



## ANNUAL REPORT

### EL 23655 'Lander'

### REYNOLDS RANGE PROJECT

From  
12 June 2015 to 11 June 2016

### NIL WORK REPORT

Holder	ABM Resources NL & Select Resources Pty Ltd
Operators	ABM Resources NL
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Date	June 2016
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Target Commodity	Gold
Datum/Zone	GDA94/ MGA Zone 53
250,000 mapsheet	Mount Peak (SF5305), Napperby (SF5309)
100,000 mapsheet	Denison (5353), Giles (5354)
	Reynolds Range (5453), Mount Peak (5454)

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File: jr130 NTDME EL 23655 AR 2016

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### DIGITAL APPENDICE

FILE	DESCRIPTION
EL23655_2016_A_01.pdf	Annual Report

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## 1.0 ABSTRACT

The ABM Resources NL (ABM) Reynolds Range Project is located approximately 230 kilometres north-northwest of Alice Springs in the western Arunta region (**Figure 1**). ABM explores **EL 23655** which forms part of the Reynolds Range Project for the potential of gold and base metal mineralisation as part of the Reynolds Range project together with EL 23888 and EL 28083.

No on - ground exploration was completed as ABM focused on bringing the Old Pirate Gold Deposit at its Bonanza project into production. ABM continued to implement its divestment policy.

Therefore this report covers nothing conducted during the reporting period.

All previous exploration has been outlined in the preceding annual reports.

## 2.0 INTRODUCTION

**EL 23655** is explored as part of ABM's Reynolds Range Project, which is located approximately 225 kilometres north-northwest of Alice Springs (**Figure 1**). The licence area lies within the Mt Peake, Napperby and Mt Theo 1:250,000 map sheets and is situated about 200 km southeast of the Granites mine.

Access to the Reynolds Range project area is via the Yuendumu community on the Tanami Road, and then via the unsealed Coniston track to Coniston station. Various station tracks provide further access throughout the licence area. The Lander River flows through the centre of the project area.

Outcrop and subcrop is found over some of the eastern part of the tenement, providing reasonable geological exposure compared to the majority of ABM's tenement holding in the North Arunta region. The geography of the area is dominated by the Yindjirbi, Yundurbulu, and Giles Ranges, whilst the western area of the tenements is mostly covered by aeolian sands over flat plains.

