

SECOND ANNUAL REPORT

EL 31103

Titleholder : Red Dingo Corp Pty Ltd

EXPLORATION LICENCE EL31103

FOR THE PERIOD 08/08/2017 to 07/08/2018

by

G. J. Bubner, AsIs International

&

Red Dingo Corp Pty Ltd

October 2018

Contact	milson@reddingocorp.com.au
Datum/Zone	GDA 94 – MGA zone 53
1:250000	Alice Springs SF 53-14
1:100000	Riddoch 5851
Target	Gold, Base Metals, REE
Keywords	Exploration, AEM, Arunta Block, Gold, REE, White Range

Copies to:	1. Red Dingo Corp Pty Ltd
	2. Northern Territory Geological Survey
	3. Australian Mining and Exploration Title Services Pty Ltd (Darwin)

CONTENTS

LIST OF TABLES.....	2
LIST OF APPENDICES	2
LIST OF FIGURES.....	3
ABSTRACT.....	4
1. INTRODUCTION.....	5
1.1. LOCATION AND ACCESS	5
2. TENURE	9
2.1. MINERAL TITLE	9
2.2. LAND TITLE	9
3. GEOLOGY.....	10
3.1. REGIONAL GEOLOGY	10
3.2. ECONOMIC GEOLOGY	15
3.3. ECONOMIC MINERAL POTENTIAL	16
4. PREVIOUS EXPLORATION	17
4.1. EL49 – 1974. McIntyre, S. J.....	18
4.2. EL2217 – 1982. Amoco Minerals Australia Company.	18
4.3. EL4865 – 1991. Pancontinental Resources (Exploration) Pty Ltd	18
4.3.1 Airborne geophysical survey and ground follow-up	20
4.3.2 Collection and assay of stream sediment samples	20
4.3.3 Collaborative CSIRO Research Project	21
4.3.4 Mapping of Blueys Folly prospect area – Ph.D. Thesis.	21
4.4. EL5210 - 1989. Bruce & Mules	21
4.5. EL10302 – 2004. Tanami Exploration – BHP/Teck JV	22
4.6. EL25926 – 2008. Newera Uranium Ltd.	22
4.7. EL28029 – 2015. Core Exploration Ltd.	23
5. EXPLORATION COMPLETED DURING CURRENT YEAR.....	24
5.1. EXPLORATION RATIONALE	24
5.2. WORK CARRIED OUT	25
5.2.1 Digitising of published geology	25
5.2.2 Interpretation of historical Airborne EM data.	25
5.2.3 Review of airborne magnetics and radiometrics	29

5.2.4	Surface sampling & Portable XRF readings	33
6.	EXPENDITURE	37
7.	FURTHER WORK	38
8.	REFERENCES	39

LIST OF TABLES

Table 1	Exploration Tenure.
Table 2	Historical Mineral Titles Overlapping EL31103 & Exploration work summary.
Table 3	Interpreted conductor parameters for EM anomalies on SkyTEM Line 113.
Table 4	Elemental concentration readings in ppm on rockchip (WRE1 & WRE8) and soil samples from EL31103 using hand-held XRF.
Table 5	Exploration Expenditure.

LIST OF APPENDICES

Appendix 1.	Handheld XRF readings on surface samples from EL31103. (File ("EL31103_2018_A_02_SurfaceGeochem.txt").
-------------	--------------------------------------------------------------------------------------------------------

LIST OF FIGURES

1. Regional location Map of EL 31103.
2. Location map of EL 31103 showing tectonic blocks, physiographic and topographic features.
3. Geology map and mineral occurrences of EL31103 area.
4. Legend to accompany geology map shown in Figure 3.
5. Stratigraphy and mineral occurrences of EL31103 area.
6. Legend to accompany stratigraphy map at Figure 5.
7. Location of surface sample sites and prospects generated by previous explorers.
8. Geology Map showing flightlines from 2008 SkyTEM survey, and location of EM anomalies on EL31103.
9. Conductivity depth interface (CDI) section calculated from SkyTEM airborne EM survey Line 113, and position of interpreted bedrock conductors.
10. 3D perspective view of Conductivity depth interface (CDI) section calculated from SkyTEM airborne EM survey Line 113, and position of interpreted bedrock conductors.
11. Image of RTP airborne magnetics and geological boundaries.
12. Contours of RTP airborne magnetics on geology.
13. 1,500 nT aeromagnetic anomaly. Contours of magnetic intensity showing section location and interpreted source of magnetic response.
14. Interpretation of magnetic anomaly in central part of EL31103.
15. Interpreted geological section derived from magnetic interpretation.
16. Location of XRF readings on EL31103.
17. Photo of the area of the southern airborne EM anomaly

ABSTRACT

This project comprises exploration licence EL 31103 of 44km² located 110 kilometres ENE of Alice Springs. It was granted on 8th August 2016 for a period of six years.

The primary target is Au-Ag and base metals. Secondary targets include REE's, Mo-W and lithium.

The area is geologically complex, comprising mostly schists and gneisses of the Strangways Metamorphic Complex and other un-named units in the Early Proterozoic Division One of the Arunta Block.

In the first year of tenure to 7th August 2017, exploration activity on EL31103 comprised historical data compilation and review, reconnaissance mapping and investigation of old workings and field checking of previously reported anomalism and mineralisation. Some sections of schist were sawn to establish its possible suitability for Dimension Stone.

Activities in the second year of tenure which generated new information or valued-added to existing information include:

- Digitising of the pdf scan of the published 1:100 000 geology map to facilitate integration with digital datasets.
- Detailed interpretation of airborne EM and aeromagnetic data.
- Collection of surface samples and elemental concentration readings using a hand-held XRF device in the area of two Priority 1 AEM anomalies.

Options for work in Year 3 include:

- Chemical assay and analysis of XRF readings from surface samples collected over the two priority one airborne EM anomalies, and a ground EM survey to define drillsites to test for possible sulphide-associated mineralisation.
- Field follow-up of an isolated 1,500nT aeromagnetic anomaly using mapping, rock chip sampling and XRF readings, and a ground magnetic survey to define drillsites to test for possible magnetite-associated mineralisation.

1. INTRODUCTION

1.1. LOCATION AND ACCESS

The Project area is located in the Arltunga-Harts Range region 110 kilometres east-north-east of Alice Springs. Refer Figures 1 and 2. The tenement area is un-inhabited. The nearest settlements are Claraville and Ambalindum stations to the west.

Access is via the Ross Highway to Ross River, thence unsealed road to Arltunga Tourist camp. From there station tracks provide very limited vehicular access within the tenement area.

The dominant watercourse is Atnarpa Creek, which flows through the central part of the tenement area. There are many small creeks and tributaries which flow after rains but may be dry for most of the year.

Topographically it is hilly. Elevation varies from 580 to 750 metres. Outcrop of gneiss, schist, calc-silicates and granitic rocks form hills and ridges throughout much of the tenement area. Locally the terrain is rugged, making access difficult.

The climate is arid. Summers are hot, winters mild, and rainfall sporadic.

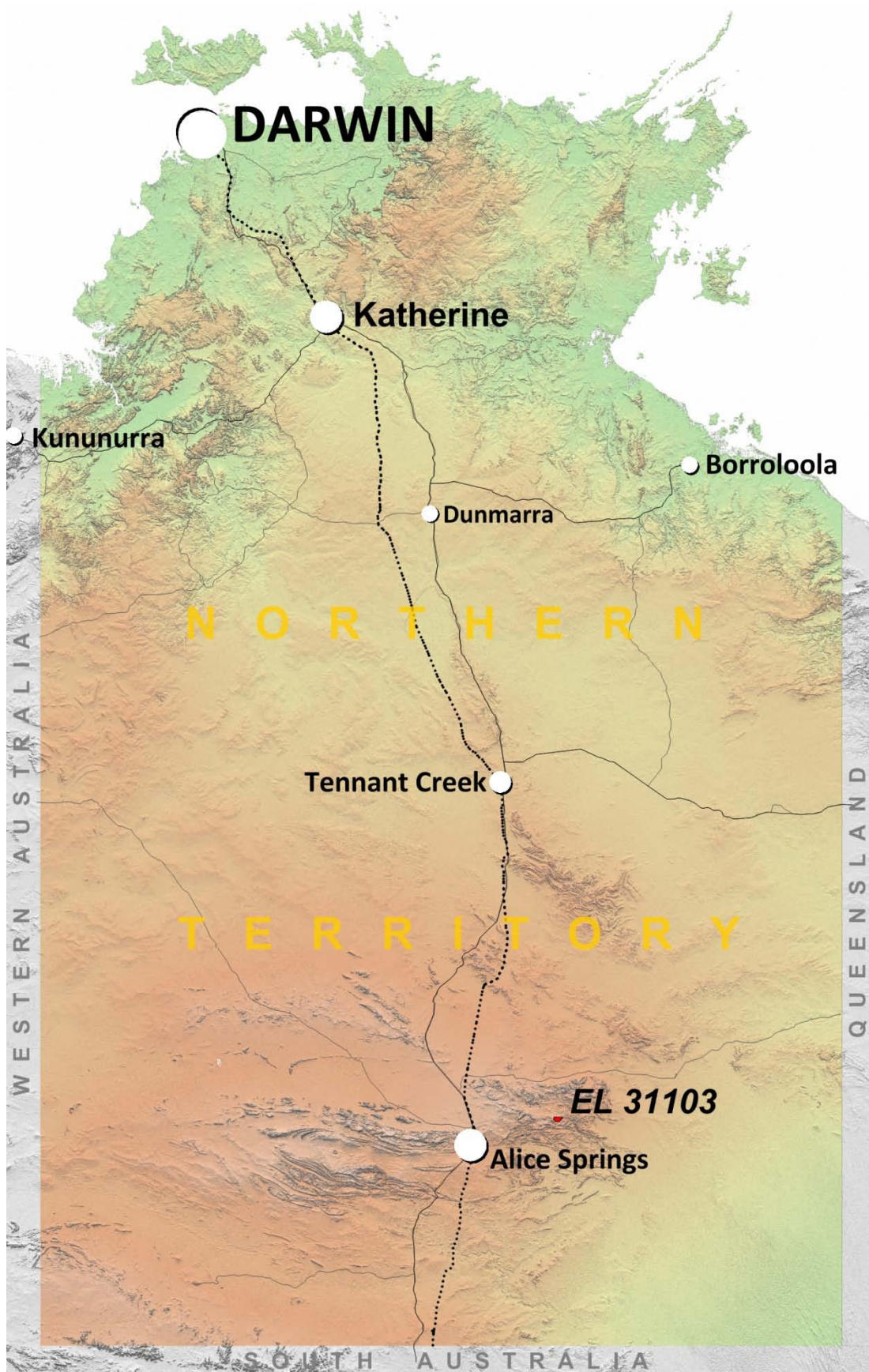


Figure 1: Regional location Map of EL 31103.

