



Rockland Resources Pty Ltd

Emirates House

Level 7, 167 Eagle Street

Brisbane, QLD 4000

Tel: +61 (0)7 3135 9770

Fax: +61 (0)7 3135 9772

Email: info@rocklandresources.com.au

Web: www.rocklandresources.com.au

ML29938
Annual Report
13 February 2016 – 12 February 2017
Hayes Ck Project - Priscilla Line

Hayes Creek Project
Northern Territory

Authors:	Geoff Beckitt	Exploration Manager	
Date	12/4/2017		
Tenements:	Mining Lease	29938	Priscilla Line
Map Sheets:	1:250,000	Pine Ck (SD5208)	
	1:100,000	Pine Ck (5270)	
Datum:	GDA94 UTM52		
Key Words:	Uranium, Base Metals, Gold		

COPYRIGHT

© Rockland Resources Pty Ltd 2016

This document and its contents are the copyright of Rockland Resources Pty Ltd. The document is for submitting to the Department of Mines and Energy of the Northern Territory, as part of the tenement reporting requirements of the Minerals Titles Act 2010. Any information included in this report that originates from historical reports or other sources is listed in the 'References' section at the end of this document. Rockland Resources Pty Ltd authorizes the Department of Mines and Energy to copy and distribute the report and associated data.

CONTENTS

1. ABSTRACT.....	4
2. INTRODUCTION	5
3. LOCATION AND ACCESS	6
4. TENEMENTS.....	7
5. GEOLOGY.....	8
5.1 REGIONAL GEOLOGY	8
5.2 PROJECT GEOLOGY	8
6. MINERALISATION SUMMARY	11
6.1 HAYES CK GOLD MINERALISATION.....	11
6.2 HAYES CK URANIUM MINERALISATION.....	12
6.3 HAYES CK BASE METAL MINERALISATION	13
7. PREVIOUS EXPLORATION.....	14
8. EXPLORATION ACTIVITIES.....	15
9. CONCLUSIONS & RECOMMENDATIONS.....	17
10. REFERENCES	18

FIGURES

Figure 1 Location of Tenements (overlying Auslig 1:250,000 topography).....	6
Figure 2 Hayes Creek Corkscrew Project Geology (after Cotton 2010) and Mining Licences.	10

TABLES

Table 1 Tenement Schedule.....	7
--------------------------------	---

1. ABSTRACT

ML29938 was granted on 12 February 2012. It consists of 20 ha for a total of 2 sqkm. In 2014, Oz Uranium Pty Ltd, a wholly owned subsidiary of Rockland Resources Pty Ltd, purchased the licence share from Element 92 Pty Ltd (a wholly owned subsidiary of Thundelarra Pty Ltd) along with all other exploration interests in the Hayes Creek area. The Oz Uranium share is 80% and the remaining 20% is owned by Dale Page and Yogi Griesbach.

Since purchasing the Hayes Ck project from Thundelarra Pty Ltd (a wholly owned subsidiary of Element 92 Pty Ltd) early in 2014, Rockland Resources has undertaken significant due diligence work, deposit studies and field activities including sampling, drilling and airborne electromagnetics. There has been assessment and compilation of the previous geological, geochemical and geophysical exploration data along with integrated targeting analysis.

There has been no on-ground exploration work undertaken within the mining lease area during the reporting period.

Alluvial gold mining and exploration is being carried out on several of the mining leases in the area by Mr Dale Page and Yogi Griesbach under separate environment authorisations. Rockland Resources is not in any way associated with these activities.

2. INTRODUCTION

ML29938 is part of Rockland Resources Hayes Ck Project, and situated in the central part of Pine Creek Orogen. The mining lease covers part of the Yam Creek mining area also known as the Priscilla Line which contains gold mineral deposits/prospects such as Priscilla, Princess Louise and North Point. The Hayes Ck project is being explored for gold, uranium and base metal mineralisation. In 2014, Oz Uranium Pty Ltd, a wholly owned subsidiary of Rockland Resources Pty Ltd, purchased the licences from Element 92 Pty Ltd (a wholly owned subsidiary of Thundelarra Pty Ltd) along with all other exploration interests in the Hayes Creek area.

3. LOCATION AND ACCESS

The Hayes Ck project is located approximately 150 km south east of Darwin and about 55 km north of Pine Creek in the Northern Territory (**Figure 1**). The project area can be reached from Darwin via the Stuart Highway for about 140 km and then turning on to the Fountain Head Road. A track leads off the Fountain Head Road less than 1 km towards the south east, and it enters into the project area. Alternatively, it can be approached by a track coming of the Grove Hill Road and then via station tracks. A railway line also transects the Hayes Ck project.