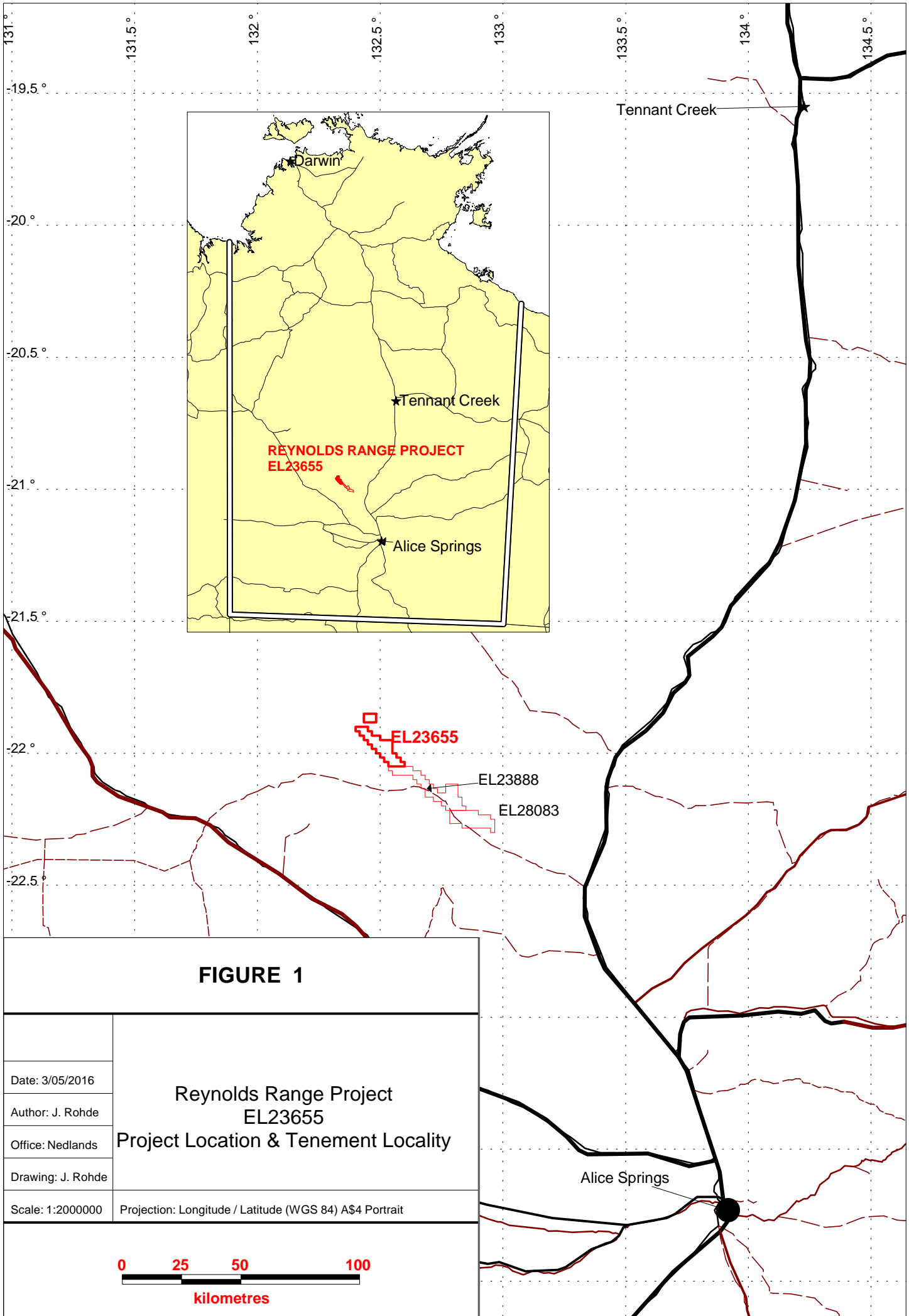
This report covers exploration carried out in the reporting period from the 12th June 2015 to 11th June 2016.

## 3.0 TENURE

**EL 23655** was applied for and granted to Select Resources Pty Ltd (Select), a private exploration and investment company, on 12 June 2003 for a period of six years. Tanami Exploration NL (TENL) entered into the Lander Project Farm-in and Joint Venture Agreement with Select on 17 December 2004. In 2008, TENL introduced a third party, Deep Yellow Limited (DYL), which had the right to explore for uranium within EL 23655. DYL withdrew from the joint venture during 2009. In December 2009, ABM Resources NL (ABM) purchased TENL's 80% beneficial ownership in EL 23655.

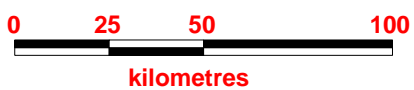
Exploration Licence 23655, together with ELs 23888 and 28083, forms ABM's Reynolds Range Project which was granted Group Reporting status (GR171/10) on 13 October 2010.

Following implementation of the *Mineral Titles Act* in November 2011, group reporting status was cancelled in respect of EL 23655 due to the requirement for all titles in the reporting group to be held by the same registered holder.



**FIGURE 1**

Date: 3/05/2016	<b>Reynolds Range Project EL23655 Project Location &amp; Tenement Locality</b>
Author: J. Rohde	
Office: Nedlands	
Drawing: J. Rohde	
Scale: 1:2000000	
Projection: Longitude / Latitude (WGS 84) A\$4 Portrait	



An extension of term of two years was approved with EL 23655 due to expire on 11 June 2017.

Tenement details are shown in **Table 1** and are illustrated in **Figure 1**.