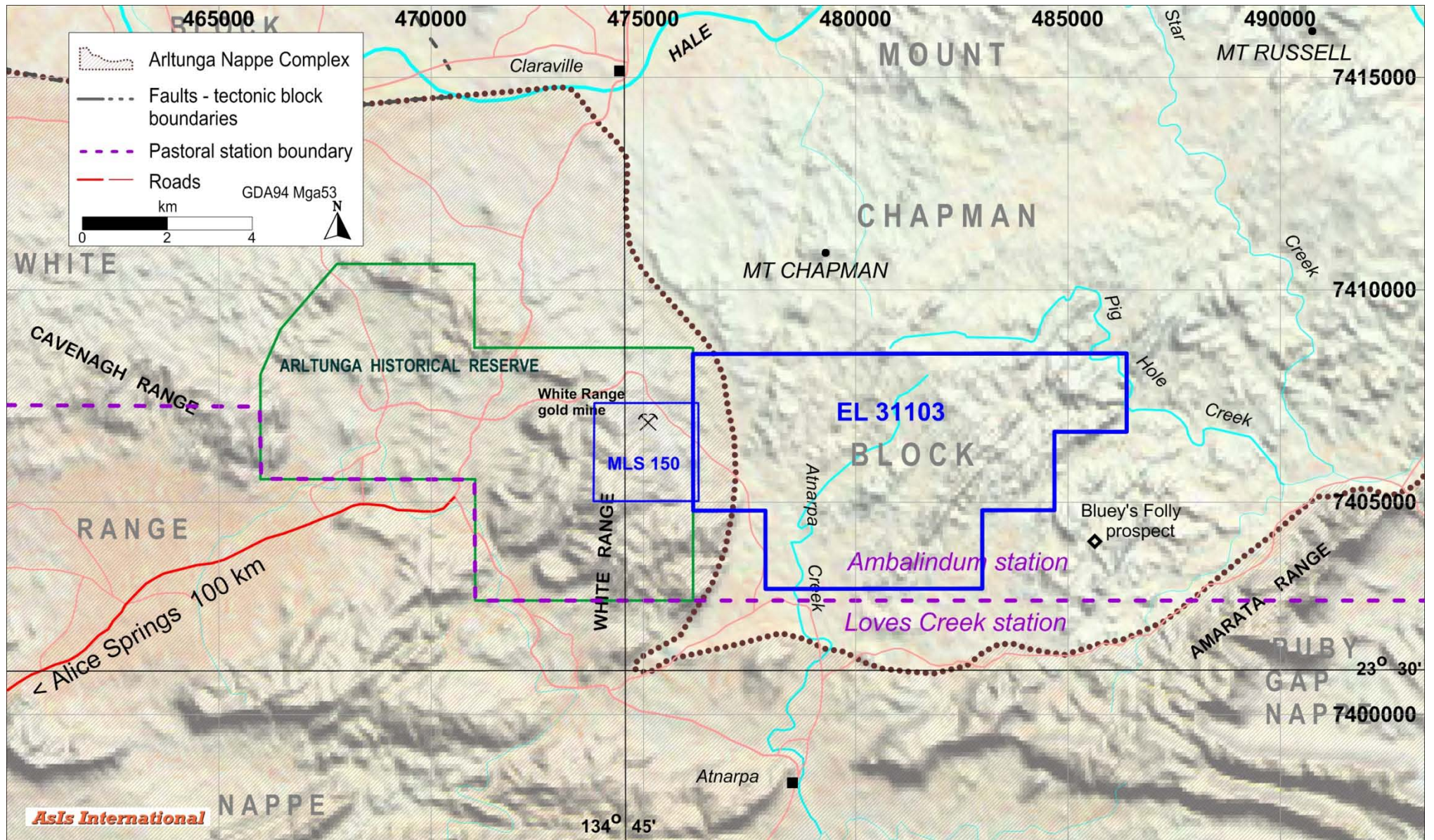


Figure 2: Location map of EL 31103 showing tectonic blocks, physiographic and topographic features.

2. TENURE

2.1. MINERAL TITLE

EL31103 was granted for a period of six years on 8th August 2016 to Red Dingo Corp Pty Ltd.

Table 1: Exploration tenure

EL	Name	Area (Sq km)	Blocks	Date of grant
EL31103		44	14	08-Aug-16

2.2. LAND TITLE

The tenement area is located entirely within Ambalindum station, a Pastoral Lease owned by Hewitt Cattle Australia (HCA). An Exploration Agreement had previously been concluded with T. Edmunds, who owned the station when the tenement was granted. In the first half of 2017 the station was purchased by HCA. Efforts to negotiate a new Exploration Agreement with HCA have been frustrated to date by failure to respond to communications from the titleholder. For this reason the titleholder has chosen to limit on-ground exploration to minimal non-ground disturbing activities

3. GEOLOGY

3.1. REGIONAL GEOLOGY

The source material for a geological description of the tenement area is that compiled over the period 1949-1982 and published as 1:100 000 Geological Map Commentary and Geology Map of the Arltunga-Harts Range Region, Northern Territory, by the Bureau of Mineral Resources, Geology & Geophysics in 1984 (NTGS, 2007 and BMRGG, 1984).

To assist integration of the geology with other datasets, the Geological map covering the region from EL31103 through to the White Range area was digitised. The digitised Geology map and legend specific to the tenement area is shown at Figures 3 and 4, and the stratigraphy and legend shown at Figures 5 and 6.

The geology of the area is well described in the published documents, and in numerous open file reports of previous explorers. A brief geological synopsis derived from the BMRGG Geological Map Commentary is given below.

Most of EL 31103 is located in the Mount Chapman Block, which contains Palaeoproterozoic age rocks in Division One of the Arunta Block. These comprise biotite and quartzofeldspathic gneiss, and amphibolite. In the western part of the EL area is tonalite of the Atnarpa Igneous Complex. In the extreme SW corner of the tenement, Heavitree Quartzite overthrusts the Atnarpa Igneous Complex.

.

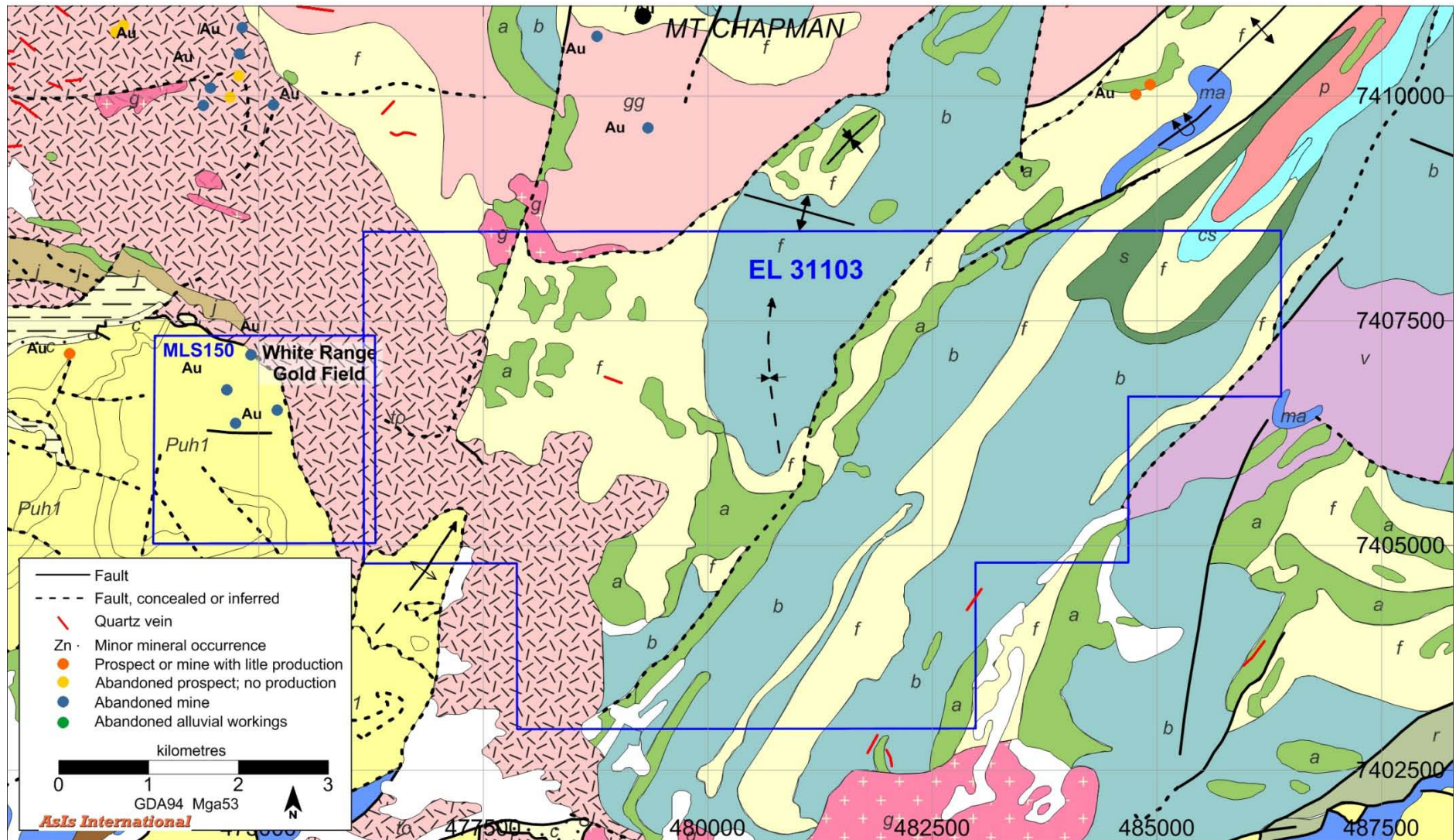


Figure 3. Geology map and mineral occurrences of EL31103 area. Adapted from BMRGG (1984). Legend shown at Figure 4.

AMADEUS BASIN

Pug	Bitter Springs Formation - dolomite, silts, shales, sands
Pug2	Sandstone
Puh	
Puh2	Heavitree Quartzite - quartzite
Puh1	
c	Heavitree Quartzite - conglomerate

ARUNTA BLOCK


a	Amphibolite	p	Porphyroblastic-feldspar gneiss
b	Biotite gneiss	r	Retrogressively metamorphosed rock
cs	Calc-silicate rock	s	Muscovite-biotite schist or gneiss
f	Quartzofeldspathic gneiss	sf	Quartzofeldspathic schist
g	Granite, adamellite	ta	Tonalite
gg	Granitic gneiss	v	Garnet-biotite-plagioclase-quartz gneiss
j	Quartz-rich metasediment		
ma	Marble	— — — —	Fault - inferred, concealed
	Quartz vein	●	Abandoned mine or prospect; little or no production
		—	Fault

Figure 4. Legend to accompany geology map shown at Figure 3. Adapted from BMRGG (1984).

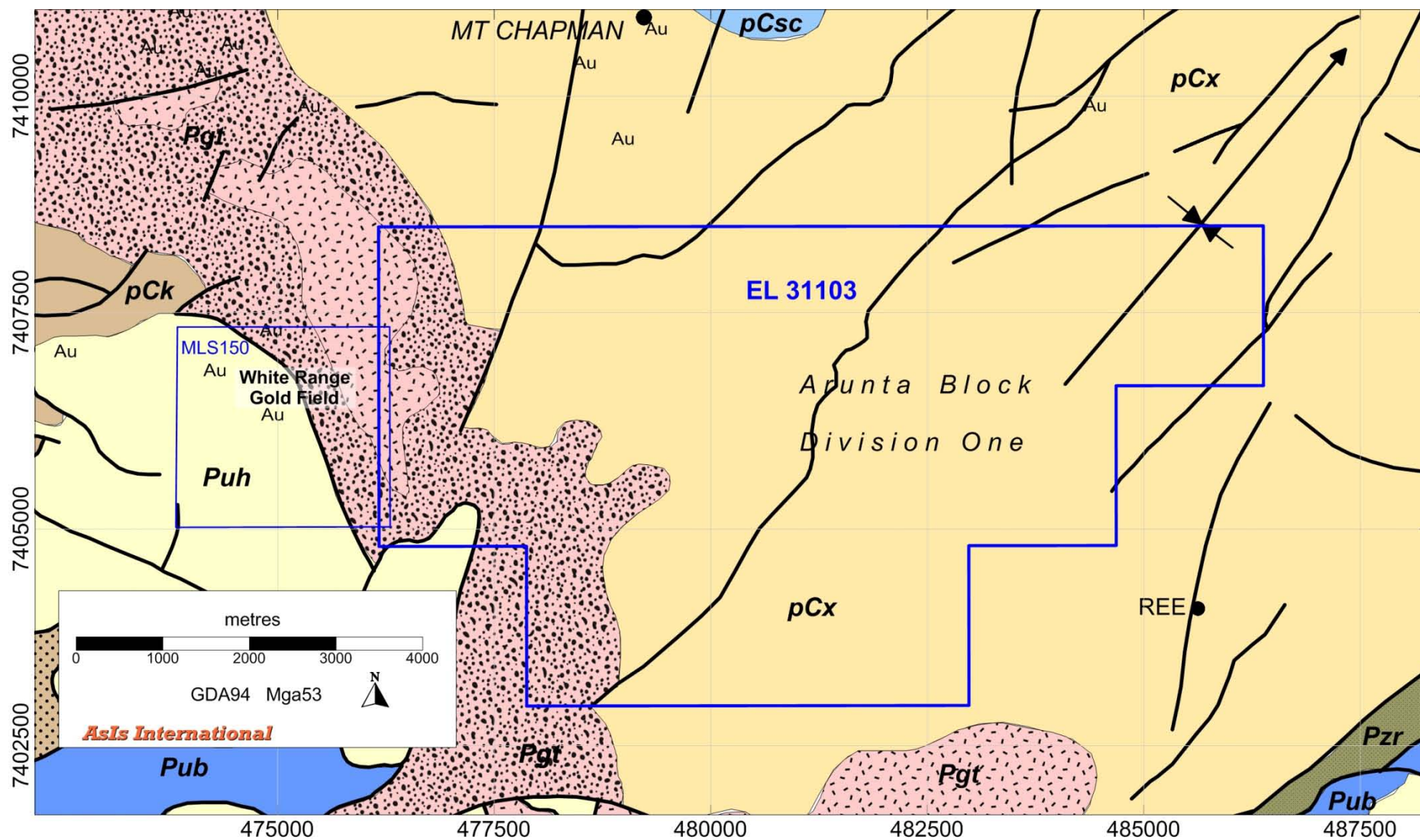


Figure 5. Stratigraphy and mineral occurrences of EL31103 area. Adapted from BMRGG (1984). Legend shown at Figure 6.