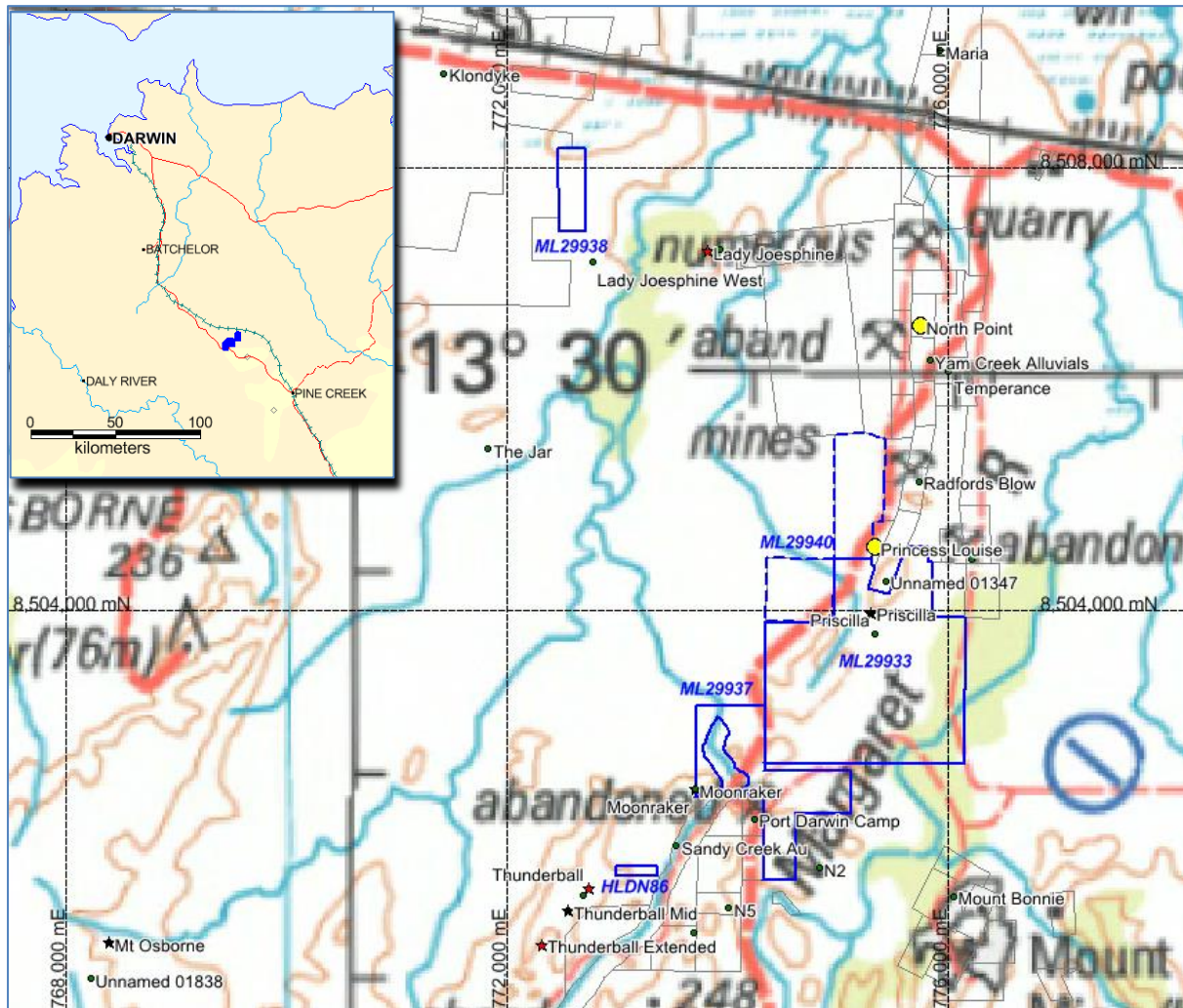


Figure 1 Location of Tenements (overlying Auslig 1:250,000 topography)

4. TENEMENTS

ML29938 was granted on 12 February 2012. It consists of 20 ha for a total of 2 sqkm. In 2014, Oz Uranium Pty Ltd, a wholly owned subsidiary of Rockland Resources Pty Ltd, purchased the licence share from Element 92 Pty Ltd (a wholly owned subsidiary of Thundelarra Pty Ltd) along with all other exploration interests in the Hayes Creek area. The Oz Uranium share is 80% and the remaining 20% is owned by Dale Page and Yogi Griesbach.

ML29938 is an amalgamation of the historical licences MCN4902 and MCN4903.

Tenements details are shown in **Table 1** below:

Table 1 Tenement Schedule

EL	Name	Licensee	Ha	KM ²	Grant Date
29938	Yam Creek (Priscilla)	80% Oz Uranium Pty Ltd	20	2	13.02.2014

5. GEOLOGY

5.1 Regional Geology

The project geology is depicted in **Figure 2** (as defined by Cotton, 2010). The project area is situated within the Pine Creek Orogen (PCO), a tightly folded sequence of Palaeoproterozoic rocks, 10 km to 14 km in thickness, laid down on a rifted granitic Achaean basement during the interval ~2.2-1.87 Ma. The geology for Hayes Creek uranium project is best described by Chan (2010), Bajwah (1994) and Ahmad et al., (1993). The sequence is dominated by pelitic and psammitic sediments with minor inter-layered tuff units. Pre-orogenic mafic sills of Zamu Dolerite event (~1.87Ma) intruded the lower formations of the South Alligator Group and part of the Mt Partridge Group. During the Top End Orogeny (1870-1800 Ma), the sequence was tightly folded and pervasively altered with metamorphic grade averaging greenschist facies to phyllite. The Cullen Batholith introduced a suite of fractionated calc-alkaline granitic magma into the sequence in the period 1820 – 1850 Ma, and thought to be responsible for introduction of a variety of mineralisation in the adjacent metasediments (Bajwah, 1994).

5.2 Project Geology

Central to the Hayes Ck project is the Cullen Supersuite (Burnside Granite) which is rimmed by the younger Zamu Dolerite and Palaeoproterozoic South Alligator Group (Mt Bonnie Formation, Gewrowie Tuff, Koolpin Formation) which also occurs to the south including the Thunderball area. In places the Palaeoproterozoic Finniss Group (Burrell Ck Formation) is present which overlies the South Alligator Group. Unconformably overlying the Paleoproterozoic basement rocks is the Mesoproterozoic lower members of the Tolmer Group sediments (Depot Ck Sandstone) which is part of the Litchfield Province/Domain and forms the eastern margin of the broader Birrindudu Basin.

The Koolpin Formation is oldest of the rock units, it unconformably overlies the Mount Partridge Group and has a conformable upper contact with Gerowie Tuff. Sills of Zamu Dolerite intrude the upper contact in places or is faulted (Stuart-Smith et al., 1993). Johnston (1984) suggests that the base of the Koolpin Formation is thrust and disconformable. The Koolpin Formation is informally subdivided into lower, middle and upper members (Nicholson, 1980). The lower member consists of up to 250 m of carbonaceous mudstone, mudstone and siltstone. The upper member is 50 – 150 m thick and contains mainly carbonaceous mudstone with minor mudstone and siltstone with interbedded tuff and shale near the contact with the Gerowie Tuff.