**Table 1: Tenement Details**

Tenement No	Tenement Name	Current Blocks	Grant Date	Expiry Date
EL 23655	Lander	43	12 Jun 2003	11 June 2017

#### 4.0 GEOLOGY AND MINERALISATION

The ABM's Reynolds Range Project covers Palaeoproterozoic metasediments and intrusives in the central Aileron Province of the Arunta region. The surface geology has been mapped and described by the Northern Territory Geological Survey (NTGS) in the 1:250,000 scale Napperby (SF53-09) sheet and in more detail by the Bureau of Mineral Resources on the special edition Reynolds Range Region 1:100,000 scale geological map.

Widespread gold anomalism was identified within greenschist-facies metasediments along the eastern side of the Reynolds Range in the early 1990's. Gold is hosted by sulphidic quartz veins and has been interpreted to broadly correlate with gold mineralisation in the Tanami region.

On a regional scale the area has a very complex geology with polydeformed Palaeoproterozoic Lander Group metasediments, which host gold mineralisation, intruded by numerous felsic and mafic intrusive phases and overlain by slightly younger siliciclastic metasediments, including the Reynolds Range Group. The area is also covered by very complex regolith, with scree shedding from substantial hills cut by large drainage systems.

Most of the gold mineralisation in the Reynolds Range Region appears to be concentrated along a relatively narrow corridor of greenschist facies Lander Rock Formation metaturbidites. Where there is good exposure in the central northeastern part of the belt, in the vicinity of Troutbeck-Bowness, folding in the Lander beds has northwest-striking axes, plunge towards the southeast and verges towards the southwest with steep southwestern limbs and gently dipping northeastern limbs (English, 2006).

The highest grade gold mineralisation is at the **Sabre** and **Falchion** prospects. A sharp increase in metamorphic grade occurs towards the northeast where granulite facies is encountered and these rocks have been named the Mt Stafford Formation. High grade intercepts do occur in rocks of higher metamorphic grade, such as the Black Knight Prospect, but in this case it appears to be associated with retrograde greenschist facies metamorphism. Gold mineralisation occurs in a number of different geological settings and with a number of different metal associations.

The project area is interpreted to be underlain by three major north-west orientated lithologies units. High magnetic / high metamorphic grade Lander Rock Beds (Aalh) along the north eastern tenement boundary is bordered to the south by low magnetic / low metamorphic grade Lander Rock Beds (Aall) which form the main lithological unit in the centre of the tenement. Minor low magnetic / moderate to high magnetic granitic units (Agn/Agm) as well as Dolerite units (P-OD) are located on the tenements (**Plate 1**).

At the district or project scale, **EL 23655** straddles the contact zone between a granite-gneiss terrain (P6 - 1800 to 1700 Ma) to the north and a meta-turbidite terrain (P4 Lander Rock beds - 1880 to 1850 Ma) to the south. These terrains are separated by 1850 - 1800 Ma P5 granite. Most mineralisation outlined to date is hosted by upper greenschist to lower amphibolite facies phyllite, dolerite, greywacke and hornfels of the Lander Rock beds. Important structures trend 320°, 030° and 065° forming thrusts and conjugate compressional fault sets (Messenger, 2004).

## 5.0 PREVIOUS EXPLORATION

In the **first** year of tenure Select completed a literature review, data compilation of previous exploration of the licence area and preliminary negotiations with the Central Land Council and Aboriginal Owners in the first year of tenure. A detailed discussion of exploration prior to EL 23655 is found in Messenger, 2004. Several prospects were defined, which are shown on **Plate 1**.

In the **second** year of tenure TENL completed a regional desktop study of the Reynolds Range project comprising regional bedrock geological interpretation of geophysical data. The study identified that a major Trans-Tanami structural corridor runs through the region and is prospective for hosting Palaeoproterozoic gold mineralisation in Lander Group metasediments.