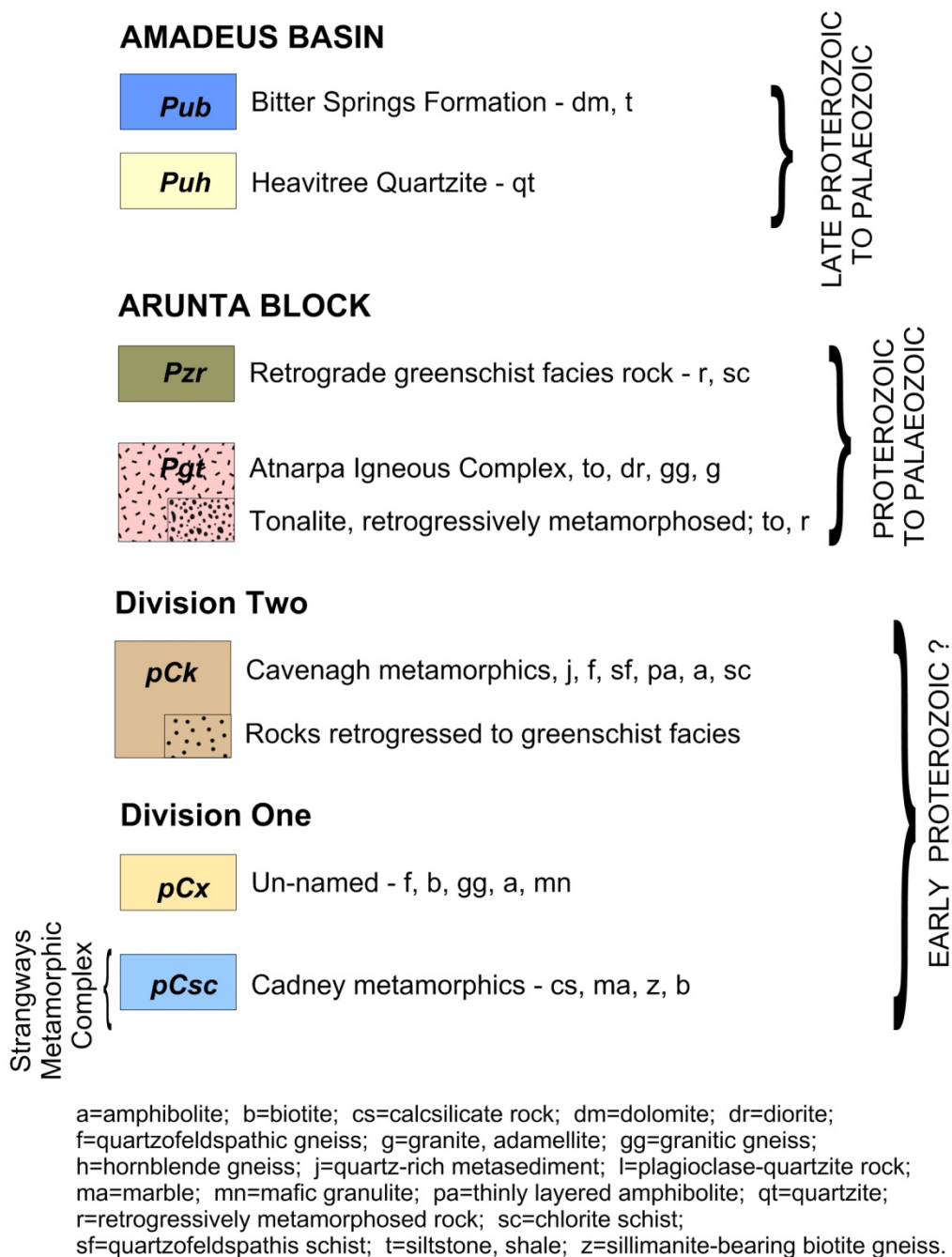


Figure 6. Legend to accompany geology map shown at Figure 5. Adapted from BMRGG (1984).

3.2. ECONOMIC GEOLOGY

References to minerals of economic value are derived from the BMRGG mapping, and the NTGS Mineral Occurrence Database 2018. These are dominantly gold, with rare minor copper and silver showings.

To the west and north of the tenement area gold, mostly associated with quartz veins, is hosted within:

- a. Biotite gneiss in the Cadney metamorphics of the Strangways Metamorphic Complex at the base of Division One of the Arunta Block.
- b. Granitic gneiss in unnamed unit (pCx) in Division One of the Arunta Block.
- c. Tonalite of the Proterozoic Atnarpa Igneous Complex.
- d. Heavitree Quartzite of the Amadeus Basin cover sequence.

The gold occurs in a range of lithologies. There may have been multiple phases of mineralizing events, with the distribution controlled by favourable structures.

Non-auriferous minerals generally occur as surficial enrichment. Copper and silver is found as patchy surficial enrichment in tonalite and Bitter Springs Formation sediments at Blueys Prospect, south of the White Range gold deposit.

REE's occur at Blueys Folly prospect, which is located immediately southeast of the tenement boundary. In this area allanite (a rare earth bearing epidote) is associated with thorium in pegmatites in biotite gneiss of the Cadney Metamorphics. Elevated concentrations of monazite and zircon have also been reported. (CR1990-0005)

Within the tenement area of EL31103, there are no references in the public domain databases to any mineral deposits, prospects or occurrences.

In respect of economic mineral deposits, the area contains many small prospects and abandoned mines, mostly gold and mostly with minimal production. The best producer in the area has been the White Range gold mine, where gold in small quartz veins occurs in quartzites of the Heavitree Quartzite. Historical production is recorded as nearly 8,000 oz. Mining of the oxide zone by White Rock Gold NL in 1989-91 produced another 32,650 oz. Heap leaching of the low-grade dumps by Intermet in 2002-2008 recovered a further 16,700 oz. Other gold workings in the area comprise mostly abandoned prospects or small mines, mostly vein but including some alluvial operations.

3.3. ECONOMIC MINERAL POTENTIAL

The Arunta Block shows marked geological resemblances to The Granites-Tanami, Tennant Creek, and Willyama Blocks, which are well endowed with gold, copper-gold, and base metal mineralisation. Although mineral occurrences as presently known are small and in general uneconomic, the Arunta Block holds potential for economic deposits. The primary types of mineralisation which might be sought are:

- a. Stratabound: copper-lead-zinc in metasediments in the lower and middle parts of the sequence.
- b. Pegmatitic: mainly copper, tin, tungsten, lithium and tantalum derived from granite.
- c. Metasomatic: tungsten, molybdenum, and minor copper in calc-silicate rocks adjacent to granite.
- d. Hydrothermal: gold in a zone of late Palaeozoic deformation and retrogressive metamorphism, and fluorite-barite veins in zones of late Palaeozoic warping;
- e. Magmatic: very minor copper, nickel, and chromium, in mafic and ultramafic rocks;

Deposits in these categories include Johnnies Reward, located in the Strangways Range 70 kilometres to the northwest, and Molyhil Mine, 100 kilometres to the northeast. The former presents as a magnetite-copper-lead-zinc-gold metamorphic skarn in Cadney metamorphics of the Strangways Metamorphic Complex. The latter is an iron-rich skarn in Strangways Metamorphic Complex rocks. Molybdenum and tungsten mineralisation at Molyhil occurs as a magnetite / sulphide-rich hornfels unit. Within the tenement area there is substantial outcrop of Strangways Metamorphic Complex rocks, with potential for discovery of similar deposits.

Immediately west of the tenement area the White Range gold deposit occurs in Late Proterozoic to Palaeozoic Amadeus Basin quartzites. To the southeast of the tenement area, sub-economic occurrences of unconformity type uranium mineralisation occur in Early Proterozoic metamorphics in the Limbla and Albarta areas.

Historical exploration has identified the presence of allanite-bearing pegmatites to the east and north of EL31103, which presents opportunities for REE's, and also lithium, thorium, uranium, and zirconium.

4. PREVIOUS EXPLORATION

Numerous historical tenements have encompassed the area of EL31103. NTGS databases “Historical Mineral Titles” and “GEMIS” were interrogated to capture past exploration titles, and all relevant reports were reviewed. Table 2 is a summary of historical titles and results reported. Previous exploration efforts involving collection of new data are summarised thereafter.

The only drilling completed within the area of EL31103 is 6 percussion holes completed in 1988 by Bruce & Mules on EL5210.

Table 2. Historical Mineral Titles Overlapping EL31103 & Exploration work summary

Title & Final Year	Reporting entity, (Report reference) & exploration work
EL49 1974	McIntyre, S.J. (CR1974-0168) Surface sampling for Au, W and base metals.
EL1324 1978	Esso Australia Ltd (CR1979-0210) No work on area of EL31103
EL1325 1978	Esso Australia Ltd (CR1979-0031) No work on area of EL31103
EL2217 1985	Amoco Minerals Australia Company (CR1984-0094) Rock chip, soil and stream sediment sampling.
EL2656 1987	Park & Athanasiou - WMC J/V (CR1983-0331) No work on area of EL31103
EL4573	Not recorded. No reports in GEMIS
EL4865 1991	Pancontinental Resources (Exploration) Pty Ltd (CR1991-0400) Stream sediment sampling & airborne geophysics
EL5210 1989	Bruce & Mules (1989-0707) Stream sediment sampling, percussion drilling & airborne geophysics
EL7400 1993	John Bruce. No reports in GEMIS
ELA8315 1994	Shandon Pty Ltd. No reports in GEMIS.
EL8785 1998	Shandon Pty Ltd. (CR1998-0674) No work on area of EL31103
EL10302 2005	Tanami Exploration. (CR2004-0216) Rock chip sampling.
EL25526 2006	Marindi Metals Ltd. No reports in GEMIS
EL25926 2010	Newera Uranium Ltd. (CR2008-0962)) Landsat analysis and rock chip sampling.
EL28029 2018	Core Exploration Ltd (CR20150851) Detailed airborne geophysics.

4.1. EL49 – 1974. McIntyre, S. J.

Explored by Centamin Ltd on behalf of tenement holder S. McIntyre, who analysed surface samples and drainage samples for gold, scheelite and base metals (McIntyre, 1974). Mostly no encouraging results but possible further exploration warranted in the White Range and the head of the Star Creek and Pig Hole Creek stream systems. No sample coordinates provided; locations shown on un-georeferenced air photo overlays.

4.2. EL2217 – 1982. Amoco Minerals Australia Company.

Amoco explored the Arltunga area targeting large stockwork, stratiform/stratibound or porphyry gold deposits. In 1982 airborne geophysical data were acquired and interpreted, and rock chip sampling completed of old workings and ferruginous quartz veins mostly in the Mount Chapman area to the north of EL31103. Apart from samples proximal to old diggings, this work did not identify any significant gold anomalous rocks.

Soil and stream sediment samples were collected at 139 and 301 sites respectively over a large area encompassing the Mount Chapman and Atnarpa Creek area. Analyses were completed for Au, Cu, Pb, Zn, Fe, Mn, Ni, Co, As, Ba, Sn, W, Bi and Mo. Sample sites relevant to the current tenement area are shown at Figure 7; however the sample location map is rarely of sufficient resolution to define sample numbers. Positive gold responses were received near Black Devil in the White Range workings, and to the south of EL31103 boundary. Best result was a sample with 0.3ppm Au, 860ppm Pb and 145ppm As. No particular results of interest derived from samples within the current EL31103 (Amoco Minerals Australia Company, 1983 and Amoco Minerals Australia Company, 1984).

