Pty Ltd	Sn,Ta,Nb,REE	review of aerial gephhysics and remote sensing images for possible gresien structural zones	CR2014-0092	
						a detail review of aerial gephhysics and remote sensing images for possible gresien structural zones failed to locat any/surrendered project	CR2015-0027	

Table 2: EL30897 Previous Explorer Sampling Statistics

Tenement	Holder	Operator	Prospect/Regional	Mapping	Geophysics	RK	Soil	SS	Costean			Auger				RAB			RC			SG	Resource	CR Number	Main Commodities
									m	Samples	Channel	Holes	m	Samples	Holes	m	Samples	Holes	m	Samples		Samples	Estimate		
EL2088	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Leviathan	Y																				CR1984-0076	Sn,Ta
			North Leviathan	Y		1			20	3														CR1985-0109	Sn,Ta
			Central Leviathan	Y																					
			South Leviathan	Y																					
			North-Central Leviathan						326	35														CR1986-0069	Sn,Ta
			North-Central Leviathan						353	26			120											CR1987-0150	Sn,Ta
			South Leviathan						3 trenches																
			Burnett's Find - North	Y					132	3														CR1988-0066	Sn,Ta
			Burnett's Find - South	Y					18	2															
			Frilled Lizard	Y					8	1															
			Jim Jim	Y					25	2															
			Kristie's	Y		6			168	6															
			Kristie's South	Y					25	2															
			McBurn's	Y					43.5	1													Y		
			North Phoenix	Y					133	14		4	49	31									Y		
			Pandanus	Y					204	52													Y		
			Phoenix	Y					163	9															
			Riverside	Y					98	22															
			Trojan	Y					75	4															
			Kristie's									1	3	2										CR1989-0086	Sn,Ta
			Pandanus									21	178.5	112									Y		
EL2155	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Vultans (Isabel's)	Y					175.9	0														CR1986-0039	Sn,Ta
EL3490	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Old Buck's	Y					101	?														CR1985-0216	Sn,Ta
			Old Buck's West	Y					15	?															
			Prospect 1	Y		1																			
			Prospect 2	Y		1																			
			Prospect 3	Y		2																			
			Old Buck's						180	9														CR1986-0224	Sn,Ta
			Megabucks (Old Buck's W)						776	164															
			Megabucks (Old Buck's W)						888			43	358											CR1988-089	Sn,Ta
			Old Buck's																						
			Centaur (Centurion)	Y					315.5	103		2	15	7									Y	CR1988-0268	Sn,Ta
			Welcome Surprise	Y		3			340	37													Y		
			Centaur (Centurion)									?	42	28									Y	CR1989-0540	Sn,Ta
			Welcome Surprise									?	126	79									Y		
EL4082	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Janna's	Y					189	72														CR1989-0500	Sn,Ta
			Melissa's	Y		3						2	9	6											
EL5096	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Angers	Y		22			167.5	4													Y	CR1988-0097	Sn,Ta
			Beata's	Y		7			182.5	4													Y		
			Hacket & Parsons	Y		1			100	2													Y		
			Macka's Reward	Y		5			190	16		8	86.5	16									Y		
			Northern Reward	Y					153	60													Y		
			Hatcher's	Y					63	7													Y		
			Northern Reward									23	114	73									Y	CR1989-0247	Sn,Ta
			Sarah's	Y		2			25	3															
EL5271	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Vulcan	Y		1																	Y	CR1988-0286	Sn,Ta
			Vulcan						93	7														CR1989-0691	Sn,Ta
EL6805	J Benger	Corporate Developments Pty Ltd	Kristie's/Kristie's South	Y		Y	Y					Y												CR1992-0582	Ta,Sn,Au
			Frilled Lizard	Y		Y	Y					Y													
			Jim Jim	Y		Y	Y					Y													
			Pandanus	Y		Y	Y					Y													
			Trojan	Y		Y	Y					Y													
			Burnett's	Y		Y	Y					Y													
			McBurn's	Y		Y	Y					Y													
			Leviathan																				Y	CR1993-0456	Sn,Ta
			North Phoenix																				Y		
			Kristie's Group																				Y		
			Frilled Lizard																				Y		
			Jim Jim																				Y		
			Trojan-Burnett's																				Y		
			McBurn's																				Y		
			Pandanus																				Y		
			Leviathan				11					1												CR1994-0532	Sn,Ta
			Levithan South				Y(?)					Y(?)													
			Leviathan				Y																	CR1995-0543	Sn,Ta
			Leviathan South				Y																		
			Leviathan-Leviathan South				21					1												CR1996-0258	Sn,Ta
EL8015	Corporate Developments Pty Ltd	Corporate Developments Pty Ltd	Megabucks																				Y	CR1994-0720	Sn,Ta
			Old Buck's																				Y		
			North Phoenix																				Y		
			Centaur (Centerion)																				Y		
			Welcome Stranger																				Y		
			Northern Reward																				Y		
			Macka's Reward																				Y		
			Sarah's																				Y		
			Hacket & Parsons																				Y		
			Angers																				Y		
			Beata's																				Y		
			Hatcher's																				Y		
			Regional 1 (MR-Pandanus)									5	11.8	5											
			Regional 2 (W Pandanus)									3	7.5	3											
			Regional 3 (E Frilled Lizard)									5	25	13.5											
			Old Buck's									18	57.9	11											
			Regional 4 (S Old Buck's)									16	61.8	8											
			Old Buck's																				Y	CR1995-0257	Sn,Ta
			Sarah's																				Y		
			McBurn's																				Y		
			Frilled Lizard																				Y		
			Jim Jim																				Y		
			Kristie's																				Y		

