



# GROUP ANNUAL REPORT

For  
EXPLORATION LICENCES  
EL 23888 "Stafford" & EL 28083 "Stafford SE"

REYNOLDS RANGE PROJECT

GR 251

From  
5 September 2016 to 4 September 2017

<b>Holder</b>	ABM Resources NL
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<b>Target Commodity</b>	Gold
<b>Datum/Zone</b>	GDA94/ MGA Zone 53
<b>250,000 mapsheet</b>	Napperby (SF5309)
<b>100,000 mapsheet</b>	Reynolds Range (5453)

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GR251_2017_GA_01.pdf	Group annual report 2017

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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). The project comprises three granted Exploration Licences, EL 28083, EL 23888 and EL 23655. ABM explores the project for the potential of gold mineralisation.

Exploration was limited to a reconnaissance visit which included location and mapping of historical workings and drilling to validate database and GIS records.

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

## 2.0 INTRODUCTION

EL 23888 and EL 28083 are explored as part of ABM Reynolds Range project. The project, comprising EL 23888, EL 28083 and EL23655, is located approximately 230 kilometres north-northwest of Alice Springs (Figure 1). The licence area lies within the Napperby, and Reynolds Range map sheets and is situated about 300 km southeast of the Granites mine.

Access to the Reynolds Range project area is via the Tanami Road, and then via an unsealed tracks from Yuendumu. Various station tracks provide further access throughout the licence area.

Clancy's acquisition was subject to several conditions precedent, including completion of a capital raising by Clancy. In September 2014 Clancy announced that it was unable to fulfil the capital raising condition precedent due to the difficult equity markets.

This group report covers exploration carried out in the reporting period from the 5 September 2016 to 4 September 2017.

## 3.0 TENURE

EL 23888 was granted over an area of 149 blocks to Newmont Gold Exploration Pty Ltd (Newmont). Tanami Gold NL (TGNL) entered into an option agreement with Newmont on 28 May 2004. On 19 December 2006, 100% ownership of EL 23888 was transferred to TGNL. In 2008, TGNL introduced a third party, DYL, which had the right to explore for uranium within EL 23888. DYL withdrew from the joint venture during 2009.

At the end of the third year of term, EL23888 was reduced to 75 blocks. The licence area was further reduced to 56 blocks at the end of the fourth year of term. A waiver from the requirement to relinquish ground at the end of the fifth year of term was approved by DRDPIFR.

In December 2009, ABM acquired EL 23888 from TGNL.

EL 28083 was granted over an area of 37 blocks to ABM on 31 January 2011 for a period of six years.