4.3 EL4865 – 1991. Pancontinental Resources (Exploration) Pty Ltd

J. H. Mules and J. R. Bruce commenced a substantial exploration effort over ten exploration licences collectively called the Arltunga Project. A Joint Venture was formed with Pancontinental, who, as operators, continued detailed investigations. The area of EL4865 encompassed most of EL31103 and included the Bluey's Folly REE prospect to the east of EL31103. The main targets of commercial value were REE's and zircon, with gold and PGE's as secondary targets.

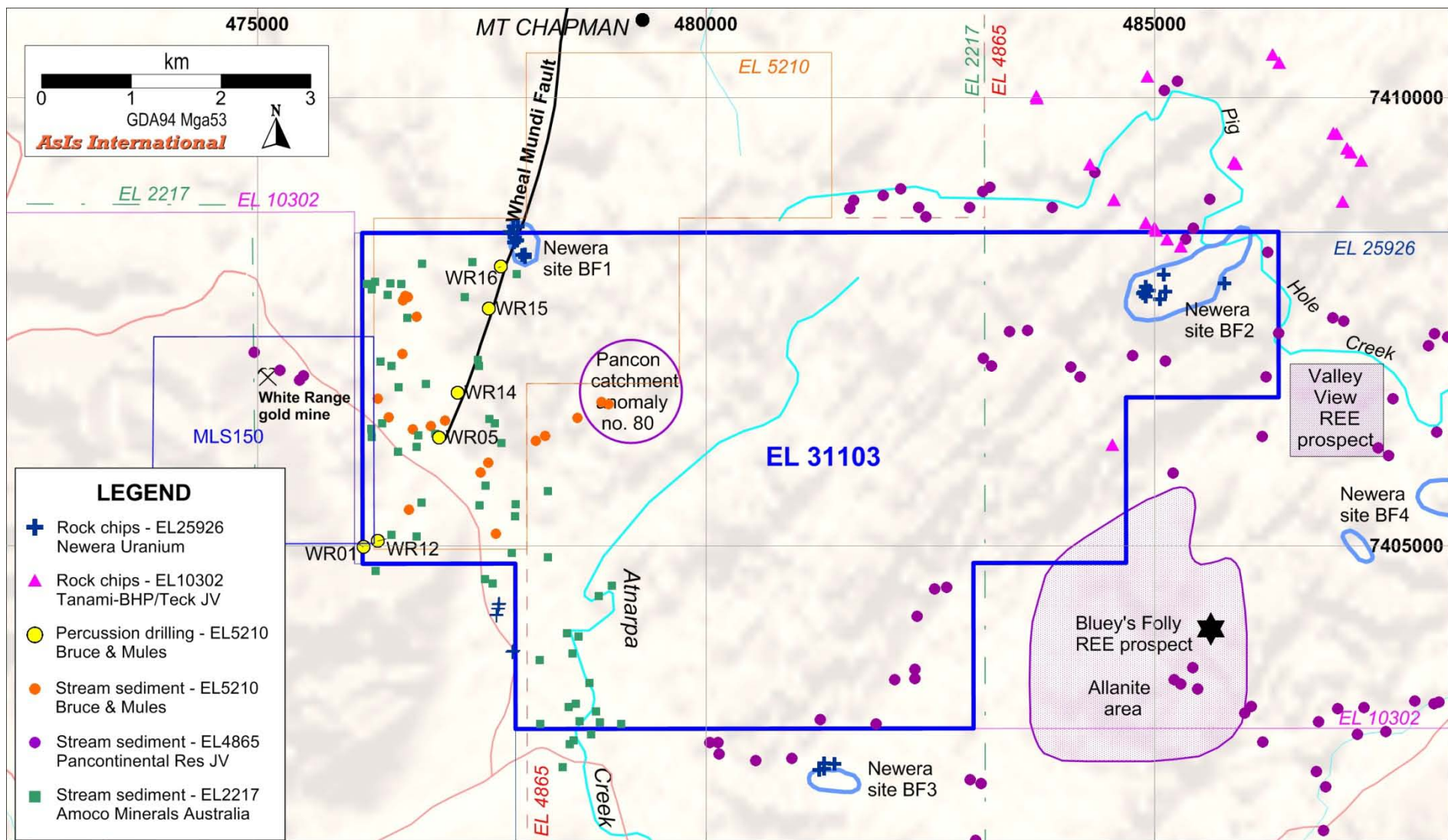


Figure 7. Location of surface sample sites and prospects generated by previous explorers.

The exploration activities over the period 1987-1991 included:

- Acquisition of detailed airborne magnetic and radiometric data and ground surveys.
- Collection and assay of stream sediment samples with detailed statistical analysis.
- Collaborative geochemical and mineralogical research by the CSIRO on samples from Blueys Folly area.
- Support of a mapping exercise around Blueys Folly prospect area by a Ph. D. student.

4.3.1 Airborne geophysical survey and ground follow-up

Austirex International Ltd in 1988 were commissioned to fly an airborne survey over a large area, which encompassed all but the western extremity of EL31103 (Graham and Edser, 1990). Magnetic and radiometric data were acquired on traverses spaced 250 metres apart and oriented 050-230 degrees at a height of 60 metres.

Elevated thorium responses in the airborne data delineated a small number of new areas of interest in addition to known prospects (Murrell, 1988). Ground radiometric surveys and geological mapping were completed at prospects including Valley View and Blueys Folly, both just to the east of EL31103. (Edser, 1991). No prospects were defined within the current tenement area. Prospect locations are shown at Figure 7.

4.3.2 Collection and assay of stream sediment samples

Many hundreds of stream sediment samples were collected, comprising the overbank clay fraction which has accumulated from silt deposited on flood plains adjacent to the watercourses. Twenty such samples are located within EL31103. Assays were determined for Au, As, Ba, Bi, Co, Cr, Cu, Ni, Pb, Zn, Fe, Mn, P, Mo, Sb, Sn, W, La, Nb, Ta, Y and Zr using AAS and ICP methods (Au by Fire Assay/AAS). Sample locations and assays in digital format were compiled by Newera Uranium Ltd and are included in their Annual report on EL25926 (Newera, 2008). Sample locations are plotted in Figure 7.

Intensive geostatistical procedures and univariate analysis were applied to quantify the data integrity (stored in two different databases) and establish relationships between element distributions (Graham and Edser, 1990). The distribution of anomalous assays defined 87 catchments of interest, of which only one occurs within EL31103. This is a low priority Pb anomaly, ranked number 80. Location is plotted in Figure 7. Unfortunately in 1990 the JV was abruptly terminated and work ceased before the information was applied to advance the on-ground exploration effort.

4.3.3 Collaborative CSIRO Research Project

A collaborative project with the CSIRO was mostly completed, titled “A Description of a Rare-earth prospect Near White Range in the Northern Territory” (CSIRO, 1988). It describes petrological and mineralogical studies of surface and drill chip samples from the area around the Blueys Folly prospect. Substantive knowledge relevant to the area of interest was gleaned, but the JV was terminated before the benefit of this research could be fully applied.

4.3.4 Mapping of Blueys Folly prospect area – Ph.D. Thesis.

The Joint Venture partners supported a James Cook University Ph.D. student, Mr. Yuan Pu, to map in detail an area near Bluey’s Folly prospect (Pu, 1992). Specifically, he studied the occurrence and genesis of allanite. This work was not completed until after termination of the JV. However, one of Pu’s conclusions from field observations is “The allanite has apparently a close relationship with granite pegmatite though it can be seen in nearly all kinds of rocks”

4.4 EL5210 - 1989. Bruce & Mules

The tenement holders explored EL5210 for gold, base metals, PGE and REE’s using airborne geophysics, stream sediment sampling and drilling (Bruce and Mules, 1989). Sample locations and drillholes are shown at Figure 7.

Austirex International Ltd in 1988 were commissioned to fly an airborne survey over a large area, which encompassed all but the western extremity of EL31103. This is the same survey reported for EL4865 (Pancontinental Resources (Exploration) Pty Ltd) and described in section 4.3.1. Magnetic and radiometric data were acquired on traverses spaced 250 metres apart and oriented 050-230 degrees at a height of 60 metres. Elevated thorium responses along the Wheal Mundi Fault were ground checked with a scintillometer. The source was interpreted to be disseminated monazite in a felsic metaintrusive unit.

Stream sediment samples were collected, comprising the overbank clay fraction which has accumulated from silt deposited on flood plains adjacent to the watercourses. Nineteen such samples are located within EL31103. Assays were determined for Au, As, Ba, Co, Cr, Cu, Ni, Pb, Zn, Fe, Mn, P, Mo, Sb, Sn, W, La and Nb, using AAS and ICP methods (Au by Fire Assay/AAS). A number of slightly anomalous catchments were identified but no economic mineralisation was discovered during follow-up.

Six rotary percussion holes totalling 365 metres were drilled along the Wheal Mundi Fault zone as water bores and to test for mineralised zones. Lithologies intersected comprised quartzite, schist, granitic gneiss and granodiorite. No mineralisation was encountered and no samples were assayed.

4.5 EL10302 – 2004. Tanami Exploration – BHP/Teck JV

Tanami Exploration NL in Joint Venture with BHP-Billiton/Teck Cominco Australia explored EL10302 for gold mineralisation associated with thrust/shear zones, and Broken Hill type Pb-Zn mineralisation in banded garnet-biotite gneiss (Tanami Exploration, 2004).

Within the area of EL31103 the only work completed was collection of rock chip samples and ground magnetometer traverses in the NE corner of the tenement. Samples were assayed for Au, As, Ag, Pt, Pd, Cu, Pb and Zn. No significant results were returned. Sample sites are plotted in Figure 7.

4.6 EL25926 – 2008. Newera Uranium Ltd.

Newera explored a substantial area encompassing EL31103 for uranium, gold, base metals and REE's. Work carried out included re-processing and imaging of airborne geophysical data and Landsat Thematic Mapper data (Newera Uranium, 2008). Rock chip samples were collected across the Hillsoak Bore Metamorphics-Heavitree Quartzite contact, and assay results presented for 62 elements. Samples were also collected at four areas of alteration, annotated BF1 - BF4, identified from the Landsat data. The samples were presumably also assayed for 62 elements, although only readings from a portable XRF device are included in the report. The prospect locations and sample sites are shown at Figure 7.

The following observations were made on the BF1 – BF4 prospect areas:

- BF1. Alteration zone with coincident U-Th anomaly on the Wheal Mundi Fault, with White Range gold mine near one end, and Mount Chapman gold field at the other.
- BF2. Alteration zone with a radiometric potassic high.
- BF3. Reported as “coincides with Blueys Foley (sic) REE prospect..”. The location of the alteration zone and sample sites actually plot four km WSW of Blueys Folly prospect. Some anomalous XRF readings include elevated Ag, Cu, Zn, Hg and Bi.
- BF4. Not visited.

4.7 EL28029 – 2015. Core Exploration Ltd.

EL31103 coincides with a portion of current EL28029 relinquished due to limited expenditure and reported by Core Exploration Ltd in 2015 (DBL Blues; Core Exploration Ltd, 2015). This tenement was originally granted to Gempart (NT) Pty Ltd in 2012, and was subject of firstly a JV agreement and then a purchase agreement by Core Exploration Pty Ltd.

Core Exploration Pty Ltd carried out literature studies and re-processing of available geophysical datasets but did not acquire any new information. The relinquishment report does refer to a detailed helicopter-borne magnetic and radiometric survey flown over the central part of EL28029 on behalf of the original operators Gempart. No digital data were included with the relinquishment report however the relevant data have been sourced through the survey contractor Daishsat. The low-level survey was flown on 100 metre spaced traverses oriented 135-315 degrees. Analysis of the survey results is included in Section 5.2.3.