Table 2: EL30897 Previous Explorer Sampling Statistics

Tenement	Holder	Operator	Prospect/Regional	Mapping	Geophysics	RK	Soil	SS	Costean			Auger				RAB				RC		SG	Resource	CR Number	Main Commodities
									m	Samples	Channel	Holes	m	Samples	Holes	m	Samples	Holes	m	Samples	Samples	Estimate		
SEL9061	Corporate Developments Pty Ltd	Corporate Developments Pty Ltd	Old Buck's	Y														5	106	14			CR1997-0124	Sn,Ta,Nb
			Macka's Reward	Y														3	96	22				
			Northern Reward	Y														1	28	0				
			Welcome Stranger	Y														1	16	9				
			Bear & Wolf	Y			104																CR1999-0060	Sn,Ta,Nb
			Northern Reward	Y																				
		Julia Corporation Ltd	Tenement Wide		aeromag/rad																		CR2001-0141	Sn,Ta
			Leviathan	Y					366	18	39							17	822	90	6		CR2001-0330	Sn,Ta
			Leviathan South	Y																				
			Centaur (Centerion)	Y					361	26	44							10	506	109	8	Y		
			Nth Reward-Welcome-Macka's	Y					1070		79							24	949	123	36	Y		
			Trojan	Y					376		25										14			
			Hacket & Parsons	Y					288		7													
			Pandanus						140		17										9			
			Angers	Y					185		7							25	1083	61	4	Y		
			Beata's	Y			40											5	220	4				
			Hatcher's	Y			34																	
EL24639	Arnham Resources Pty Ltd	Haddingtion Resurces Ltd	Regional			1	99								625	1731.5	625						CR2006-0564	Ta
			A1 (Sue's Block)			1																		
			A2 (Sue's Block)	Y		10																		
			A7 (Leviathan Block)	Y		17																		
			A8 (Leviathan Block)																					
			A9 (Leviathan Block)	Y		19																		
			Bynoe Habour	Y		28																		
			Lost Chinaman	Y		18																		
			Lost Chinaman North	Y		13																		
			A27	Y		1																		
			Melissa's	Y																				
			Jenna's	Y																				
			A10 (Leviathan Block)	Y																				
			A11 (Leviathan Block)	Y																				
			A12 (Leviathan Block)	Y																				
			A13 (Leviathan Block)	Y																				
			A14 (Leviathan Block)	Y																				
			A15 (Leviathan Block)	Y																				
			A16 (Leviathan Block)	Y																				
			A17-A19 (Leviathan Block)	Y																				
			A22 (Leviathan Block)	Y																				
			A25 (Leviathan Block)	Y																				
			A28 (Saffums Block)	Y		4																		
			A29 (Saffums Block)	Y																				
			A31 (Saffums Block)	Y																				
			Radiometric Anomaly (R5-R6)	Y	reprocessed																		CR2007-0629	U
			A10 (Leviathan Block)	Y		4																	CR2008-0920	Ta,Sn
			A12-A13 (Leviathan Block)	Y		23																		
			Georgia's (A7)	Y		12																		
			Janna's/Melissa's	Y		14																		
			Un-named Propsect	Y		3																		
			Leviathan Mine	Y		10																		
EL24773	Australia Tantalum Pty Ltd	Haddington Resources Ltd	A3 (7 Up)	Y		25																	CR2007-0010	Ta
			A28 (Saffums Block)	Y																				
			A3 (7 Up)	Y		29																	CR2009-0027	Ta
	Altura Mining Ltd	Altura Mining Ltd	A3 (7 Up)	Y		59																	CR2010-0006	Li