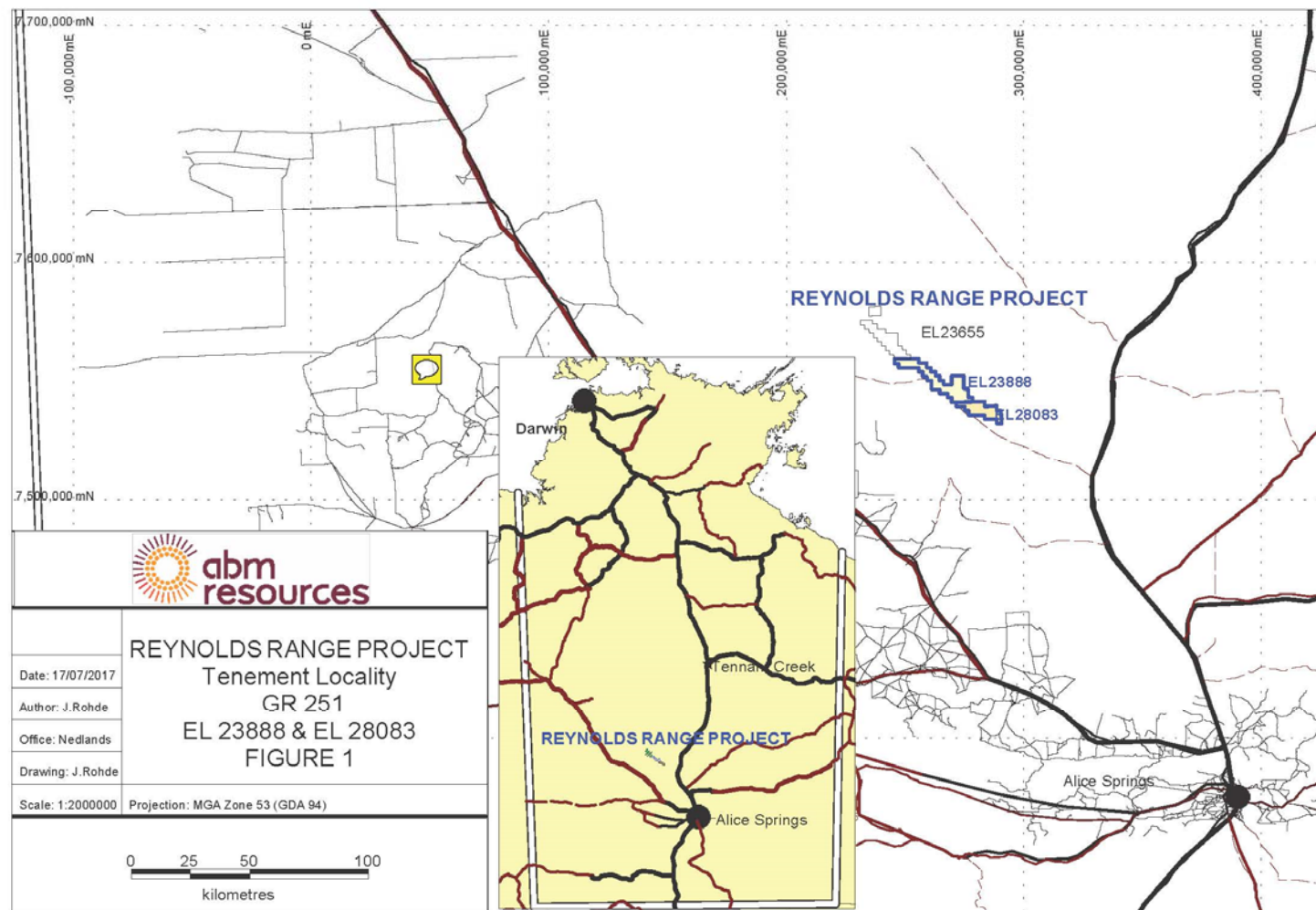


Figure 1: Project Location & Tenement Locality

On the 26 April 2012 EL 23888 was approved to be amalgamated together with EL 28083 for technical reporting and the group reporting ID GR 251/12 was allocated. The reporting period for this title group was set to 5 September to 4 September with a report submission due date of 4 November each year.

To align the reporting period for the group report with the set reporting period two bridging reports were completed in October 2012.

Renewal of EL 23888 was granted for a term of two years expiring 11 August 2014. A further renewal for a term of two years, expiring 11 August 2016, was granted on 15 January 2015. Grant of a further extension to 11 August 2018 occurred on 20 January 2017.

EL28083 was renewed for a further two years on 27 February 2017 and is due to expire on 30 January 2019.

Current tenements are listed in Table 1 and are illustrated in Figure 1.

Table 1: Tenement Details

Tenement No	Tenement Name	Current Blocks	Grant Date	Expiry Date
EL 23888	Stafford	56	12 Aug 04	11 Aug 2018
EL 28083	Stafford SE	37	31 Jan 11	31 Jan 2019

#### 4.0 GEOLOGY AND MINERALISATION

The 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 lithological 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 three tenements (Plate 1).

## 5.0 PREVIOUS EXPLORATION

Exploration in the first year of tenure consisted of regional desktop studies, including geophysical and geological interpretations. The study confirmed that a major Trans-Tanami structural corridor which runs through the area hosts the known gold mineralisation.