5. EXPLORATION COMPLETED DURING CURRENT YEAR

5.1. EXPLORATION RATIONALE

The project area is considered prospective primarily for gold and copper. Secondary targets include base metals and REE's, lithium and molybdenum/tungsten. The rationale for securing EL31103 includes:

- The Managing Director of Red Dingo Corp Pty Ltd, a long time resident of Alice Springs, has for many years carried out exploration in the Harts Range and surrounding areas, targeting gemstones, gold and other commodities. Red Dingo Corp Pty Ltd also hold MLS150, covering the White Range gold mining area.
- Gold occurs in many prospects, historical workings and abandoned mines immediately to the north and west of EL31103 in the Mount Chapman gold fields and Arltunga Goldfields respectively.
- The largest known gold deposit in the area, at White Range located immediately west of EL31103, has been worked intermittently from 1880's to recent times for production in excess of 56,000 oz Au. The last profitable mining operations ceased in 2008, when the price of gold was US\$800.
- The demand for REE's and lithium is expected to remain strong as they are a key component of materials in the industry sectors of energy, communications and aerospace.

5.2. WORK CARRIED OUT

Activities which generated new information or valued-added to existing information included:

- Digitising of the pdf scan of the published 1:100 000 geology map.
- Quantitative interpretation of historical airborne EM data.
- Quantitative interpretation of historical aeromagnetic data.
- Collection of surface samples and readings using a hand-held XRF.

5.2.1 Digitising of published geology

The 1:100 000 scale pdf scan of the Arltunga-Harts Range Area Geological map was geo-referenced to GDA94 Mga53 projection, and an area encompassing EL31103 through to the Arltunga Historical Reserve digitised. The rocktype and stratigraphy maps, and accompanying legends, are shown at Figures 3 to 6.

5.2.2 Interpretation of historical Airborne EM data.

In 2008 an airborne EM survey was commissioned by Intermin Resources Ltd, then titleholders of Mining Lease MLS150 over the White Range gold deposit. This lease is now owned by Red Dingo Corp Pty Ltd, the titleholder of EL31103. The Mining Lease adjoins and slightly overlaps the western boundary of EL31103.

The essential EM survey parameters are:

- Survey Type : Helicopter-borne Transient Electromagnetic (SkyTEM)
- Flown by : Geoforce Pty Ltd
- Client : Reward Minerals Ltd
- Flight line spacing : 200 metres
- Flight line orientation : north-south
- Terrain clearance : 30 metres
- Base frequency : 25 Hz

A copy of the digital data has been obtained and qualitative interpretation carried out by D. McInnes of Montana Drafting & Design Pty Ltd. A summary map of the interpretation is shown at Figure 8.

Only a small number of EM anomalies were amenable to a robust quantitative interpretation. Significantly, two of these occur on Line 113, which is the easternmost survey traverse entirely on EL31103. The following is an excerpt from the interpretation report.

- The modelling was very difficult: The area is quite resistive: signal dissipates very quickly. Generally, all the anomalies have narrow wavelengths and are low amplitude in the moderate time windows, indicating they are sourced by shallow low conductance bodies.
- The most robust anomaly(ies) sourced by discrete bodies (tabular dipping plates) is on line113: The anomaly is modelled as being sourced by two bodies dipping to the north (L103_N1 & L103CofN1). The Z and X component is quite coherent, the anomaly has a good wavelength. The bodies model in the Atnarpa Complex.

The parameters of the plate models on line 113 are shown in Table 3.

Table 3. Interpreted conductor parameters for EM anomalies on SkyTEM Line 113.

East	North	Priority	Depth to top	Dip	Dip Direction	Length	Depth Extent	Conductance
476310	7405065	5	-50	80	180	100	150	120
476310	7405510	5	-55	77	180	125	150	90
476325	7406045	1	-55	72	0	200	200	85
476325	7406255	1	-75	75	0	200	200	70
476320	7406460	5	-55	72	180	125	150	70

A CDI (conductivity depth image) was calculated and is shown, with interpreted conductor positions, at Figure 9. A 3D perspective view of the interpreted conductors is shown at Figure 10. The anomalies plot within tonalites of the Proterozoic Atnarpa Igneous Complex. Percussion drilling along the Wheal Mundi Fault by Bruce & Mules in 1989 intersected quartzite, schist, granitic gneiss and granodiorite. The EM anomalies are one kilometre from the nearest drillhole. The nature of the interpreted conductors is un-explained.

It is recommended that a small ground EM survey be carried out to further investigate the two high priority anomalies. Interpretation of data from a ground survey would resolve the location and geometry of the source conductors, and allow definition of drillsites to test for economic mineralisation.

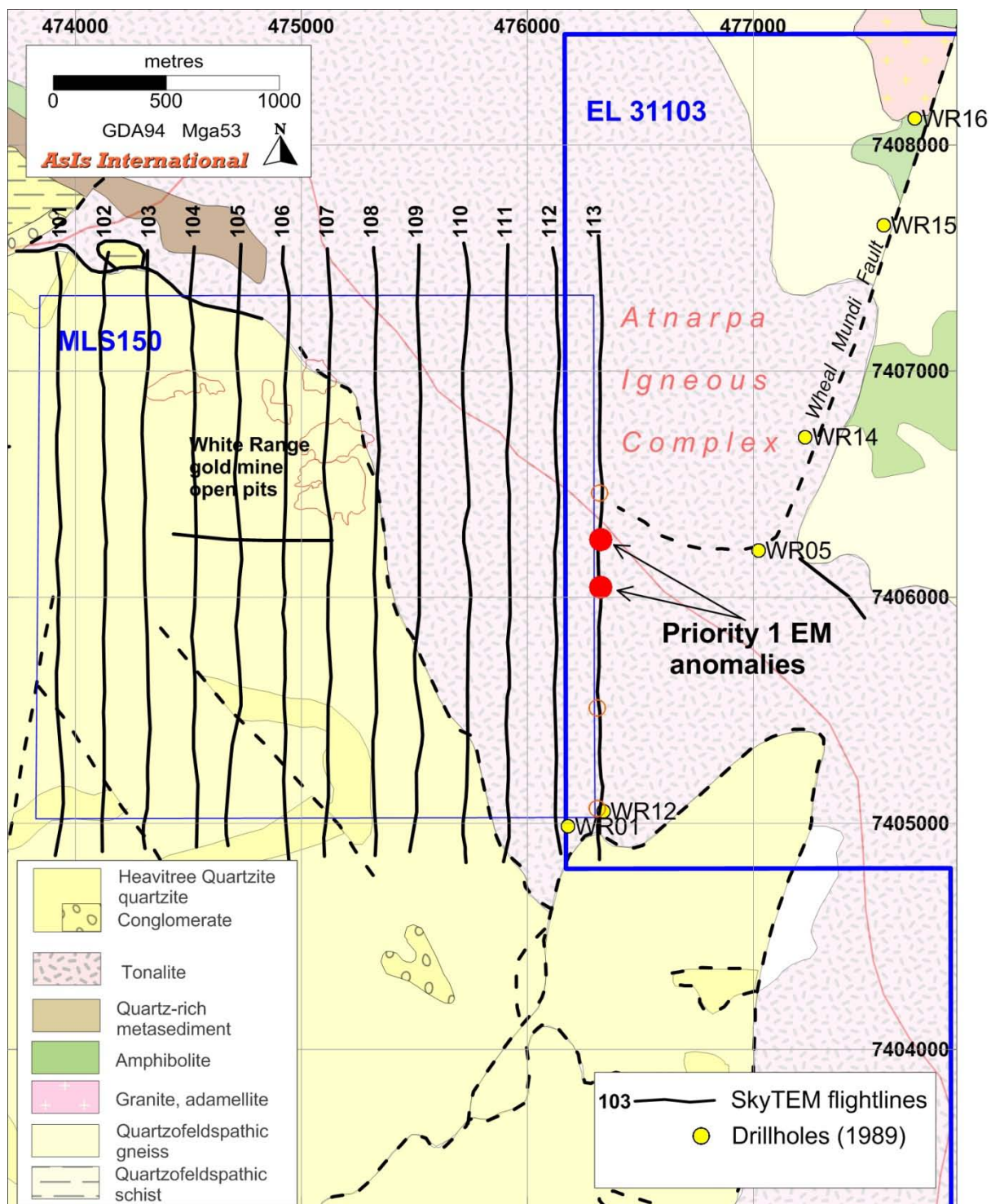


Figure 8. Geology Map showing flightlines from 2008 SkyTEM survey, and location of EM anomalies on EL31103.

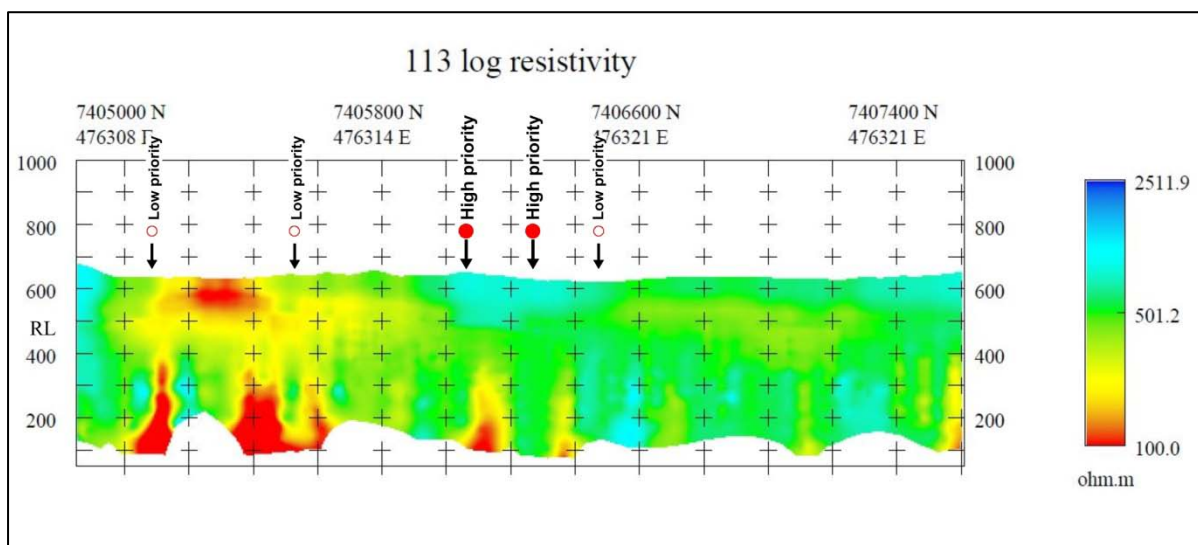


Figure 9. Conductivity depth interface (CDI) section calculated from SkyTEM airborne EM survey Line 113, and position of interpreted bedrock conductors.

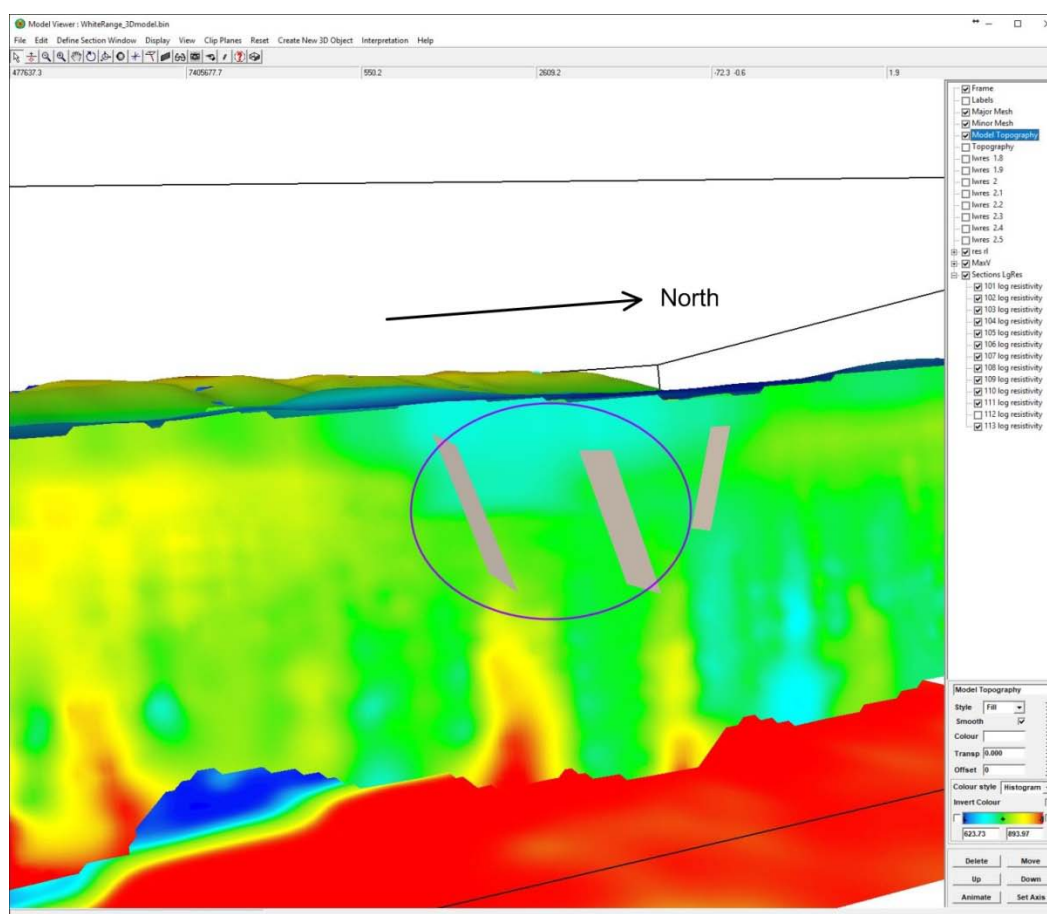


Figure 10. 3D perspective view of Conductivity depth interface (CDI) section calculated from SkyTEM airborne EM survey Line 113, and position of interpreted bedrock conductors.