As a result of the literature review it was determined that initial reconnaissance geochemical prospecting had been completed over much of the tenement resulting in the identification of several prospects with significant gold mineralisation. As several prospects requiring immediate follow-up drilling were identified, no further preliminary reconnaissance work was thought necessary. Select then decided to seek a joint venture partner to conduct drilling programs at key prospects as well as regional exploration over the remainder of the licence area.

In the **third** year of tenure exploration on EL 23655 included (Rohde, 2006):

- geological and regolith mapping and interpretation
- rock chip sampling (20 samples)
- vegetation sampling (14 samples)
- lag sampling (183 samples)
- RAB drilling (139 holes, 5,128 metres)
- Aircore drilling (22 holes, 1,005 metres) and
- SLRC drilling (41 holes, 2,307 metres).

Significant rock chip results were returned from calcrete at Troutbeck (RRK032) with 71 ppb Au. A value of 2,233 ppb Au from Bowness was a repeat rock chip confirming previous gold mineralisation known from this outcrop.

Results of vegetation sampling highlighted detectable concentrations of various metals, including Au. Lag sampling at the Red Hackle Dam anomaly returned a best result of 194 ppb Au.

During **2005** a program of Aircore and Slimline RC drilling was completed. At the area of the Troutbeck prospect widespread moderate anomalism was encountered at Troutbeck 1 & 2, with weak anomalism at Troutbeck 3. Best results were at Troutbeck 2 with 4m @ 2.86g/t Au in a massive psammite (RRN054; 24-28m) and 4m @ 1.59g/t Au in psammite and psammopelite (RRN053; 12-16 m).

In **2006** further drilling, including Aircore, RAB and Slimline RC was completed on EL 23655 to test the Red Hackle strike extension; untested Lander beds to the west of Red Hackle and strike extensions of Bowness and Troutbeck.

Exploration continued in the **fourth** year of tenure (Year Ending 11th June **2007**) from the previous year with RAB / aircore drilling west of Bowness, slimline RC drilling at Bowness, lag sampling at the Red Hackle Dam anomaly and re-sampling and petrography from the Black Knight diamond hole BKD003. A summary of exploration is listed below:

- lag sampling (14 samples)
- RAB drilling (1 hole, 5, 35 metres)
- Aircore drilling (9 holes, 180 metres )
- SLRC drilling (5 holes, 352 metres) and
- Drill Re-Sampling (274samples).

No significant results were returned from the drill programs, with only low tenor of gold anomalism intersected. Thin section descriptions of the Black Knight drill samples confirmed that the mineralisation is associated with retrograde greenschist facies metamorphism and the re-samples confirmed but did not improve upon the low grade assays of drilling undertaken by a previous explorer. No elevated gold results were returned from the lag sampling.

In the **fifth** year of tenure (year ending 11th June **2008**) no on-ground exploration was undertaken.

In the **sixth** year of tenure (Year Ending 11th June **2009**) DYL completed all exploration including reconnaissance field trips, an Airborne Electromagnetic (AEM) survey, a Night Time Thermal Infrared (NTIR) data interpretation and an aircore drill programme. A summary of exploration is listed below:

- Reconnaissance trips (3)
- Airborne Electromagnetic Survey (335 line km, 1.5 km line spacing)
- Infrared Data Interpretation and
- Aircore drilling (39 holes, 887 metres, 72 samples, 144 assays)

The field trips, the AEM survey and the NTIR data interpretation resulted in the identification of paleo – channels, which were subsequently drill tested in parts, where access was allowed. The drilling intersected oxidised and clay-prone colluvium without finding any sandy or calcreted paleodrainage. Therefore the uranium prospectivity of this tenement is considered downgraded and unattractive for further sediment-hosted exploration.

No significant results were returned from the drill program. The best uranium assay result was 9ppm U and the best uranium oxide assay result returned was 11ppm U<sub>3</sub>O<sub>8</sub> from a five metre interval in hole RRAC 220.

In **2009/2010** no on ground exploration was completed on EL 23655 ‘Lander’. Geochemical sampling and drill hole data obtained from TGNL was transferred to the ABM database.