A review of the open file reports by Poseidon Gold, Normandy Exploration and Exodus minerals was completed for the Reynolds Range area. There are numerous untested anomalies (surface geochemical and geophysical) as well as prospects with economic grades and widths. Diamond and RC drilling was completed at Sabre, Falchion, Assegai and Yataghan, but only hammer RAB, blade RAB, vacuum or surface sampling elsewhere. A couple of historic Au-Cu mines (Reward, Pine Hill) are situated southeast of the Sabre-Falchion area (Plate 1). Gold is commonly associated with Sb, Pb and As. Geochemical sampling data obtained from Newmont and from open file reports were transferred to the TGNL database and validated.

Diamond drillcore was also retrieved from Newmont's Ivy camp and relogged. A number of brief reconnaissance trips were undertaken through the area, but the absence of comprehensive work area clearances limited these trips to logistical planning.

During the final reconnaissance trip in the Reynolds Range area, previous drilling and grid lines, prospect mapping and sample sites were identified. A total of 24 rockchip samples were collected with some encouraging results:

- RRK004 1494ppb Au, 190ppm As, 10ppm Cu and
- RRK009 7775ppb Au, 668 ppm As, 25 ppm Cu from the Sabre area and
- RRK02312,149 ppb Au, 44 ppm As, 1176 ppm Bi and 5405 ppm Cu from a known prospect ca 1.1 kilometers southwest of Sabre.

In the second year of tenure exploration included geological and regolith mapping and interpretation, rock chip and vegetation sampling, RAB, Aircore and SLRC drilling in two drilling phases. The activities details and the results are described in the second annual report in Rohde, C., 2006. An exploration summary is listed below in Table 2.

Table 2: Exploration Summary for the second year (12 Aug 05 to 11 Aug 06)

Activity	Details
Geological and Regolith Mapping / Interpretation	1:100,000 map
Rock Chip Sampling	66 samples
Vegetation Sampling	29 samples
RAB Drilling	76 holes, 2,570 metres
Aircore Drilling	16 holes, 863 metres
SLRC Drilling	42 holes, 2,220 metres

Significant rock chip results were returned from the known Falchion mineralization with a maximum value of 11.5 ppm. Results of vegetation sampling highlighted detectable concentrations of various metals, including Au.

In 2005 RAB, Aircore and slimline RC drilling was completed testing three regional targets and three advanced targets, Falchion, Sabre and Yataghan South. In 2006 RAB drilling was on untested Lander beds south and parallel to Sabre and Falchion.

At Falchion the width and tenor of previously identified mineralisation was confirmed, including an intercept of 14m at 3.8g/t Au from 5m (RRA009). Step-out drilling also extended the known mineralised structure along strike in both directions, with intercepts of 4m at 1.5g/t Au from 40m depth (RRA011) over 50 metres to the east, and 4m at 0.5g/t Au from 44m depth (RRB2326) over 100 metres to the northwest.

At Yataghan South infill drilling established the main structural orientation and confirmed continuity of previously recognised mineralisation, returning a best result of 20m at 0.5g/t Au from 16m which included 4m at 1.2g/t Au from 20m depth (RRN026).

The drilling at Sabre was disappointing with only moderate anomalism returned from the traverse across the interpreted fold hinge and further west across the interpreted opposing limb to the main Sabre mineralisation.

In the third year of tenure no field work was conducted.

In the fourth year of tenure, TENL introduced a third party, DYL, to the project to assist with exploration funding. DYL carried out a reconnaissance trip to investigate access to the tenement area. No field work was carried out.

In the fifth year of tenure exploration was carried out by DYL and comprehended three reconnaissance trips field trips and a night time thermal infrared data interpretation. The field trips and the night time thermal infrared data interpretation resulted in the identification of two east west trending palaeo-ponds, which did not have apparent direct surface expressions of buried paleochannels.

In 2009/2010 ABM completed surface sampling as well as RC and diamond drilling on EL 23888 'Stafford'. A summary of exploration is listed in Table 3.