The Gerowie Tuff is not classified as a formation, as it only constitutes a time-stratigraphic and conformable subdivision of the South Alligator Group between the Koolpin Formation and Mt Bonnie Formation. The Gerowie Tuff is estimated to have a thickness of 200 to 400 m and consists of a sequence of ferruginous shale, siltstone, nodular chert and tuff. Tuff represents at least a quarter of the unit and is represented by three varieties: 1) black cherty, dull green and white spotted, 2) fine-grained and feldspathic and 3) grey-green, coarse-grained (Stuart-Smith et al., 1993). The Gerowie Tuff hosts parts of the Thunderball uranium deposit.

Zamu dolerite is a suit of pre-orogenic continental to calc-alkaline tholeiite intrusive rock that are concordant to stratigraphy. They occur throughout the central region of the PCO and have been

dated at 1870 ± 6 Ma (OZCHRON, Geoscience Australia) where they are interpreted to be intruded immediately prior to the onset of the ca. 1870-1850 Ma Nimbuwah Event (D_1 & D_2). In the Thunderball and Extended areas, Zamu dolerite was found cutting both the Mt Bonnie Formation and Gerowie Tuff.

The Mt Bonnie Formation conformably overlies the Gerowie Tuff. The lower contact is marked by a sequence of feldspathic greywacke, whereas the upper contact is defined by a tuffaceous horizon. The Formation comprises interbedded slate, mudstone, shale, siltstone, greywacke, tuffaceous chert, crystal tuffs, dolomite and subordinate banded iron formations, forming a 500-700 m succession (Stuart-Smith et al., 1993). The Mount Bonnie Formation hosts the Thunderball uranium deposit and a number of gold, base metals and tin deposits.

The Burrell Creek Formation forms a thick sequence towards north and east of the project area. It comprises interbedded shale, slate, phyllite, siltstone, sandy siltstone, greywacke and rare volcanolithic conglomerate. In the Pine Creek Orogen, a variety of mineral deposits such as gold, uranium, base metals and tin are hosted by the formation.

Intruding the South Alligator Group is the Cullen Supersuite I-type granites. The Burnside Granite is situated in the central part of the project but there are also other smaller occurrences: McMinns Bluff Granite, Margaret Granite, McMinns Bluff Granite. The Cullen intrusive event introduced a suite of fractionated calc-alkaline granitic magma into the sequence in the period ~ 1.85 - 1.78 Ma. These high temperature I-type intrusives induced strong contact metamorphic aureoles ranging up to (garnet) amphibolite facies to more extensive biotite and andalusite hornfels facies (Bajwah, 1994).

Unconformably overlying the South Alligator and Finniss Group is the Depot Creek Sandstone. This is described as amassive arenaceous cross-bedded quartz sandstone, commonly ripple marked; quartzite, quartz-pebble conglomerate lenses.

Cainozoic sediments, laterite and recent alluvium obscure parts of the Orogen lithologies.

There is a tendency for gold and uranium mineralisation to be focused in anticlinal settings within strata of the South Alligator Group and lower parts of the Finniss River Group. This sequence evolved from initial low energy shallow basinal sedimentation to higher energy deeper water flysch facies. Some of the gold mineralisation appears to be related to the I-type members of Cullen Batholith, formed during the evolution of hydrothermal fluids as a result of fractionation and differentiation processes (Bajwah, 1994).

The Project area is located in one of the most prospective regions of the Pine Creek Orogen where significant gold, uranium and base metals mineralisation has been identified in the past, and a number of gold and base metals mining and processing mills have been operational. Recent discovery of uranium further highlights the importance of the area.