5.2.3 Review of airborne magnetics and radiometrics

Airborne magnetic and radiometric data is available in the public domain from a company survey flown by Austirex for Endras Trust No.2 Pty Ltd in 1988. Information was recorded on traverses oriented at 50 degrees and spaced 250 metres at a nominal terrain clearance of 60 metres. Considering that the geological trend in this area parallels the flight line direction, the complex geology and potential size of a commercial deposit, the airborne data is coarse.

Data not yet in the public domain repository were acquired by Daishsat for Gempart (NT) Pty Ltd in 2012. Magnetics and 256-channel radiometric data were recorded on traverses oriented at 135 degrees and spaced 100 metres at a nominal terrain clearance of 30 metres. This is a high quality dataset.

An image of the first vertical derivative of RTP magnetics merged from both surveys is shown at Figure 11.

Contours of RTP aeromagnetics overlain on geology is shown in Figure 12. The area is moderately magnetic; total variation over EL31103 is about 1,000 nT. The dominant magnetic pattern is NE-SW oriented linear highs typically of 300-400 nT amplitude coinciding with biotite gneiss. The other lithologies display little magnetic relief.

Significantly, a distinct anomaly of 1,500 nT magnitude occurs at 482400mE 7406700mN in an area of biotite gneiss. There is no particular response in the radiometric channels, and the area has not been surface sampled by previous explorers. Interpretation was completed to better define the causative source. The modelling suggests an elongate source parallel to strike at shallow depth about 100 metres long and 50 metres wide, with a susceptibility up to 0.2 SI units. A plan of the anomaly area is shown at Figure 13, and interpreted geophysical and geological sections shown at Figures 14 and 15.

The source of this response is untested. The susceptibility is consistent with a magnetite content in the range 10% to 15%. This may represent a magnetite skarn with potential for Cu-Au or Mo-W mineralization.

The radiometric data were examined as contours of potassium, uranium and thorium on geology. An area of elevated thorium is observed over the Bluey's Folly REE prospect to the east of the tenement area. There are no other responses of significance in the radiometric data.

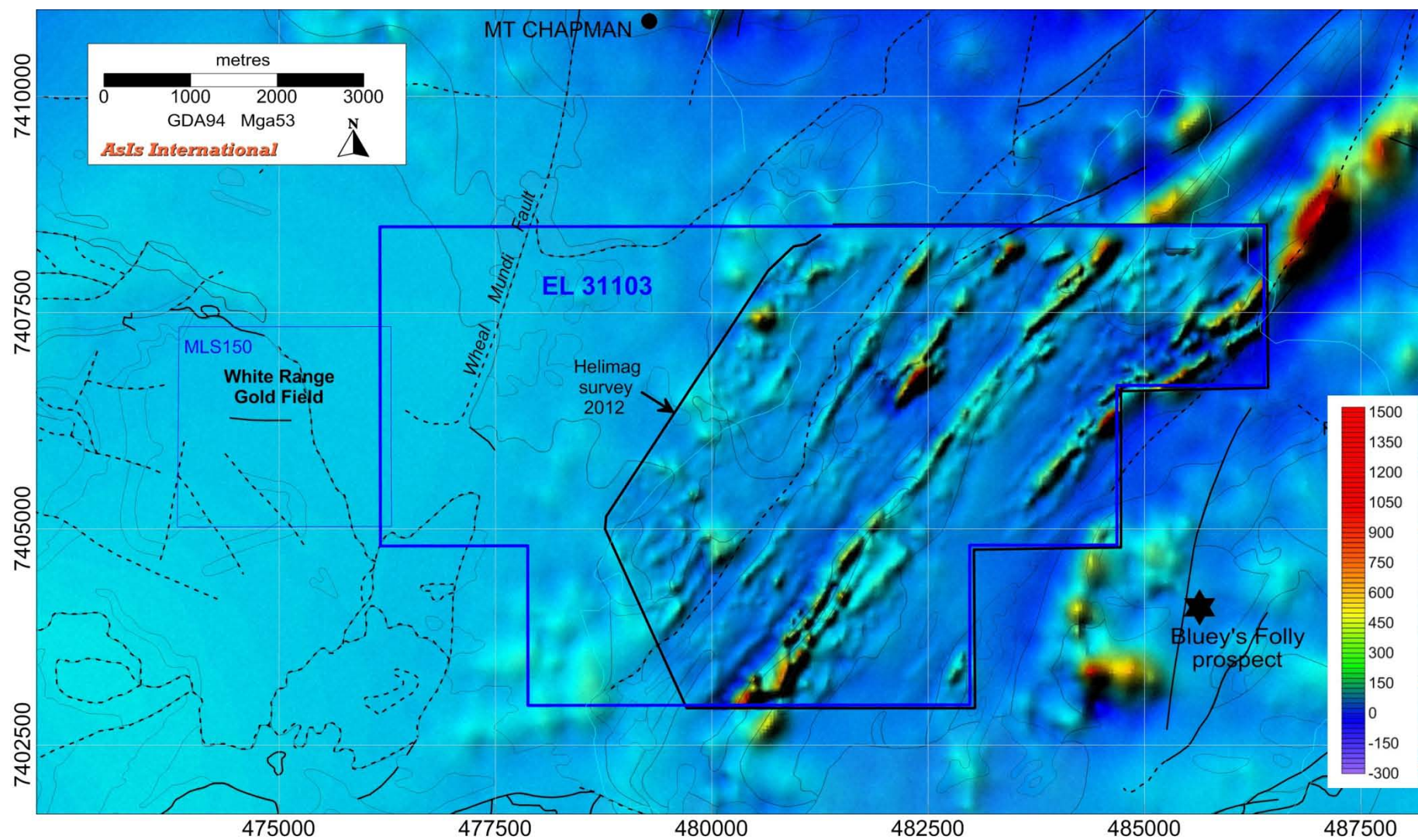


Figure 11. Image of RTP airborne magnetics and geological boundaries. Derived from 1988 Endras survey flown on 250 metre SW-NE lines, and 2012 Gempart survey flown on 100 metre NW-SE lines.

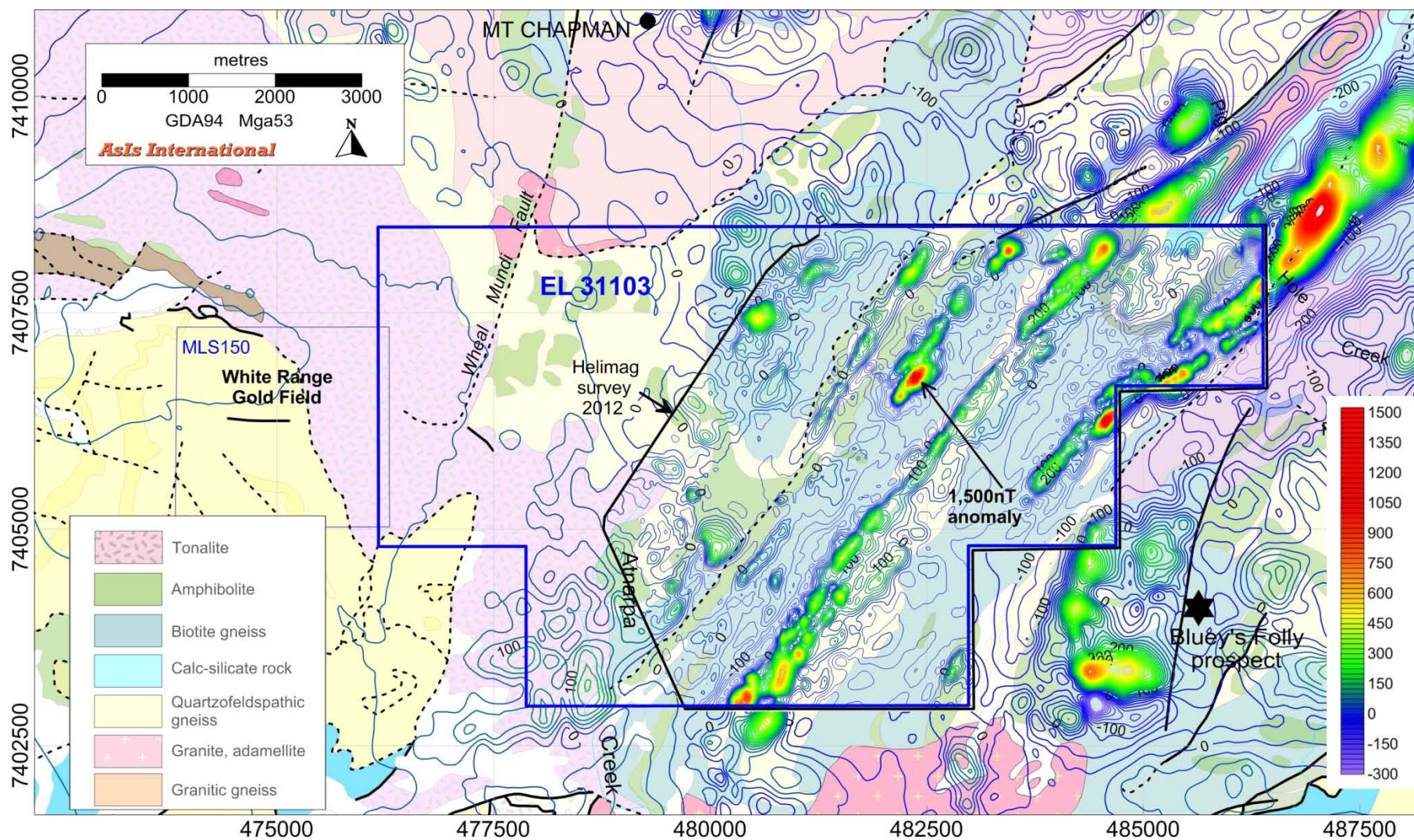


Figure 12. Contours of RTP airborne magnetics on geology. Contour interval = 25 nT. Derived from 1988 Endras survey flown on 250 metre SW-NE lines, and 2012 Gempart survey flown on 100 metre NW-SE lines.