Table 3: Exploration Summary for the year ending 11 Aug 2010

Exploration Activity	Details
Rock Chip Sampling	8 samples

Termite Hill Sampling	1 sample
RC Drilling	4 holes, 1165 metres
Diamond Drilling	4 holes, 1092.5 metres

Significant surface sample (rock chip) assay results were returned from both the Pine Hill Prospect with a maximum value of 1.79 g/t Au (PH200004) as well as from the Reward Prospect with maximum value of 271g/t Ag (RW 200005) and a 20.30% Cu (RW200006) assay value.

In 2010 RC and Diamond drilling tested targets of a high grade sediment hosted veins style along the Stafford Mineralised Zone. The results at the Sabre Prospect extend the mineralised zone to a width of more than 120 metres. Best intercepts were associated with sulphidic quartz veining in metamorphosed silt and sandstones (semipelite and psammite) and included 17meters @ 3.93g/t gold including 2 meters of 18.15g/t Au came from the Sabre Prospect. At the Falchion Prospect the best intersection returned 29m at 2.32g/t Au and 32m at 1.84 g/t Au also in conjunction with quartz veins hosted within metamorphosed sandstone. The one RC hole drilled at the Assegai prospect returned no significant intercepts.

In 2011 no on ground exploration was carried out during the newly implemented combined reporting period ending 4 October each year. Three previously unreported surface samples from outcropping quartz veins and quartz lag material were reported. No significant surface sample assay results were returned from both sampling sites with a maximum value of 0.003 ppm Au from BKS300001 (on EL 23655).

In 2012 exploration across ABM's Reynolds Range Project during the reporting period 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 42 degrees. The nominal terrain clearance was 100m.

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

As a result eight high conductivity targets were generated. Four anomalies fell on EL 23888 (2\_17, 2\_18, 2\_19, 2\_12) and none of the anomalies fell on EL 28083. .

In 2013 as ABM focused on bringing the high-grade Old Pirate Gold Deposit at its Bonanza project into production through staged development, commencing with trial mining and processing, no exploration was conducted during the reporting period.

In the period 5 September 2013 - 4 September 2014:

ABM continued to focus on bringing the high-grade Old Pirate Gold Deposit at its Bonanza project into production through staged development and started to implement its divestment policy including EL 28083, EL 23888.

In November 2013, as part of ABM's 2013 divestment policy and its commitment to regional exploration programs, ABM reached an agreement with Clancy Exploration Ltd (ASX: CLY) ("Clancy") whereby Clancy will have the option to acquire 100% of ABM's interests in the North Arunta Regional Projects, which EL 28083 and EL 23888 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 *Mt Stafford and Coniston Tin workings, Yataghan, Sabre and Assegai* Prospects in particular.

Clancy commenced a substantial program of compilation and re-processing of potential field datasets covering an Area of Influence (AOI) in the Tanami – North Arunta region, which includes the Reynolds Range project. This work was undertaken by Fathom Geophysics.

Public domain data and 7 closed file ABM surveys of Total Magnetic Intensity (TMI) data was processed using the differential Reduced to the Pole method to produce a selection of images for a later stage interpretation.

The program of compilation and re-processing rediscovered a previously overlooked helimagnetic survey, flown in 1996 by Normandy. It was recommended that the high-resolution dataset should be integrated into the regional and detailed magnetic grids for Reynolds Range Project.

The 2013 recommendation to follow up on the in 2012 airborne electromagnetic survey generated anomalies 2\_17, 2\_18, 2\_19 and 2\_12 on EL 23888 remained valid.

At the end of the 2013 -2014 reporting period the negotiations between ABM and Clancy were still ongoing.

In the period 5 September 2014 to 4 September 2015 exploration consisted of a pre-acquisition assessment, a reconnaissance trip in combination with rock chip sampling and X-ray fluorescent (XRF) analyser sampling. A summary of exploration is listed in Table 4.