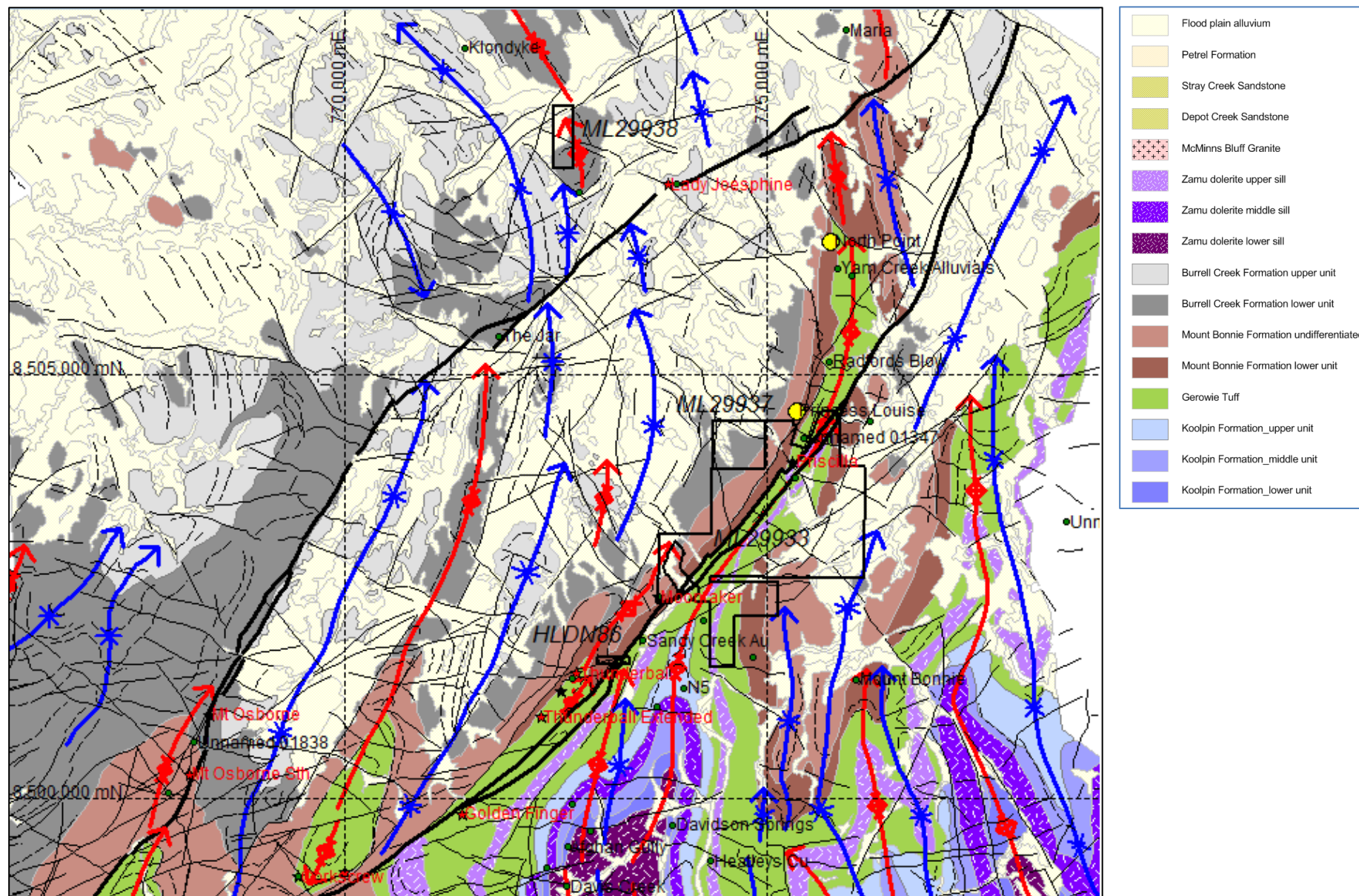


Figure 2 Hayes Creek Corkscrew Project Geology (after Cotton 2010) and Mining Licences

6. MINERALISATION SUMMARY

6.1 Hayes Ck Gold Mineralisation

The discussion of mineralisation is reproduced here from Bajwah (2014). *“At North Point and Princess Louise, auriferous quartz-sulphide veining is associated with greywacke-dominated packages within the west limb and axial zones of the Yam Creek fold, particularly where bedding slip, reverse faults and splays cut the limb at shallow angles. Lithological contrasts between silt-mudstone packages and massive greywackes has been a further focusing factor for auriferous quartz veining.*

Within the finer grained lithologies the veining has sub vertical, perhaps axial planar foliation dips. Within the more massive brittle greywacke horizons the veins take the form of ladder veins or cross fracture sets sub normal to the bedding and dip shallowly eastwards. The upper greywacke-dominated package hosts most of the gold resource. Refraction of vein dips has been observed passing from one litho-type to the other. The thickness of the finer grained packages appears to be greater at Princess Louise where compared with the North Point sequence, controls to Mineralisation and possible Extensions.

The Yam Creek mineralisation is an epigenetic deposit, situated within a greywacke-mudstone association of the Mount Bonnie Formation (South Alligator Group) on the western limb of the Yam Creek Anticline. The anticline plunges 10° to the north, with the west limb dipping at 60° W (range 50°-75° W). Axial plane cleavage (S₁) is well developed in the mudstone units and is sub-vertical, but is refracted at the mudstone-greywacke contact due to competency contrasts, producing a cleavage dip of 10°-50° to the east.

A number of north-east trending faults displace bedding trends in the Yam Creek area. The faults are thought to be sub-vertical and appear to post-date mineralisation.

The majority of mineralisation is associated with quartz filled tension gash veins within the greywacke, controlled by the refracted cleavage pattern. The veins are best developed near the hanging wall (western) contact of greywacke and mudstone, occurring as an echelon vein sets, vein thickness varying from stringers to over one metre. Carbonaceous shears within the greywacke and at the mudstone contacts often contain minor but high grade gold mineralisation, associated with quartz stringers and small boudins. This type of mineralisation is thought to originate from tension gash veins rolled into the shears. Low grade gold mineralisation (0.1-0.5 g/t) is pervasive throughout the greywacke host.

The mineralised greywacke unit is open along strike to the north and down dip (west). To the south mineralisation has decreased significantly, however drill hole density is low and is situated in an area of structural complexity. It is likely mineralisation continues further south along strike. Similar styles of mineralisation could be targeted further east in a second greywacke unit.

Primary mineralisation occurs within quartz veined greywackes and lesser mudstones. Quartz vein gangue mineralogy consists of common pyrite, less common arsenopyrite and rarer chlorite, carbonate and pyrrhotite. Free gold has been recognised in the oxide zone, associated with ferruginous (ex-sulphide?) quartz veins.

Gold bearing alluvial material occurs over most of the resource area. The alluvial cover has a maximum thickness of 4m, with gold occurring in basal conglomerates as fine gold, nuggets and in quartz specimens. Auriferous eluvial material is also widespread.

Primary ore material has been classified as oxide or sulphide, transitional ore has not been recognised. The average depth of the base of oxidation is approximately 33m.

The recognition of late stage faulting as a 'spatial control' to mineralisation is important, especially at a flitching stage and during optimisation.

The two principal deposits have been outlined by several campaigns of RC drilling and were computer resource-modelled in 2003. For North Point the indicated and inferred resource at 0.7g/t cut off totalled 278,000t @ 2.27g/t Au. For Princess Louise the indicated and inferred resource at 0.7g/t cut off totalled 170,000t @ 2.25g/t Au."