Table 3: EL30897 Previous Explorer Pegmatitie Data

Tenement	Holder	Operator	Prospect/Regional	Workings	Workings (average m)			Pegmatite	Strike	Dip	Pegmatite (m)		Country Rock	No Samples							Costean	Average Grades		Estimated	CR Number
				Number	Length	Width	Depth				Length	Width		RK	Soil	Costean	Auger	RAB	RC	SG	Coverage (m)	Sn (kg/t)	Ta (kg/t)	Resource (t)	
EL2088	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	North Leviathan	1					145	75E/90			mica schist	1								0.83	0.03		
			Central Leviathan	2						24-27N			mica schist												CR1985-0109
			South Leviathan	1							120		mica schist												
			North Leviathan					West Pegmatite		steep	100	50	mica schist												
			North Leviathan					East Pegmatite					mica schist												CR1986-0069
			Central Leviathan					West Pegmatite		steep-NW	50	25	mica schist												
			Central Leviathan					East Pegmatite				15	mica schist												
			North-Central Leviathan					West Pegmatite			250	40	mica schist												
			North-Central Leviathan					East Pegmatite			150	15	mica schist												CR1987-0150
			South Leviathan										mica schist									0.342	0.02		
			Burnett's Find - North	3	20	5	2	North Pegmatite	N-S	18-74E	25	1.5-4	micaceous shale			3					55				
			Burnett's Find - South					South Pegmatite	N-S	65E	25	1.5-4	micaceous shale			2					25				
			Frilled Lizard	1					NNW	80E	50		micaceous shale			1									
			Jim Jim	2	10	5	2		SW-NE		110	1.5-5	micaceous shale			1									
			Krsitie's	2	10	6	1		20	88W/50E	50	1-7	micaceous shale	6		6					140				
			Krsitie's South	1	5	5	0.8		300	78W/50E	5	3	micaceous shale			2						0.003	0.005		
			McBurn's	1	10	3	1		21	80W	10	2-3	micaceous shale			1					28			100-200	CR1988-0066
			North Phoenix	1	15	8	0.5		350		40	2-20	micaceous shale			14					75	0.219	0.024	5000-6000	
			Pandanus	2	3	12			5	58W/50E	160	1.5-28.5	micaceous shale			52					175	0.006	0.055	3000-5000	
			Phoenix	2					25	68W/90	10	1.5-4	micaceous shale			9					125	0.008	0.009		
			Riverside	2				West Riverside	N-S	64W/46E	25	13.5-17	micaceous shale			20					25	0	0.002		
								East Riverside	NE	90		3	micaceous shale			2									
			Trojan	1					5	45-82W	15	3.5-6	micaceous shale			4					150				
			Krsitie's										micaceous shale				2								CR1989-0086
			Pandanus							E			micaceous shale				112					0.006	0.106	3000-5000	
EL2155	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Vultans (Isabel's)	2									micaceous shale			0					130				CR1986-0039
EL3490	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Old Buck's	Many					NNE	70E			mica schist									0.04	0.105		
			Old Buck's West	Few									mica schist									0.154	0.008		
			Prospect 1	Few					15	70E	60	3	metapelitie/shale	1								0.54	0.028		CR1985-0216
			Prospect 2	1	1.4	2	0.5		59	steep E		1	metapelitie/shale	1								0.922	0.047		
			Prospect 2	1	0.5	0.5	0.1						schist/metasiltstones	2								0.035	0.006		
			Old Buck's	Many					NNE	70E	250		mica schist			9						0.014	0.017		CR1986-0224
			Megabucks (Old Buck's W)	Few						90	600	69	mica schist			164									
			Megabucks (Old Buck's W)						N-S	steep E		60	mica schist								575				CR1988-0089
			Old Buck's						NNE	steep E	200		mica schist												
			Centaur (Centurion)	Few	9	10	1.5		40	70W/30E	270	15-34	micaceous shale			103	7				250	0.226	0.035	5000-10000	CR1988-0268
			Welcome Surprise	Few					30	50W/20E	300	1.25-9	micaceous shale	3		37					300	0.021	0.049	2000-3000	
			Centaur (Centurion)						40	70W/30E	270	15-34	micaceous shale				28							5000-10000	CR1989-0540
			Welcome Surprise						30	50W/20E	300	1.25-9	micaceous shale				79							2000-3000	