Table 4 Summary of Exploration 2015

Tenement No	Pre Agreement Assessment	Number of Rock-chip Sampling	Number of Laboratory Assays	Number of XRF Measurements	Number of Prospects Visited
EL 23888	yes	78	78	59	4
EL 28083	yes				

The pre-acquisition evaluation (SRK Consulting for Clancy) noted that the distribution of prospects appear to be zoned around the central intrusions of Agn and appearing to be preferentially emplaced along the Lander River Beds (Aall). The inner zone is marked by Sn and W deposits, followed outwards by gold, Cu and Cu-Au, and then copper and other base metals.

ABM's 5 day fieldtrip aimed at ground truthing a number of targets (based on existing geochemical response) with XRF sampling, mapping and rock chip sampling. The Assegai, Falchion, Sabre and Bayonet prospect locations were visited.

59 XRF samples were recorded and 78 rock chip samples were collected and multi - element assayed.

Three elevated gold assay and two elevated arsenic results were returned. The maximum Au assay result was 3.38 ppm from ABM15LV053\_R1 and the maximum As assay value was >10,000ppm (above the lab method's upper detection limit) from RRRK100122.

The best XRF arsenic reading of 4124.06ppm came from RRXRF00019 at a quartz vein at the Falchion prospect.

XRF results for Au typically did not exceed the standard deviation; however results for other elements (specifically As) did tend to highlight anomalism.

Several occurrences of structurally controlled anomalous mineralisation were located and identified.

Structural measurements (dip and →dip direction) were noted.

At Falchion & Sabre: probable shear localised mineralisation trending 84 →014 (anomalous As values) trending oblique to main milky-grey quartz veins hosted in fine grained quartz-metasandstone & biotite-siltstone Lander Rock Formation;

At Assegai: no substantial outcrop of Lander Rock Formation was found to assess potential mineralisation setting; the setting is surmised to be similar to Falchion & Sabre

At Bayonet due to limited outcrop the setting of mineralisation remained unclear.

The field observations, the XRF and laboratory results suggest a follow up campaign aimed at targeted sampling, further characterisation and extension of known mineralisation and a discovery of previously unrecognised mineralisation in the area.

As of 6 March 2015 the CLC restricted the access to the area south of the Assegai prospect (approximately 50% of the project area) except main access track for transit. The restriction was imposed pending review of previously issued approvals for access and consultation with the Traditional Aboriginal landholders.