6.2 Hayes Ck Uranium Mineralisation

The discussion of mineralisation is reproduced here from Bajwah (2014). *"The project area and surroundings contains lithological units which are important hosts to uranium mineralisation. Amongst these recent discovery of uranium mineralisation at Thunderball (EL 23431), Thunderball Extended, Bella Rose, Corkscrew and Mt Osborne are significant (Figure 2). Uranium mineralisation is generally hosted by the Mount Bonnie Formation together with some mineralisation within the Gerowie Tuff.*

The mineralisation at Thunderball is located along a northerly trending anticlinal axis and consists of veins and disseminations of uraninite (pitchblende) hosted within a folded brittle ductile shear zone that appears to plunge approximately 40 degrees to the north. In 2009, a 16 RC holes (2,383 metres) and 7 diamond holes (for 561metres) were drilled at Thunderball with the majority of holes returning significant intercepts including a best intercept of 11 metres at 3.4% U₃O₈ within diamond hole TPCDD026. The 4,000 ppm top cut affected five data composites that had uncut average grades of up to 76,000 ppm U₃O₈ and disproportionally increased contained metal by 200%. The uncut model comprises 775,000 tonnes at an average grade of 3,196 ppm U₃O₈ for 5.5 million pounds of U₃O₈ (400 ppm U lower cut). Geological modelling associated with the resource estimation has highlighted the potential to identify repetitions of the existing mineralised zones at Thunderball. In particular the contact between the Gerowie Tuff and Zamu Dolerite, approximately 70 metres stratigraphically below the Lower Zone resource, is considered a priority target."

6.3 Hayes Ck Base Metal Mineralisation

The discussion of mineralisation is reproduced here from Bajwah (2014). "The Iron Blow deposit occurs on the eastern side of the EL 10120 and is covered by other party MCNs. It comprises a strata-bound massive sulphide deposit of zinc-lead-silver- copper gold mineralisation. The deposit occurs in basal sediments (carbonaceous siltstone, shale, greywacke, chert, conglomerate and carbonate of the Mt Bonnie Formation. It is geologically similar to the Mt Bonnie deposit to the south.

The Iron Blow gossan was discovered in 1873 and developed as an underground mine in 1886 when 100t was mined. Between 1898 and 1906 Northern Territory Goldfields of Australia produced 13,700t from underground and surface mining. It was extensively explored between 1957 and 1971 by the BMR, mining companies and NTGS.

A Geopeko-BHP JV explored the deposit from 1975, drilling 15 core holes, 8 of which met with massive sulphide. They determined that Iron Blow comprised two stacked lenses. The Upper Lode contained 92,000t, averaging 400g/t Ag, 8.1% Zn, 3.0% Pb, 0.4% Cu and 4.3g/t gold.

The Lower Lode was larger and of lower grade comprising 887,500t averaging 87.3 g/t Ag, 6.7% Zn, 0.7% Pb, 0.4% Cu, and 1.9 g/t Au.

The oxide zone was relatively enriched in gold and silver and the deposit was open pitted to 40m by Henry and Walker in 1984. The ore was treated at the Mt Bonnie plant along with the Mt Bonnie deposit's oxide component. Records show that Iron Blow produced 10,000t of oxide @ 9.0g/t gold and 250g/t Ag and 25,000t of sulphide @ 7.0g/t Au, and 360g/t Ag in this period.

Both Mt Bonnie and Iron Blow coincide with significant airborne magnetic anomalies. No other comparable anomalies occur in the area so this appears to downgrade the potential for repetitions of these stratiform, perhaps syngenetic exhalative deposits."

7. PREVIOUS EXPLORATION

The discussion of previous exploration is reproduced here from Bajwah (2014) for EL10120 which surrounds the mining licences of the Priscilla Line. *"The EL10120 forms part of the historical Yam Creek Goldfield where gold was first discovered in 1870. The area of the EL would have been subjected to intensive historical prospecting. Several hard rock gold and alluvial/eluvial occurrences were mined on the EL between 1872 and 1910.*

Modern company exploration appears to have commenced in the late 1970's with regional assessments for base metals by Geopeko and others. The modern phase of gold exploration appears to have commenced in 1988 with percussion drilling near Port Darwin Camp by Geonorth. A total of 20 holes were drilled within the area of EL10120. The best reported intercept was 3 m @ 1.16 ppm Au.

Subsequent to this Dominion Gold Ltd explored the area of the EL between 1993-1996. Work carried out included soil sampling, vacuum drilling, geophysical interpretation and RC drilling. A total of 8 RC holes were drilled by Dominion although all of these were on MCN's excised from the current EL.

Following this Northern Gold obtained an interest in the area. Northern Gold explored the EL between 1996-and 1997. Northern Gold carried out a Mobile Metal Ion soil sampling programme and drilled 8 RC holes in the area of EL10120.

A number of gold explorers were active on MCN's excised from the EL during the late

1990's to recently, including AngloGold and GBS Gold. This has included several exploration and resource definition drilling programmes. Little company exploration seems to have been done on other areas of EL10120 during this period.

During 2007 Armada Exploration carried out an infill soil sampling programme on the area of EL10120.

Small scale prospecting for gold has been intermittently carried out over EL10120 by Mr R.M. Biddlecombe from at least the early 1990's to the present. During the last reporting period a bulk sample of 5000t of material at a grade of 0.25 g/t Au producing 41 oz. fine gold was put through an alluvial testing plant."

During 2009-2014 Thundelarra conducted a number of investigations in conjunction with their project wide exploration. These included high a resolution (25 m line spacing) airborne radiometric-magnetic survey, reconnaissance mapping, detailed geological and structural mapping programs by consultant geologists (Cotton, 2010; Rankin, 2011; Taylor 2011). In particular mapping by Taylor (2011) focussed on the Priscilla Line which identified a number of targets and recommended sampling programs.

Thundelarra conducted RC drilling on the overlapping mining licence (ML29938) in 2011 and 2013. In 2011 a total of 30 holes were drilled for 3,580 m. Drilling met with significant success with intercepts in excess of 1 g/t Au. The best results encountered 4m @ 62 g/t Au (including 1m @ 906 g/t Au) in hole TPCRC159, and 1m @ 1.2 g/t Au in hole TPCRC158 on the same section (G).