In **2011** two previously sampled rock chip samples were assayed. The two rock chip samples were collected from quartz veins 1.8km southwest of the Black Knight, which showed traces of sulphides. Details are summarized in **Table 4**.

**Table 2**            **2011 Surface Sampling Details**



Sample ID	Prospect Locality	Sample Type	Coordinates MGA94 53 East	Coordinates MGA94 53 North	Gold (g/t)	Silver (g/t)	Copper ppm	Lead ppm	Zinc ppm
BKRK200001	SW Black Knight	Rock chip	244695	7569052	<0.001	0.15	24.7	14.3	96
BKSL300001	SW Black Knight	Soil lag	244600	7569012	0.003	0.86	229	60.1	415

No significant assay results were returned.

In year ending 11th June **2012** exploration included the mobilisation for an airborne geophysical survey. The actual survey flights over ABM's Reynolds Range tenements commenced on the 28th of June 2012, after the new anniversary date for the reporting period (11<sup>th</sup> of June 2012).

In the year ending 11th June **2013** exploration across ABM's Reynolds Range Project included the completion of a medium density airborne electromagnetic (AEM) survey of a total of 1,638 line km, with a 400m line spacing and a line direction of 042 degrees. The nominal terrain clearance was 100m.

The 582km<sup>2</sup> survey, covering the project, was completed by Fugro Pty Ltd., and the survey data was processed and interpreted by Fathom Geophysics.

As a result of the processing, eight high conductivity targets were generated project wide. Two anomalies, "2\_13", and the larger "2\_15", fall on **EL 23655**. The only apparently real conductor, modelled as an approximately flat plate, is anomaly "2\_15", which is located 3km south west of the Black Knight prospect (**Plate 2**).

The survey also generated two anomalies ("2\_14", "2\_16") which are located to the east of **EL 23655** at the limits of the AEM survey and are as such deemed unreliable.

During the year ending 11th June **2014** ABM focused on bringing the high-grade Old Pirate Gold Deposit at its Bonanza project into production and started to implement a divestment policy.

In November 2013 ABM had reached an agreement with Clancy Exploration Ltd (ASX: CLY) ("Clancy") whereby Clancy would have the option to acquire 100% of ABM's interests in the North Arunta Regional Projects, which EL 23655 forms a part of.

In March 2014 ABM conducted a reconnaissance trip to introduce Clancy representatives to the ground in general as well as to the Trout Prospects plus the Mt Stafford and Coniston Tin Workings in particular.

During the year ending 11th June **2015** exploration included a geophysical review and a valuation of ABM's North Arunta Package by Clancy and a field reconnaissance trip including XRF measurements by ABM.

At the Mt Stafford tin workings, five XRF readings were taken from rocks, which showed elevated levels of tin, but nothing significantly high to warrant further work.

At the Trout prospect, eleven XRF soil readings were taken to follow up on a historic assay result of 104 ppm gold from a rock sample, and a 29 ppm gold value from a costean sample. Some moderately increased arsenic results were identified and further soil sampling or shallow drilling will be required to assess whether the historic results were valid and worth following up.

## 6.0 EXPLORATION COMPLETED

During the year ending 11th June 2016 no exploration was conducted as ABM focused on mining its Old Pirate Gold Deposit at its Bonanza project.

Therefore this report covers nothing conducted during the reporting period.

## 7.0 RECOMMENDATIONS AND CONCLUSIONS

No new recommendations or conclusions were made.

The 2013 recommendation to follow up on the in 2012 airborne electromagnetic survey generated anomalies “2\_15” in the center and the smaller anomaly “2\_13” remains valid.