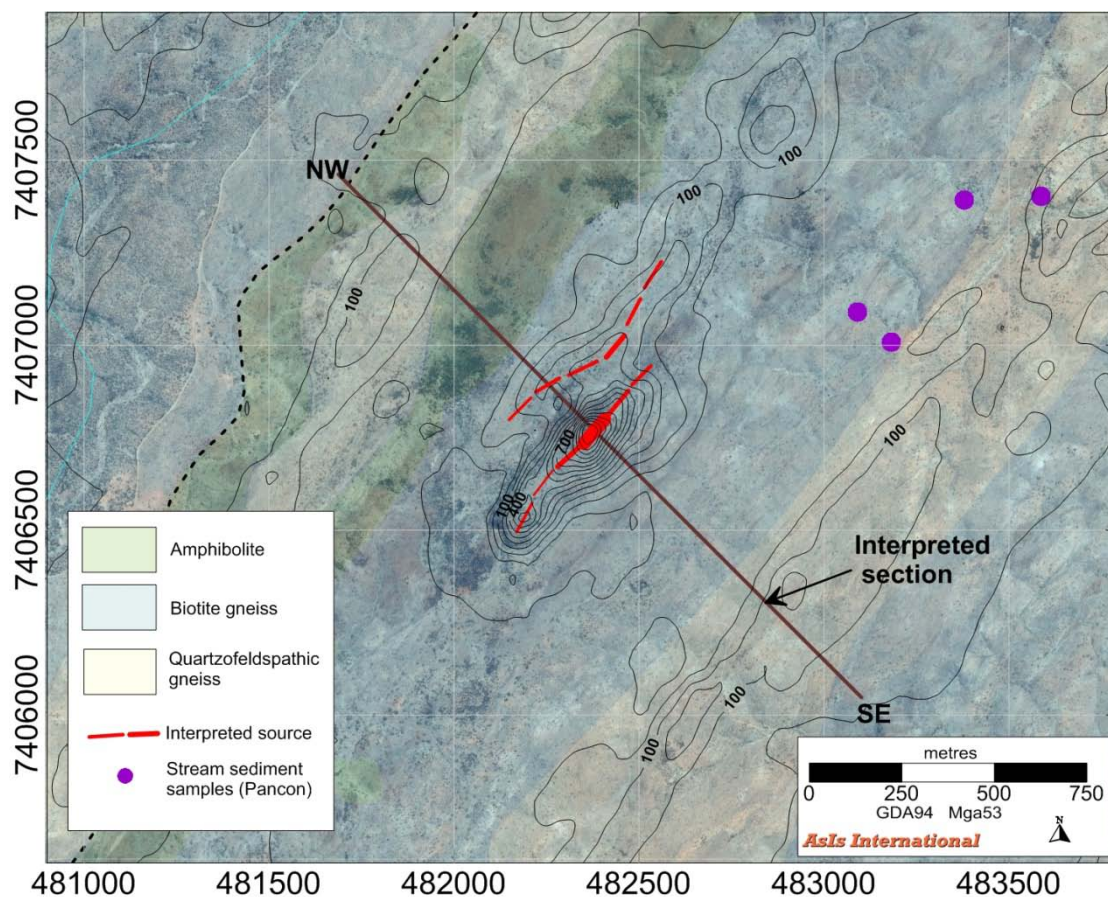


Figure 13. 1,500 nT aeromagnetic anomaly. Contours of magnetic intensity showing section location and interpreted source of magnetic response. Contour interval is 100 nT. Background is geology on Google Earth image.

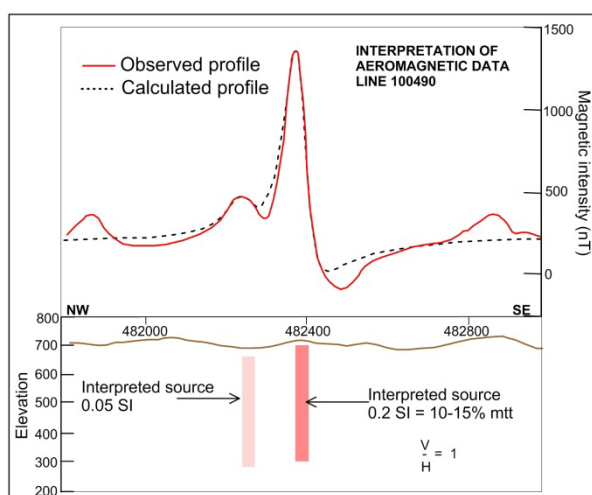


Figure 14. Interpretation of magnetic anomaly in central part of EL31103.

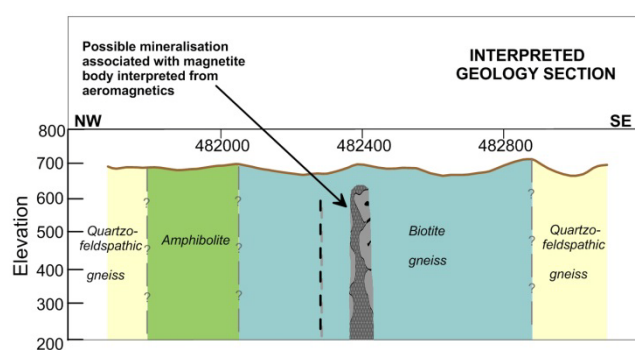


Figure 15. Interpreted geological section derived from magnetic interpretation.

5.2.4 Surface sampling & Portable XRF readings

Surface sampling comprising two rockchip and eleven soil samples were collected in the area of two Priority 1 airborne EM anomalies, located 2 kilometres SE of White Range gold deposit. The anomalies plot within tonalites of the Proterozoic Atnarpa Igneous Complex. Elemental concentration readings were acquired on the samples using a Niton XL3t 500 handheld XRF device. It must be emphasised that these are NOT assay data. The results should be regarded as loosely qualitative numbers only, as there is considerable variation in the measured element concentration values and %error readout. The values are listed in Table 4, and reading locations plotted at Figure 16. The photo at Figure 17 is a view looking NW towards the White Range gold mine showing the location of the southern airborne EM anomaly

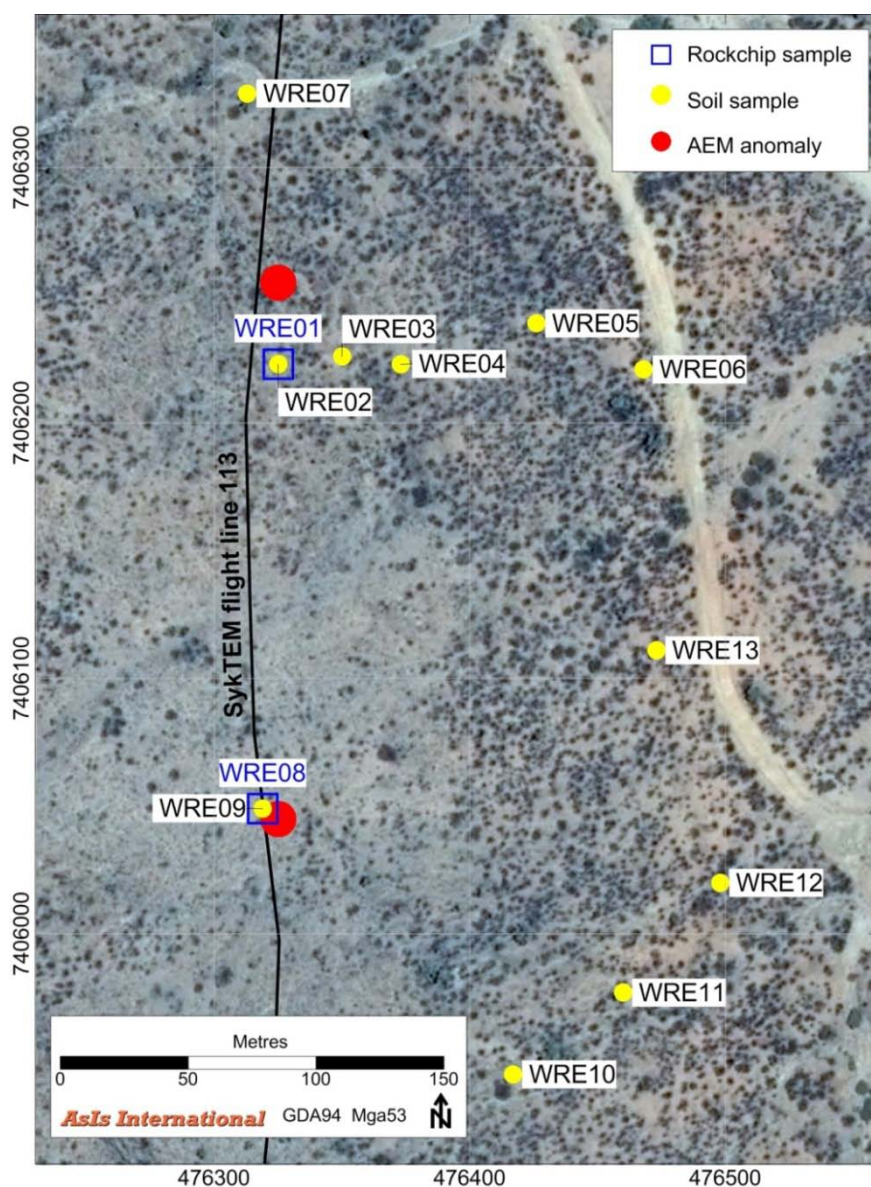


Figure 16. Location of XRF readings near AEM anomalies, EL31103.

Table 4. Elemental concentration readings in ppm on rockchip (WRE1 & WRE8) and soil samples from EL31103 using hand-held XRF.

(no representation is made as to the accuracy or veracity of these data)

SAMPLE	Duration	Ag	Ag Error	Al	Al Error	Bi	Bi Error	Co	Co Error
WRE 1	63	< LOD	37981	< LOD	800000	< LOD	5529	< LOD	11219
WRE 2	94	< LOD	11625	< LOD	800000	8247	1151	10321	3661
WRE 3	94	< LOD	12763	< LOD	800000	4457	1027	< LOD	7613
WRE 4	63	< LOD	13624	< LOD	800000	4175	1136	13785	4497
WRE 5	62	< LOD	13090	< LOD	800000	3693	1060	12482	4373
WRE 6	62	< LOD	13003	< LOD	800000	4423	1097	12040	4292
WRE 7	62	< LOD	16966	< LOD	800000	5808	1385	10001	4856
WRE 8	62	< LOD	66536	< LOD	800000	< LOD	6929	< LOD	13786
WRE 9	62	< LOD	16288	< LOD	800000	4874	1343	12269	4877
WRE 10	63	< LOD	19679	< LOD	800000	5849	1603	< LOD	10262
WRE 11	61	< LOD	15822	< LOD	800000	4978	1287	< LOD	9222
WRE 12	65	< LOD	14411	< LOD	800000	4793	1227	< LOD	8842
WRE 13	62	< LOD	24506	< LOD	800000	4340	2034	< LOD	14945
SAMPLE	Duration	Cr	Cr Error	Cu	Cu Error	Fe	Fe Error	Mn	Mn Error
WRE 1	63	3913	1631	< LOD	11707	677362	13888	< LOD	8318
WRE 2	94	3453	642	< LOD	4546	874899	9802	11430	2153
WRE 3	94	3273	672	< LOD	5129	877812	10477	10535	2229
WRE 4	63	2547	779	< LOD	5476	878872	11837	14323	2769
WRE 5	62	2665	730	< LOD	5142	875224	11288	11751	2534
WRE 6	62	3016	738	< LOD	5391	868095	10702	9957	2381
WRE 7	62	3446	946	< LOD	6146	850403	12988	11030	2927
WRE 8	62	< LOD	6770	< LOD	13715	512209	114679	< LOD	10617
WRE 9	62	3651	894	< LOD	6849	879474	13743	8562	2685
WRE 10	63	3757	1004	< LOD	7721	872026	15569	10696	3189
WRE 11	61	3046	928	< LOD	5869	874454	13037	11442	2803
WRE 12	65	2074	763	< LOD	5742	893119	12410	11412	2630
WRE 13	62	< LOD	2464	< LOD	9707	900824	20744	< LOD	8205
SAMPLE	Duration	Mo	Mo Error	Nb	Nb Error	Ni	Ni Error	Pb	Pb Error
WRE 1	63	< LOD	6005	< LOD	3934	< LOD	15232	7691	3133
WRE 2	94	< LOD	1774	2014	593	< LOD	7168	3530	956
WRE 3	94	< LOD	1958	1330	628	< LOD	8092	3022	967
WRE 4	63	< LOD	2114	< LOD	1373	< LOD	8566	2698	1063
WRE 5	62	< LOD	2029	1728	668	< LOD	8499	2549	1000
WRE 6	62	< LOD	2024	1461	644	< LOD	7933	4890	1146
WRE 7	62	< LOD	2602	2034	835	< LOD	10060	2731	1207
WRE 8	62	< LOD	8723	< LOD	5541	< LOD	20141	< LOD	8299
WRE 9	62	< LOD	2511	1727	827	< LOD	10110	2510	1191
WRE 10	63	< LOD	2976	< LOD	1975	< LOD	11600	5141	1577
WRE 11	61	< LOD	2375	2029	797	< LOD	9846	3040	1183
WRE 12	65	< LOD	2254	1605	736	< LOD	9449	3458	1161
WRE 13	62	< LOD	3664	< LOD	2478	< LOD	16261	< LOD	3760

Table 4 (cont'd). Elemental concentration readings in ppm on rockchip (WRE1 & WRE8) and soil samples from EL31103 using hand-held XRF.