Three holes were drilled in 2013 for a total of 288 m. Of these, two were stepped outs of 30 m and 127 m to the north of TPCRC159. The upper zone of mineralisation was intersected but apparently not the zone of high grade mineralisation, which lies in the footwall of the dolerite. This suggests that either the high grade zone has no continuity, or that unlike the known zones of mineralisation, it is strongly cross-

cutting rather than being sub-parallel to the stratigraphy (Bajwah, 2014). No drilling was attempted to the south.

Although unclear from the reports, it is likely that the mapping by Taylor only partially guided the 2011 drilling (since the final reports were completed after the drilling), and the limited follow up drilling in 2013 was focused on drilling targets from 2011 drilling. It is therefore quite possible that some of the targets identified by Taylor and Rankin have not yet been followed up.

8. EXPLORATION ACTIVITIES

Since purchasing the Hayes Ck uranium project from Thundelarra Pty Ltd (trading as Element 92 Pty Ltd) early in 2014, Rockland Resources has undertaken significant due diligence work, deposit studies and field activities including sampling, drilling and airborne electromagnetics. There has been assessment and compilation of the previous geological, geochemical and geophysical exploration data along with integrated targeting analysis. Prior to the purchase, Global Ore Discovery were engaged to assess the exploration potential for the project (Beckitt, 2013). Parus Exploration Services (Harry Mees) sub-contracted extensively to Rockland Resources and took a lead role with the field activities.

For the Hayes Ck project the historical database from Thundelarra has been improved by capturing missing data, fixing errors, standardising codes and adding columns to facilitate reinterpretation of the geology and mineralisation controls. The emphasis was on the Thunderball Deposit but does also have some impact on the present tenure. Inconsistencies sometimes existed due to the involvement of different geologists and also the progressive evolution of geological understanding. In addition, there were some holes that were not logged properly in Thundelarra's final year of drilling in 2011 when their budget was cut. New formation and structural columns were added to the database by correlating between logs, borehole images and core photography. To assist in assessing the broader project, key Crocodile Gold holes such as those at Fleur de Lys area, has been added with codes standardised to that of Rockland Resources.

Deficiencies were identified in the geochemistry database originally received from Thundelarra. For instance, there were many assays with zero in the uranium column, yet in some cases the hand scintillometer or probe gamma data indicated elevated uranium, which should have been assayed by a laboratory. Also, it was found that some sample results were missing and some elements had not been recorded in the database. As a consequence, the raw geochemistry reports were sourced from both Thundelarra and the respective laboratories. New data from these reports was integrated into the database. The revised database was also designed to better capture QAQC data and meta-data information such as the laboratory details and method. Although the revised database did not materially change any uranium values for the Thunderball deposit, there were significant changes for other areas within the Hayes Ck project.

Rockland Resources has been utilising the available geophysics and especially the airborne radiometrics to identify exploration targets. During the reporting period a problem was identified with the raw line data for the Rum Jungle government aerial survey. An offset of 120 m was found to exist compared to the gridded data for the same survey, and also compared to overlapping ground and airborne surveys. The NTGS were notified and traced this issue to a coordinate transformation error by the original contractor in 1999, which was subsequently

rectified. Often it is the gridded airborne radiometric data which is utilised by explorers to identify anomalous uranium to follow up in the field; which is understood to be the case for Thundelarra's historical work. However, it is possible that previous explorers may have checked the wrong location if they used the wrongly located raw line data.

In the south east part of the Hayes Ck project Thundelarra flew a very detailed radiometric survey using 25 m spaced flight lines. This data is of sufficient quality to allow the gridded data to be utilised for field checking. However, for other parts of the project the best quality airborne radiometric data is the Rum Jungle government survey flown at 200 m line spacing. For such surveys, care must be taken with identifying anomalies based on gridded data, which has the potential to blur subtle anomalies not directly below the flight path. In order to identify line data anomalies in a rigorous and semi-automated manner, the GAMMA_Target method was utilised (developed by Minty Geophysics Pty Ltd) by Rockland Resources to identify anomalies. The method relies on the gamma-ray response functions calculated according to the mean survey height and sample spacing. GAMMA_Target recognises two types of anomalies for both grid and line data. Areas in the dataset which are rare are called a "*spectral*" anomaly. In the case of 3-component radioelement data (K, U and Th) spectral anomalies are those areas of the map or profiles where the 3-component radioelement signatures (K, U and Th concentrations) are rare. The second type of anomaly may not be as unique, but is anomalous with respect to the local background for the radio-element and is referred to as a "*point*" anomaly.

Airborne electromagnetic data can help map lithologies under cover including the highly carbonaceous/sulphidic Koolpin Formation and lesser carbonaceous/sulphidic Mt Bonnie and Gerowie Tuff Formations. Rockland Resources has worked with Core Geophysics to better displaying 2D inversion results in the GIS as pseudo referenced grids. This approach has facilitated interpretation/targeting since it can be viewed more readily with geology and geochemistry, and the colour ranges can be modified easily to highlight localised features. Another interpretation method employed by Rockland Resources was to produce 3D voxel renditions of the data and to extract conductive surfaces to understand the 3D variations in conductivity and geology. Integrated targeting has been undertaken utilising historic electromagnetic data and visualisation methods for the historical airborne electromagnetic data in the south east part of Hayes Ck project, these include: Thundelarra VTEM survey (over Thunderball), CGAO VTEM survey (south east portion of broader Burnside survey) and Northern Territory Government TEMPEST survey (Rum Jungle).

Within the reporting period there has been not on ground exploration within the mining lease.