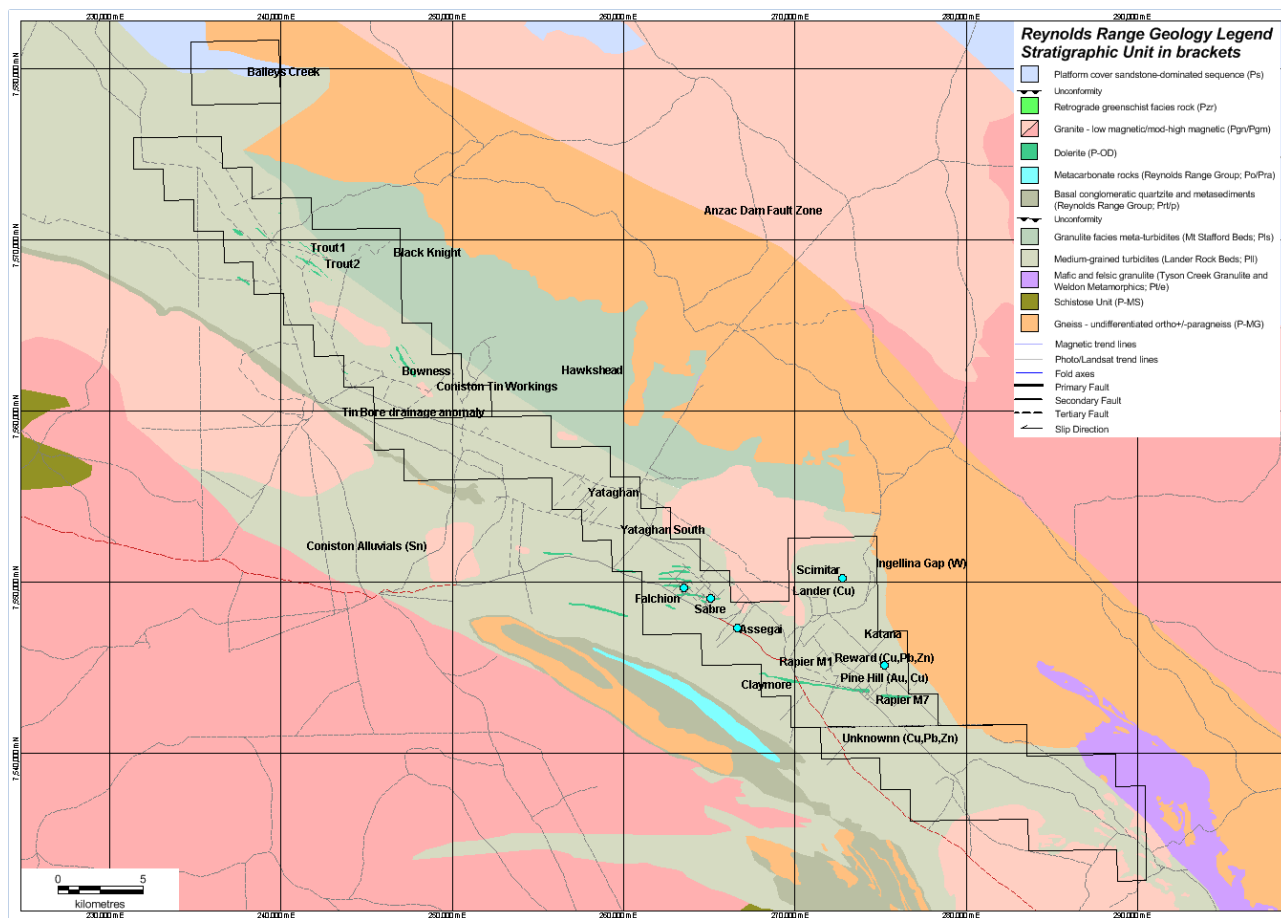
During the year ending 4 September 2016 no exploration was conducted as ABM focused on mining its Old Pirate Gold Deposit at its Bonanza project.

## 6.0 EXPLORATION COMPLETED

On-ground work during the reporting period included a three day field reconnaissance visit to the Reynolds Range project from 28<sup>th</sup> to 30<sup>th</sup> March 2017. The field visit focussed on a review of the Reynolds Range prospects after desktop studies during the rainy season.

During the visit the highest ranked targets within the reported tenements were field checked and reviewed. Sites visited included Sabre, Falchion, Assegai, Reward and Scimitar. At Reward mapping and GPS locations of historical workings and drilling were taken to validate database and GIS records. The mapping and GPS identified gaps in the ABM database and flagged areas requiring follow up literature review and data compilation prior to further field work.

Although not within the reporting group a single rock chip sample from outcropping quartz vein at the Trout Prospect (241736mE, 7568526mN, MGA94 z53) within adjoining EL23655 returned a grade of 16.1 g/t.



## 7.0 RECOMMENDATION and CONCLUSIONS

The highly encouraging result from the single rock chip taken at the Trout prospect flags the underexplored nature of the area and the potential prospectivity of the belt and the targets within the area. With the identification of drill holes that are not in the ABM database this has highlighted areas requiring follow up which include literature reviews and data compilation prior to further field work.

As part of the Tanami Scale target evaluation ABM is currently determining whether further follow up work is warranted for the area. This would include a systematic geochemical sampling campaign to collect multi-elements for litho-geochemical sampling and mapping and sampling of outcrop.

The 2013 recommendation to follow up on the in 2012 airborne electromagnetic survey generated anomalies 2\_17, 2\_18, 2\_19 and 2\_12 on EL 23888 remains valid.

The SRK review noted the distribution of prospects to be zoned around the central intrusions of Agn emplaced along the Lander River Beds (Aall). The inner zone is marked by Sn and W deposits, followed outwards by gold, Cu and Cu-Au, and then copper and other base metals.