(no representation is made as to the accuracy or veracity of these data)

SAMPLE	Duration	Pd	Pd Error	Sb	Sb Error	Se	Se Error	Sn	Sn Error
WRE 1	63	< LOD	24863	< LOD	32289	< LOD	2612	< LOD	25616
WRE 2	94	< LOD	7418	< LOD	9843	< LOD	802	< LOD	7818
WRE 3	94	< LOD	8110	< LOD	10671	< LOD	825	< LOD	8442
RE 4	63	< LOD	8688	< LOD	11273	< LOD	944	< LOD	9043
WRE 5	62	< LOD	8385	< LOD	10971	< LOD	866	< LOD	8600
WRE 6	62	< LOD	8251	< LOD	10872	< LOD	851	< LOD	8532
WRE 7	62	< LOD	10836	< LOD	14299	< LOD	1063	< LOD	11266
WRE 8	62	< LOD	42274	< LOD	60911	< LOD	2979	< LOD	47808
WRE 9	62	< LOD	10379	< LOD	13620	< LOD	992	< LOD	10786
WRE 10	63	< LOD	12648	< LOD	16584	< LOD	1269	< LOD	13134
WRE 11	61	< LOD	10107	< LOD	13357	< LOD	1023	< LOD	10577
WRE 12	65	< LOD	9193	< LOD	11915	< LOD	907	< LOD	9663
WRE 13	62	< LOD	15757	< LOD	21054	< LOD	1366	< LOD	16397
SAMPLE	Duration	Ti	Ti Error	V	V Error	W	W Error	Zn	Zn Error
WRE 1	63	7,366	1,774	< LOD	2,815	< LOD	33,699	274,004	31,255
WRE 2	94	33,583	1,369	2,911	653	< LOD	7,699	3,943	1,596
WRE 3	94	33,049	1,418	1,843	661	< LOD	7,902	6,703	1,879
WRE 4	63	33,007	1,691	2,638	805	< LOD	9,264	6,470	2,152
WRE 5	62	34,657	1,655	2,753	769	< LOD	9,010	5,796	2,034
WRE 6	62	33,624	1,636	2,360	757	< LOD	8,181	4,057	1,783
WRE 7	62	38,462	1,993	3,105	956	< LOD	10,101	5,802	2,282
WRE 8	62	8,086	3,143	< LOD	4,887	< LOD	38,734	94,807	19,811
WRE 9	62	34,536	1,844	2,820	890	< LOD	11,011	< LOD	4,359
WRE 10	63	32,682	1,952	2,303	965	< LOD	12,926	5,668	2,720
WRE 11	61	34,644	1,928	2,931	941	< LOD	10,238	6,213	2,293
WRE 12	65	30,568	1,628	2,056	776	< LOD	9,247	8,974	2,390
WRE 13	62	22,154	2,810	< LOD	2,666	< LOD	14,817	8,814	3,833
SAMPLE	Duration	Zr	Zr Error						
WRE 1	63	8199	2134						
WRE 2	94	41849	1980						
WRE 3	94	45368	2297						
WRE 4	63	38248	2212						
WRE 5	62	43727	2360						
WRE 6	62	50702	2603						
WRE 7	62	65226	3950						
WRE 8	62	6442	2445						
WRE 9	62	39381	2605						
WRE 10	63	46807	3445						
WRE 11	61	46475	2850						
WRE 12	65	33753	2100						
WRE 13	62	38775	3940						

No definitive analysis of the XRF readings has been attempted as the integrity of the data is in doubt. Readings for some elements are geologically reasonable, whereas others are clearly invalid. For example, Fe readings average 83%, although pure magnetite is only 72% Fe. The XRF readings are retained and reported, as it may be possible to edit and extract useful information as further data from chemical analysis of some of the samples becomes available.

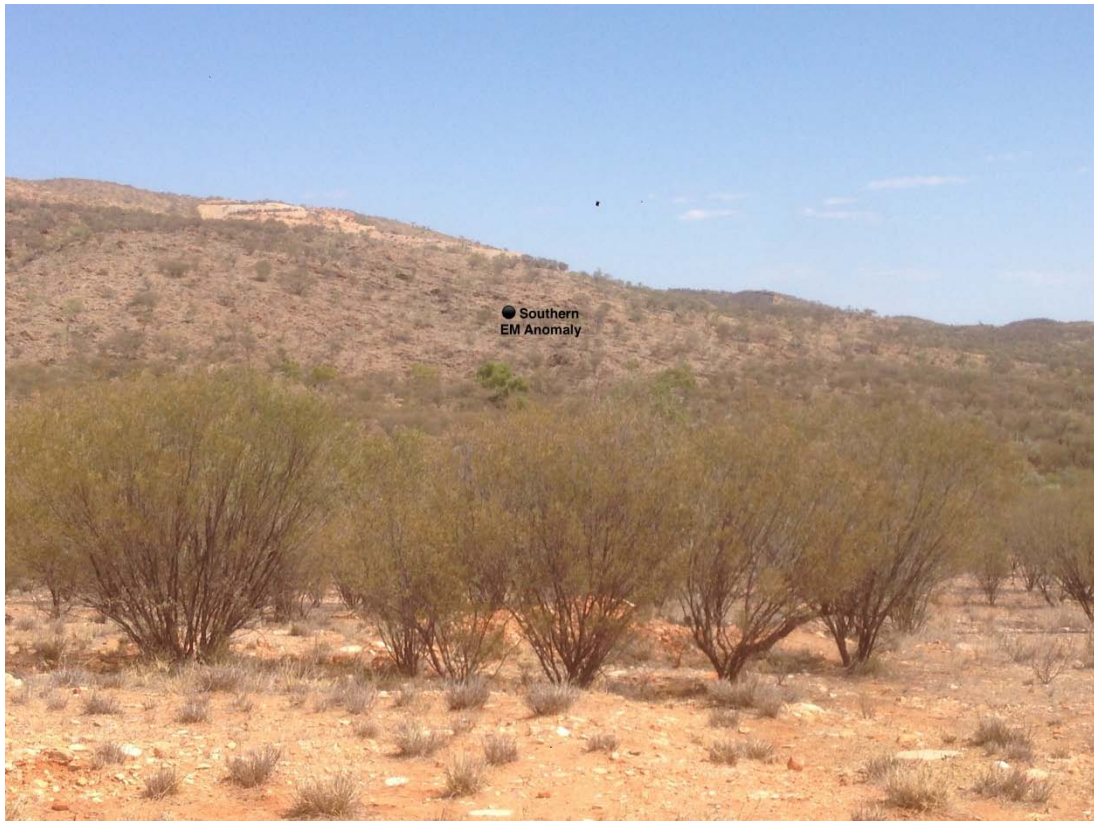


Figure 17. Photo of the area of the southern airborne EM anomaly.

6. EXPENDITURE

Table 5: Exploration expenditure for EL31103 Year 2.

ACTIVITY DETAILS FOR THE REPORTING PERIOD		
Admissible Expenditure	Detail work done including number of samples taken / stations / line km surveyed /metres drilled etc.	AU\$ Claimed
A. Geological Activities and Prospecting	20 Hand Held XRF soil samples.	5,280
B. Geochemical Activities		
C. Geophysical and Remote Sensing Activities	Contribution to White Range EM Survey Interpretation	3,775
D. Drilling		
E. Bulk Sampling and Earthworks	Grade access tracks	3,897
F. Rehabilitation		
G. Pre-feasibility inc. Metallurgical and Environmental		
H. Office Studies	Review potential success for Geophysics and historic data.	
I. Land Access	Post-grant heritage surveys.	
J. Overheads	Not to exceed 15% of the sum of A to I above. Description not required.	2,920
K. Preliminary Exploration		
L. Total Expenditure Claimed		14,679
M. Covenant for this reporting period	\$13,500	Number of blocks: 14

7. FURTHER WORK

Options for work in Year 3 include:

- Negotiate an Exploration Agreement with the new owners of Ambalindum station.
- Continue investigation of the two priority 1 airborne EM anomalies. This should include chemical assay of surface samples collected. A small ground EM survey would enable definitive interpretation of conductor locations and geometry, and planning of drillsites.
- Investigation of a 1,500 nT aeromagnetic anomaly for a possible magnetite skarn setting with Cu-Au or Mo-W mineralisation. This should include mapping, rock chip sampling, and readings of elemental concentration with a portable XRF and/or chemical assay.. A small ground magnetic survey would enable interpretation to drillsite selection stage.

8. REFERENCES

- Amoco Minerals Australia Company, 1983. Exploration Licence 2217. Arltunga (Alice Springs SF 53-14 1:250,000 sheet) Exploration Report for period 17.1.82 to 16.1.83. Northern Territory Geological Survey, Open File Company Report CR1983-0094.
- Amoco Minerals Australia Company, 1984. Exploration Licence 2217. Arltunga (Alice Springs SF 53-14 1:250,000 sheet) Exploration Report for period 17.1.83 to 15.1.84. Northern Territory Geological Survey, Open File Company Report CR1984-0094.
- Bruce, J.R, and Mules, J.H.M, 1989. NT Exploration Licence 5210. Report of Exploration Activities Relinquishment Report October 1989. Northern Territory Geological Survey, Open File Company Report CR1989-0707.
- BMRGG, 1984. Geology of the Arltunga-Harts Range Region (1:100,000 scale geological map). Bureau of Mineral Resources, Geology and Geophysics.
- CSIRO, 1988. A Description of a Rare-earth prospect Near White Range in the Northern Territory. CSIRO Mineral Chemistry Communication No. 821.
- DBL Blues; Core Exploration, 2015. EL 28029 Blueys Folley Partial relinquishment report for the period 30 November 2014 to 29 November 2015. Northern Territory Geological Survey, Open File Company Report CR2015-0851.
- Edser, G. A., 1991. Final report for period 30 October 1989 to 11 July 1990 Arltunga project. Northern Territory Geological Survey, Open File Company Report CR1991-0400.
- Graham, J. M. and Edser, G. A., 1990. Combined Annual report for Period 30 October 1988 to 29 October 1989, Arltunga Project, Northern Territory For Exploration Licences 4865, 5156, 5157, 5681, 6105, 6153, 6154, 6219, 6604 & 6665. Northern Territory Geological Survey, Open File Company Report CR1990-0005.
- McIntyre, S.J., 1974. Final report on Exploration, Arltunga, NT. McIntyre, S. Northern Territory Geological Survey, Open File Company Report CR1974-0168
- Murrell, B., 1988. Report on exploration activities 29 October 1987 to 28 October 1988 year 2. Northern Territory Geological Survey, Open File Company Report CR1988-0452.
- Newera Uranium, 2008. 2008 Annual report for EL 25926 Blueys Foley Project, 15 November 2007 to 14 November 2008. Northern Territory Geological Survey, Open File Company Report CR2008-0962.

NTGS, 2007. Bureau of Mineral Resources, Geology and Geophysics, Australia, 1:100 000 geological map series explanatory notes of the Northern Territory, Australia. *Northern Territory Geological Survey, Special Publication 4*.

Pu, Yuan, 1992. A study of allanite mineralogy and mineralisation in Bluey's Folly, Arltunga Area, Central Australia. Ph.D. thesis, James Cook University of North Queensland, Dept. of Geology.

Tanami Exploration, 2004. EL 10302 Partial relinquishment report 31 January 2002 to 30 January 2004. Territory Geological Survey, Open File Company Report CR2004-0216.

Till, S., 2017. Central Australian Gemstones Pty Ltd. Year 1 Annual Report EL31103 2 June 2016 – 1 June 2017. Northern Territory Geological Survey, Closed File Company Report.