9. CONCLUSIONS & RECOMMENDATIONS

Since purchasing the Hayes Ck project from Thundelarra early in 2014, Rockland Resources has undertaken significant due diligence work, deposit studies and field activities including drilling and airborne electromagnetics. There has been assessment and compilation of the previous geological, geochemical and geophysical exploration data along with integrated targeting analysis.

The 3D control on the geometry of uranium mineralisation at Thunderball is complex and appears to hinge on the fine interplay of focused deformation of sufficient intensity, and favourable geometry for brecciation, with chemically favourable (reduced?) lithologies. A number of the surrounding prospects have high grade intercepts, but are discontinuous - possibly due to cross linkage between formational weaknesses. There are some promising indications that the new multi-element geochemistry, and especially lead isotopes, may help to identify near misses and primary vs remobilised secondary mineralisation.

Gravity is identified as a key dataset to interpret sub-surface intrusions and aureoles to guide regional prospectivity for gold mineralisation. However, much of Rockland's Hayes Creek tenements have poor gravity coverage (1-5 km stations) which could be improved to allow robust regional target filtering. Sub-audio magnetics may be useful to image sub-surface structures and controls at a local scale.

There has been no on ground exploration carried out within the mining lease.

10. REFERENCES

ALS Metallurgy 2013. Quantitative Automated Mineralogical Analysis conducted on ten Uranium Borehole Core Samples from the Hayes Creek – Thunderball deposit for Oz Uranium (Rockland Resources). – Internal report for Rockland Resources

Ahmad, M. 1998. Geology and mineral deposits of the Pine Ck Inlier and McArthur basin, Northern Territory. AGSO Journal of Australian Geology and Geophysics 17(3) p1-17

Ahmad, M, Wygralak, A.S. and Ferenczi, P.A., 1999, Gold deposits of the Northern Territory: Northern Territory Geological Survey, Report 11.

Ahmad, M., Wygralak, A.S., Ferenczi, P.A., and Bajwah, Z.U. 1993. Explanatory Notes and Mineral Deposit Data Sheets. 1:250,000 Metallogenic Map Series, Department of Mines and Energy, Northern Territory Geological Survey.

Bajwah, Z.U., 1994. A contribution of geology, petrology and geochemistry to the Cullen Batholith and related hydrothermal activity responsible for mineralisation, Pine Creek Geosyncline, Northern Territory. Northern Territory Geological Survey Report 8.

Bajwah, Z.U., 2011a. Annual Report on Exploration Licence 25309 for the period 25 February 2010 to 26 February 2011. Thundelarra Exploration Limited Annual Exploration Report to NT Dept of Resources, Darwin.

Bajwah, Z.U, 2011b. Annual Combined Report on ELs 25379 and 27363 (GR205-11) Pine Creek NT, for the Period ending on 11 March 2011. Thundelarra Exploration Limited Annual Report to NT Dept of Resources, Darwin.

Bajwah, Z.U., 2012. Annual report on GR198-11 (EL10120, EL 23509) for the period ending on 26 April 2012. Thundelarra Exploration Limited Annual Report to NT Dept of Mines and Energy, Darwin.

Bajwah, 2014, Annual Report on GR198-11 (EL 10120, EL 23509) For the Period Ending on 26th April 2014, Thundelarra Pty Ltd.

Basile, D., Edwards, M., 2012, Mineral Resources and Mineral Reserves of the Burnside Gold and Base Metal Project in the Northern Territory, Australia; Crocodile Gold Corp.

Beckitt, G., 2013, Uranium Exploration Potential of Thundelarra Ground (Hayes Ck, Pine Ck, Katherine), Global Ore Discovery, Internal Report.

Bisset, A., Memo: 2014 Hays Creek VTEM EMFlow Processing, Core Geophysics for Rockland Resources.

Card, D. 2012. Burnside VTEM2011 Interpretation Memo. Memo from Southern Geoscience Consultants regarding VTEM prioritisation work.

Chan, G., 2010, Structural Mapping of Thunderball Uranium Prospect, Report THE001, SRK Consulting.

Connelly, May 2011, Thundelarra Exploration Ltd, QEMSCAN Analysis Metallurgical Report, Project J533, METS – Mineral Engineering Technical Services

Cotton, B., 2010, Photogeological Mapping at 1:250,000 Scale of the Thunderball Area, Hayes Ck Project, Northern Territory. Consultant Report to Element 92 Pty Ltd.

Craig, M.A. ed. 2011. Geological and energy implications of the Pine Ck region airborne electromagnetic (AEM) survey, Northern Territory, Australia. Record 2011/18, 292 pp.

Dickson, B. L., and Beckitt, G., 2013a, The application of Monte Carlo modelling to downhole total-count logging of uranium: part I – low grade mineralisation: Exploration Geophysics, 44

Dickson, B. L., and Beckitt, G., 2013b, The application of Monte Carlo modelling to downhole total-count logging of uranium: part II – high grade mineralisation: Exploration Geophysics, 45

Edwards, M and Basile D 2013. NI43-101 report for the Burnside Gold Project.

Edwards, M. 2012, Crocodile Gold – Document Review database. Paper for Mining the Territory Conference 19-20 September 2012, Darwin Entertainment Centre

Edwards, M., Gerritsen, H., Muller, F.L., 2011, Report on the Mineral Resources & Mineral Reserves of the Northern Territory Gold and Base Metals Properties, For Crocodile Gold Corp, April 4th 2011. Pages 84 to 85.

Firman JB, 1955. Surface geology at the Fleur de Lys mine near Brocks Creek. Bureau of Mineral Resources, Australia, Record 1955/011.

Ferenczi, 1990, Uranium Mineralisation in the Pine Ck 1:250,000 Pine Ck Sheet, NTGS Department of Mines and Energy, Technical Report GS 90/018.

Gleeson, P., 2011, Resource Estimate for the Thunderball Uranium Deposit, Hayes Ck Project, Northern Territory, Australia. Project THE003. SRK Consulting.