The pattern suggests that exploration may be enhanced by multi-element geochemistry and a review of granite geochemistry. In addition, if the deposits are intrusion related, a structural study to locate structures active during granite emplacement may also be warranted.

## 8.0 REFERENCES

Ding, P. & James, P.R., 1985. Structural evolution of the Harts Range area and its implications for the development of the Arunta Block, Central Australia. *Precambrian Research*, 27, 251-276.

Ding, Puquan, 2001. Pre-Cenozoic solid geology map of the Strangways Range to Harts Range area, Explanatory Note. Unpublished TGNL in-house report.

Vandenberg, L.C, 2015 –Notes of the Reynolds Range Project field trip in March 2015. In-house ABM memo.

Rohde, C., 2004. First Combined Annual Report EL's 9814, 22387, 23483 and 23486 Napperby Project for the Year Ending 3 March 2004. Unpublished Tanami Gold NL In-house report.

Rohde, C., 2005. Second Combined Annual Report EL's 9814, 22387, 23483 and 23486 Napperby Project for the Year Ending 3 March 2005. Unpublished Tanami Gold NL In-house report.

Rohde, C., 2005. First Combined Annual Report on Exploration Licences 23486, 23923, 23924 and 23991 Reynolds Range Project for the year ending 31 May 2005. Unpublished report by Tanami Exploration NL.

Rohde, C., 2005. First Annual Report EL 23888 Stafford, Reynolds Range. Unpublished report by Tanami Exploration NL.

Rohde, C., 2006. Second Annual Report EL 23888 Stafford, Reynolds Range Project, for the year ending 11 August 2006. Unpublished report by Tanami Exploration NL.

Rohde, J., 2006. Fifth Annual Report EL 23888 Stafford, Reynolds Range Project, for the year ending 11 August 2009. Unpublished report by Tanami Exploration NL.

Rohde, J., 2010. Six Annual Report EL 23888 Stafford, Reynolds Range Project, for the year ending 11 August 2010. Unpublished report by ABM Resources NL.

Rohde, J., 2010. Seventh Annual Report EL 23655 Lander, Reynolds Range Project, for the year ending 11 June 2010. Unpublished report by ABM Resources NL.

Rohde, J., 2011. Combined Annual Report EL 23888 'Stafford' & EL 23655 'Lander' Reynolds Range Project from the 12 June 2009 to 04 October. Unpublished report by ABM Resources NL.

Rohde, J., 2012. Bridging Report EL 23888 'Stafford' Reynolds Range Project from the 12 August 2011 to 4 September 2012. Unpublished report by ABM Resources NL.

Rohde, J., 2012. Bridging Report EL 28083 'Stafford SE' Reynolds Range Project from the 31 January 2012 to 4 September 2012. Unpublished report by ABM Resources NL.

Rohde, J., 2013. Annual Report EL 23655 'Lander' Reynolds Range Project from 12 June 2012 to 11 June 2013, Unpublished report by ABM Resources NL.

Rohde, J., 2013. Group Annual Report EL 23888 "Stafford"& EL 28083 "Stafford SE", Reynolds Range Project, GR 251, from the 5th June 2012 to 4th September 2013. Nil Work Report. Unpublished report by ABM Resources NL

Rohde, J., 2014. Group Annual Report EL 23888 "Stafford"& EL 28083 "Stafford SE", Reynolds Range Project, GR 251, from the 5th June 2013 to 4th September 2014. Unpublished report by ABM Resources NL

Rohde, J., 2015. Group Annual Report EL 23888 "Stafford"& EL 28083 "Stafford SE", Reynolds Range Project, GR 251, from the 5th June 2014 to 4th September 2015. Unpublished report by ABM Resources NL

Rohde, J., 2016. Group Annual Report EL 23888 "Stafford"& EL 28083 "Stafford SE", Reynolds Range Project, GR 251, from the 5 September 2015 to 4 September 2016. Unpublished report by ABM Resources NL