EL4082	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Janna's	None					N-S	42W/44E	160	30-40	micaceous shale			72					125				CR1989-0500
			Melissa's	?					49	sub 90	37.5	1.5	micaceous shale	3			6					0.005	0.001		
EL5096	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Angers	Few	20	10	5	pegmatite dykes/pods	N-S	80W/45E	10	5-8	micaceous shale	22		4					50	0.797	0.278	5000-10000	
			Beata's	Few					15	42W/70E	60	1.5-3.5	micaceous shale	7		4					125	0.15	0.073	5000-7000	
			Hacket & Parsons	Few	16	4.5	1		N-S	34-73E	40	5-Jul	micaceous shale	1		2					75			5000	CR1988-0097
			Macka's Reward	Many					29	52W/35E	160	1-5 (13)	micaceous shale	5		16	16				125	0.112	0.17	3000-6000	
			Northern Reward	Few					28	38W/30E	225	3-17.5	micaceous shale			60					200	0.03	0.113	4000-5000	
			Hatcher's	Few	10.5	4	1.5		N-S	46-66W	70	1-4	micaceous shale			7					100			2000	
			Northern Reward	Few					28	38W/30E	225	3-17.5	micaceous shale				73					0.025	0.124	4000-5000	CR1989-0247
			Sarah's	Few					NNE	5E/60E	50	2-4.5	micaceous shale	2		3					25	0.028	0.027		
EL5271	Greenbushes Tin Ltd	Greenex (Greenbushes Tin Ltd)	Vulcan	1	4.5	2	1	Working	15	?	200	2	micaceous shales	Y								0.538	0.069	7000-8000	CR1988-0286
			Vulcan					SW pegmatite	NNE	24E	100	1-3	micaceous shales			7					200	0.01	0.014	None	CR1989-0601
			Vulcan					NE pegmatite	NNE	60W	75	1-3	micaceous shales												
EL6805	J Benger	Corporate Developments Pty Ltd	Leviathan (Ind/Inf)																			1	0.04	4000	
			North Phoenix (Measured)																			0.033	0.017	4440	
			North Phoenix (Ind/Inf)																			0.6	0.04	8000	
			Krsitie's Group (Ind/Inf)																			0.6	0.02	4500	
			Frilled Lizard (Ind/Inf)																			0.4	0.3	1700	
			Jim Jim (Ind/Inf)																			0.25	0.03	2500	CR1993-0456
			Trojans-Burnett (Ind/Inf)																			0.4	0.03	5000	
			McBurn's (measured)																			0.986	0.162	150	
			McBurn's (Ind/Inf)																			1	0.06	1200	
			Pandanus (Measured)																			0.006	0.055	22830	
			Pandanus (Ind/Inf)																			0.1	0.15	35000	
			Leviathan												11		1								CR1994-0532
			Leviathan South												Y		?								
			Leviathan												Y										CR1995-0543
			Leviathan South												Y										
			Leviathan-Leviathan South												21		1								CR1996-0258
EL8015	Corporate Developments Pty Ltd	Corporate Developments Pty Ltd	Megabucks																			0.4	0.03	700-7100	
			Old Buck's																			0.4	0.1	1400-3500	
			North Phoenix																			0.6	0.04	1100-1800	
			Centaur (Centerion)																			0.4	0.02	700-3500	
			Welcome Stranger																			0.2	0.3	5300-6400	
			Northern Reward																			0.2	0.14	5300-6400	
			Macka's Reward																			0.7	0.1	7100-12400	
			Sarah's																			0.4	0.02	200-550	
			Hacket & Parsons																			0.4	0.2	530-1100	CR1994-0720
			Angers																			0.6	0.06	1100-3500	
			Beata's																			0.5	0.03	530-3500	
			Hatcher's																			1	0.04	700-1800	
			Regional 1 (MR-Pandanus)														5								
			Regional 2 (W Pandanus)														3								
			Regional 3 (E Frilled Lizard)														13.5								
			Old Buck's														11								
			Regional 4 (S Old Buck's)														8								
			Old Buck's																			0.6	0.1	1400-3500	
			Sarah's																			0.4	0.02	180-550	
			McBurn's																			1	0.06	70-400	CR1996-0257
			Frilled Lizard																			0.4	0.3	70-550	
			Jim Jim																			0.25	0.3	180-700	
			Krsitie's																			0.6	0.02	550-1100	