Graham S. Teale, February 2010, A Scanning Electron Microscope Investigation of a Uraniferous Shale Sample (Sample Number TK551679)

Hinman, M., 2014a, Hayes Creek Gold Prospectivity, Hinman GeoSolutions Pty Ltd for Rockland Resources.

Hinman, M., 2014b, Thunderball DDH Structural Analysis, Hinman GeoSolutions Pty Ltd for Rockland Resources.

Hollis, J., and Wygralak, A., 2012, A review of the geology and uranium, gold and iron ore deposits of the Pine Ck Orogen, Episodes Vol. 35, no. 1

Hussey, M., 2010, HyMap SURVEY AND PROCESSING REPORT PINE CK AREA, NORTHERN TERRITORY, Hyvista Corporation.

Isles & Rankin, 2011. Interpretation and structural analysis of aeromagnetic data. Workshop manual (unpublished – current edition).

Jenkins, R. 2012. VTEM anomaly report. BLT114, 164, 155 & 156. Internal Report for Crocodile Gold, unpublished

Jenkins, R & Rehder, T. 2012. VTEM Anomaly Report BLT 18, 19, 20, 21, 22, 23, 24, 24 & 30. Bon's Rush East. Unpublished internal report.

Johnson J.D. 1984 Structural evolution of the Pine Ck inlier and mineralisation therein, Northern Territory, Australia. PhD, Monash University, Melbourne. Unpublished.

McAndrew, J., 1954, Uranium ore from Feur De Lease, Brocks Ck, Northern Territory, Commonwealth Scientific and Industrial Research Organization Mineralogical Investigations

Masterman, K. 2007. SEL 24352 Snakebite- Proposed RC drilling program 2007, GBS Gold Australia Pty Ltd, Memorandum, 1-6.

Masterman, K. 2007. SEL 24352 Snakebite- Proposed Soil Sampling Program, GBS Gold Australia Pty Ltd, Memorandum, 1-5.

McInnes, M. 2012 NI43-101 Style Report on Mineral Resources and Mineral Reserves for Snakebite, EL 25748, Burnside Project, Northern Territory, Australia. Unpublished internal document

Mees, H., 2010, Annual Report for Exploration Licence 10120, Yam Creek, for Year Ending 14 August 2010. *Thundelarra Annual Report to NT Dept of Resources Darwin*.

Morey, A. 2012. Preliminary review of the structural geometry of the Burnside area, Pine Creek Orogen, Northern Territory. Unpublished internal report

Needham, R.S and Stuart-Smith, P.G., 1984. Geology of the Pine Ck Geosyncline, Northern Territory – 1:500,000 scale map. Bureau of Mineral Resources, Australia.

Needham, R.S., Stuart-Smith, P.G., and Page, R.W., 1988. Tectonic evolution of the Pine Ck Inlier, Northern Territory. *Precambrian Research* 40/41, pp 543-

Nielsen, B, 2012 Stream Sediment Surveys – Cosmo South. Internal Memo

Nielsen, B. 2012 Cosmo Area Stream Sediment Survey – Preliminary Findings. Internal Memo

- Nielsen, B 2012. Burnside VTEM Survey, Interpretation and Recommendations. Internal Memo
- Nicholson, P.M. 1980. The geology and economic significance of the Golden Dyke Dome, Northern Territory. In: Furguson, J. and Goleby, A.B. (eds.). Proceedings of the International Uranium Symposium on the Pine Ck Geosyncline. International Atomic Energy Agency, Vienna. 1-22.
- Partington, G.A. and McNaughton, N.J. 1997. Controls on mineralisation in the Howley District, Northern Territory: a link between granite intrusion and gold mineralisation. *Chronique de la Recherche Miniere*, 529, 1-19.
- Pervis, A., and Pontifex, I., Feb 2009, MINERALOGICAL REPORT No. 9652
- Pontifex and Associates Pty Ltd. 2010. Report on right drill core samples from Thunderball Uranium Prospect, Pine Ck Orogen.
- Pownceby, M., Torpy, A., Aral, H., 2010, Characterisation of uranium ore samples from the Thunderball Prospect N.T., Minerals Down Under Report: EP104368
- Rankin, 2011, Structural Setting of the U Mineralisation Thunderball Prospect – Pine Ck Geosyncline, Northern Territory Australia, Rankin Consulting PL trading as Geointerp
- Richardson, B., 2010, Thundelarra Exploration – Hayes Ck A New Uranium Field?, AGES 2010 Presentation.
- Sener, A., Groves, D., Fletcher, I., 2003, Timing of gold mineralisation in the Pine Ck orogen, Northern Territory, Australia: its significance to the thermal-aureole gold model,
- Sener A.K, 2004. Characteristics, Distribution and Timing of Gold Mineralisation in the Pine Ck Orogen, Northern Territory, Australia. PhD. Thesis University of Western Australia, Perth Unpublished.
- Stuart-Smith, PG., Needham, RS., Wallace, DA., and Roarty, MJ., 1986, McKinlay River, Northern
- Stuart-Smith, P.G., Needham, R.S., Page, R.W. and Wyborn, L.A.I. 1993. Geology and mineral deposits of the Cullan Mineral Field, Northern Territory. Australian Geological Survey Organisation, Bulletin 229
- Taylor, W., 2010, Mineralogy of Drill Chips from hole TPCDD026 (150-150.5 m)
- Taylor, T., 2011 Priscilla Line Gold Mineralisation Mapping Program and Recommendations for Further Exploration
- Teale, 2010, A Scanning Electron Microscope Investigation of a Uraniferous Shale Sample (Sample Number TK551679), Teale and Associates, Report TA10-09

Tizzard, A 2012. Prospectivity Analysis Geodatabases, Internal Memo from Mercator Geological Services.

Tizzard, A. 2012, Compilation Guide Document Review Database April 2012 (unpublished)