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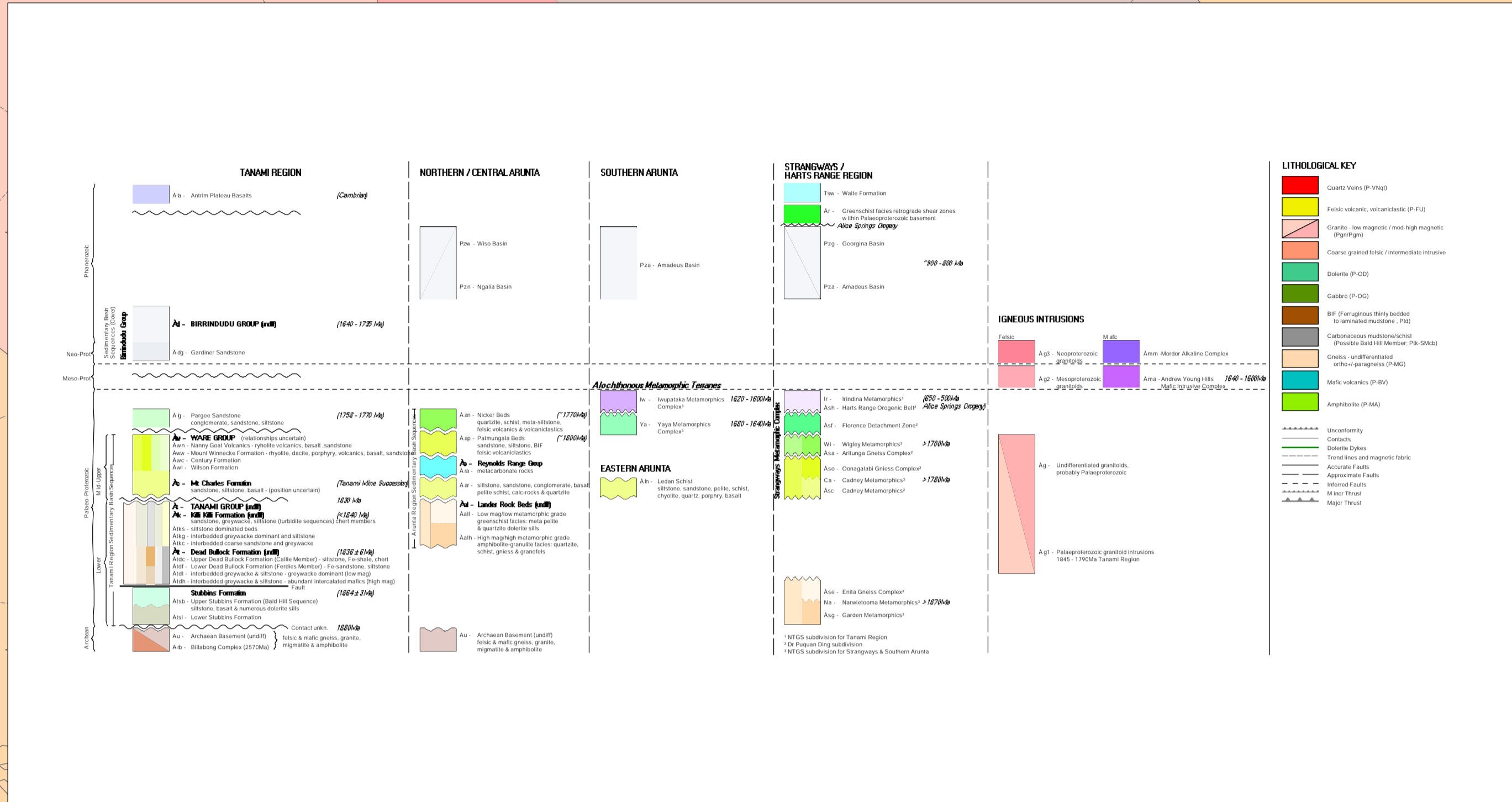
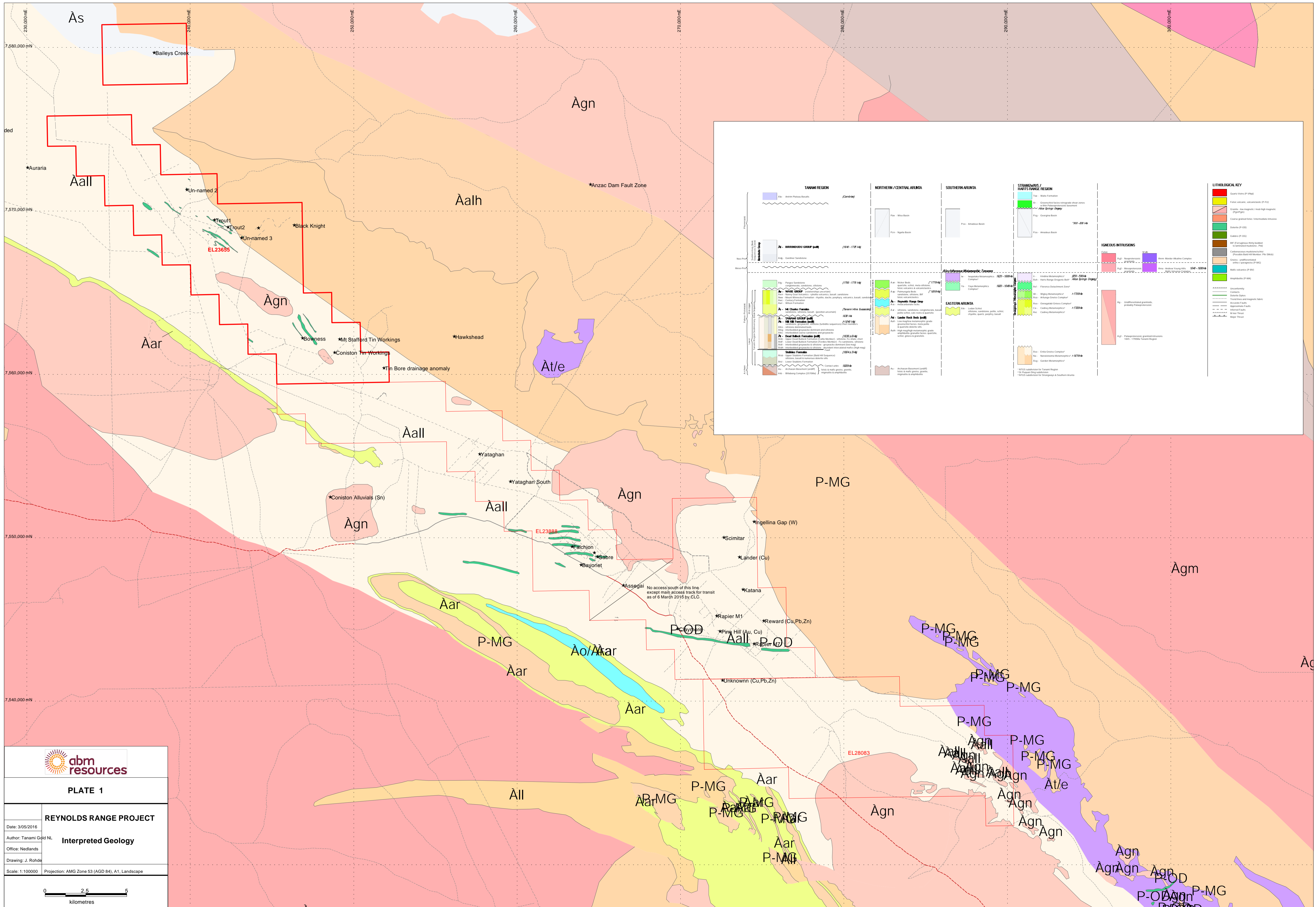
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**abm resources**

**PLATE 1**

**REYNOLDS RANGE PROJECT**

Date: 3/05/2016  
 Author: Tanami Gold NL  
 Office: Nedlands  
 Drawing: J. Rohde

**Interpreted Geology**

Scale: 1:100000 Projection: AMG Zone 53 (AGD 84), A1, Landscape

0 2.5 5  
 kilometres