Table 3: EL30897 Previous Explorer Pegmatitie Data

Tenement	Holder	Operator	Prospect/Regional	Workings	Workings (average m)			Pegmatite	Strike	Dip	Pegmatite (m)		Country Rock	No Samples							Costean	Average Grades		Estimated	CR Number
				Number	Length	Width	Depth				Length	Width		RK	Soil	Costean	Auger	RAB	RC	SG	Coverage (m)	Sn (kg/t)	Ta (kg/t)	Resource (t)	
SEL9061	Corporate Developments Pty Ltd	Corporate Developments Pty Ltd	Old Buck's															14							
			Macka's Reward															22							CR1997-0124
			Northern Reward															0							
			Welcome Stranger															9							
			Bear & Wolf	1					345		?250				104								0.15	0.01		CR1999-0060
			Northern Reward							45E															
SEL9061	Corporate Developments Pty Ltd	Julia Corporation Ltd	Leviathan					3 over 250m x 120m		30SE	?300	10-15				57			90	6					
			Leviathan South						20	steep E	70	10-15													
			Centaur (Centurion)						30-35	50-80E	240	20				70			109	8			0.15	50000	
			Nth Reward-Welcome-Macka's					combined 3 prospects	30-35	45-70SE	800	5-10				79			123	36			0.16	115000	
			Trojan								150	2-3				25				14					CR2001-0330
			Hacket & Parsons						5		150	1-3				7									
			Pandanus						30		100	10-15				17				9					
			Angers					2 pegmatite zones	45/80		150	7				7			61	4			0.28	150000	
			Beata's						30	70SE		1-2			84				4						
EL24639	Arnham Resources Pty Ltd	Haddington Resources Ltd	Regional											1	99			625							
			A1 (Sue's Block)					3 pegmatite vns	2-20	40-60W				1											
			A2 (Sue's Block)											10											
			A7 (Leviathan Block)											17											
			A8 (Leviathan Block)																						
			A9 (Leviathan Block)					numerous peg dykes						19											
			Bynoe Harbour					numerous peg dykes	130-160	steep				28											
			Lost Chinaman											18											
			Lost Chinaman North											13											
			A27											1											
			Melissa's						0-45	steep															
			Jennea's								160	30-40													
			A10 (Leviathan Block)					peg in RAB																	CR2006-0564
			A11 (Leviathan Block)					near peg o/c																	
			A12 (Leviathan Block)					peg in RAB																	
			A13 (Leviathan Block)					near peg o/c																	
			A14 (Leviathan Block)					no peg in RAB																	
			A15 (Leviathan Block)					peg in RAB																	
			A16 (Leviathan Block)					?																	
			A17-A19 (Leviathan Block)					peg in RAB																	
			A22 (Leviathan Block)					qtz vn																	
			A25 (Leviathan Block)					peg o/c & in RAB																	
			A28 (Saffums Block)					peg sub-crop	NNE					4											
			A29 (Saffums Block)					peg float																	
			A31 (Saffums Block)																						
			Radiometric Anomaly (R5-R6)					no pegmatite																	CR2007-0629
			A10 (Leviathan Block)											4											
			A12-A13 (Leviathan Block)											23											
			Georgia's (A7)											12											CR2008-0920
			Janna's/Melissa's											14											
			Un-named Prospect	2	2	2	2							3											
			Leviathan Mine											10											
EL24773	Australia Tantalum Pty Ltd	Haddington Resources Ltd	A3 (7 Up)						340-350			0.3		25											CR2007-0010
			A28 (Saffums Block)					no peg																	
			A3 (7 Up)											29											CR2009-0027
	Altura Mining Ltd	Altura Mining Ltd	A3 (7 Up)						10-24	80-82NW	10-60	0.3-8		59											CR2010-0006

APPENDIX 2

Southern Geoscience Consultant GIS Data Package Digital Data (Attached DVD)