ANNUAL TECHNICAL REPORT FOR EL30144

DINGO'S REST SOUTH PROSPECT

BIGRLYI JV PROJECT

PERIOD ENDING 7th August, 2018

EL30144_2018_A_01.pdf

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Report Date: 4 October 2018

Commodities: Uranium, Vanadium
250K Map-sheet: Mount Doreen

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SUMMARY

EL30144 'Dingo's Rest South' is part of the Bigrlyi Joint Venture Project (BJV) focused on uranium exploration and development in the Ngalia Basin region. During the reporting period, a 1.2km x 600m Gradient Array Induced Polarisation (GAIP) survey, located in the southern part of EL30144, and partly overlapping ground on the adjacent tenement EL31821, was completed. The GAIP method has been successful in locating buried uranium-prospective units of the Mt Eclipse Sandstone and the Dingos Rest South survey has identified a new target area interpreted to lie within the fold hinge of a syncline. In addition, a sacred site clearance survey was conducted over EL30144 by the AAPA with an Authority Certificate issued in December 2017. A reconnaissance field trip to uranium prospective areas to investigate access to proposed drill sites was also undertaken.

On 6th July 2018, EL30689, which was part of GR375 group reporting together with EL30144, was surrendered in its entirety. As EL30144 remained the only tenement within the group reporting area, GR375 has now ceased.

INTRODUCTION

Exploration Licence EL30144 'Dingo's Rest South' was granted on 8th August 2014, following conversion from historical titles MCS270-278 which date back to the 1970s. This licence together with EL30145 'Sundberg' and EL30689 'Little Cone' were originally all grouped under GR375. In July 2016, EL30145 was converted to a retention licence (ELR31319) with the underlying EL surrendered and in July 2018 EL30689 was surrendered in its entirety; consequently, GR375 has now ceased.

EL30144 is part of the Bigrlyi Joint Venture Project (BJV) located within the Ngalia Basin, NT. Although not contiguous with the Bigrlyi uranium deposit tenements (ELRs 46-55), EL30144 is covered by the same joint venture agreement. The BJV Project is a three party joint venture between Energy Metals Ltd (EME: 53.3%), NT Uranium Pty Ltd (NTU: 41.7%) and Southern Cross Exploration (SXX: 5%), with Energy Metals as the operator. EL30144 is surrounded by EL31821 (formally EL24453), which is part of Energy Metals' 100% owned Ngalia Regional Project.

The projects are located approximately 380 kilometres (by road) northwest of Alice Springs and 40km east of the Vaughan Springs homestead on Mount Doreen Station (Figures 1 & 2).

The Ngalia Basin has presently defined JORC uranium resources of over 20,000 tonnes of U_3O_8. Modern and historical resources are known from various sandstone-hosted uranium deposits (Bigrlyi, Walbiri, Sundberg, Malawiri-Minerva, Karins, Camel Flat, A15E, & Bigwest) with numerous prospects showing good potential for additional resources.

This report refers to exploration activities conducted on EL30144 of the Bigrlyi Joint Venture Project (BJV).

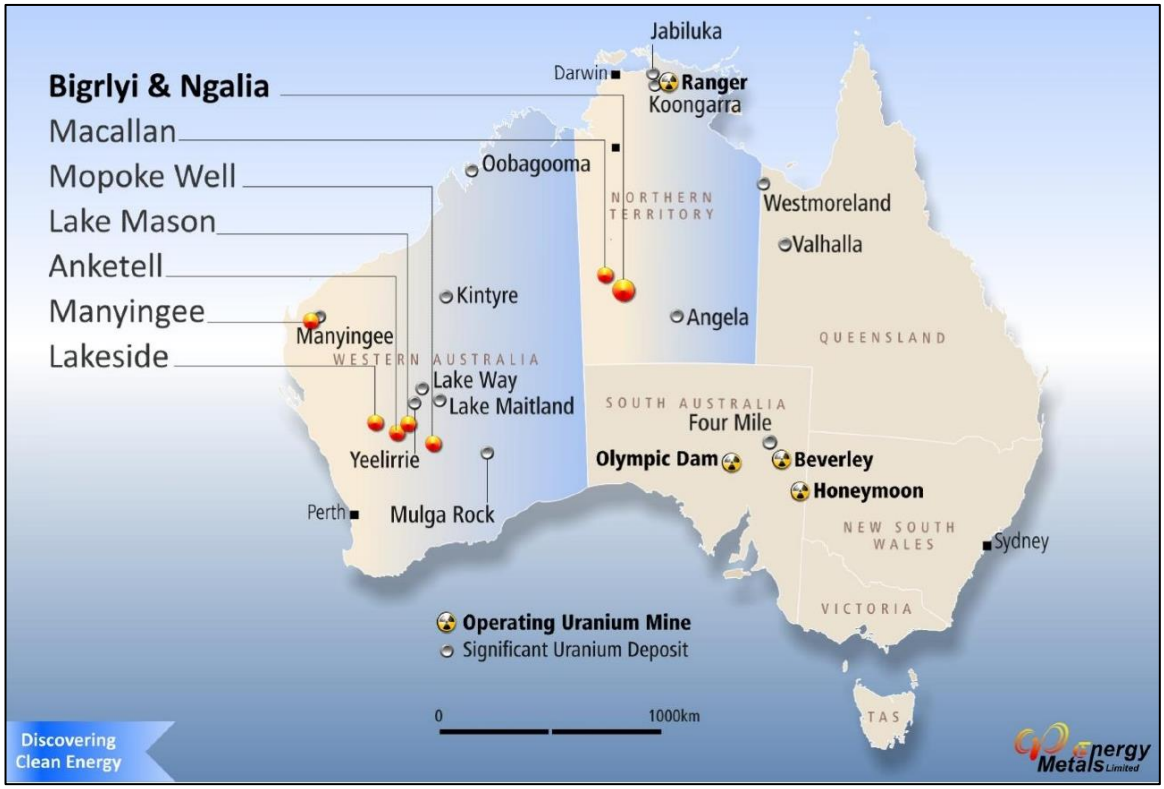

Figure 1: Location of the Bigrlyi and Ngalia Projects, NT, Australia.

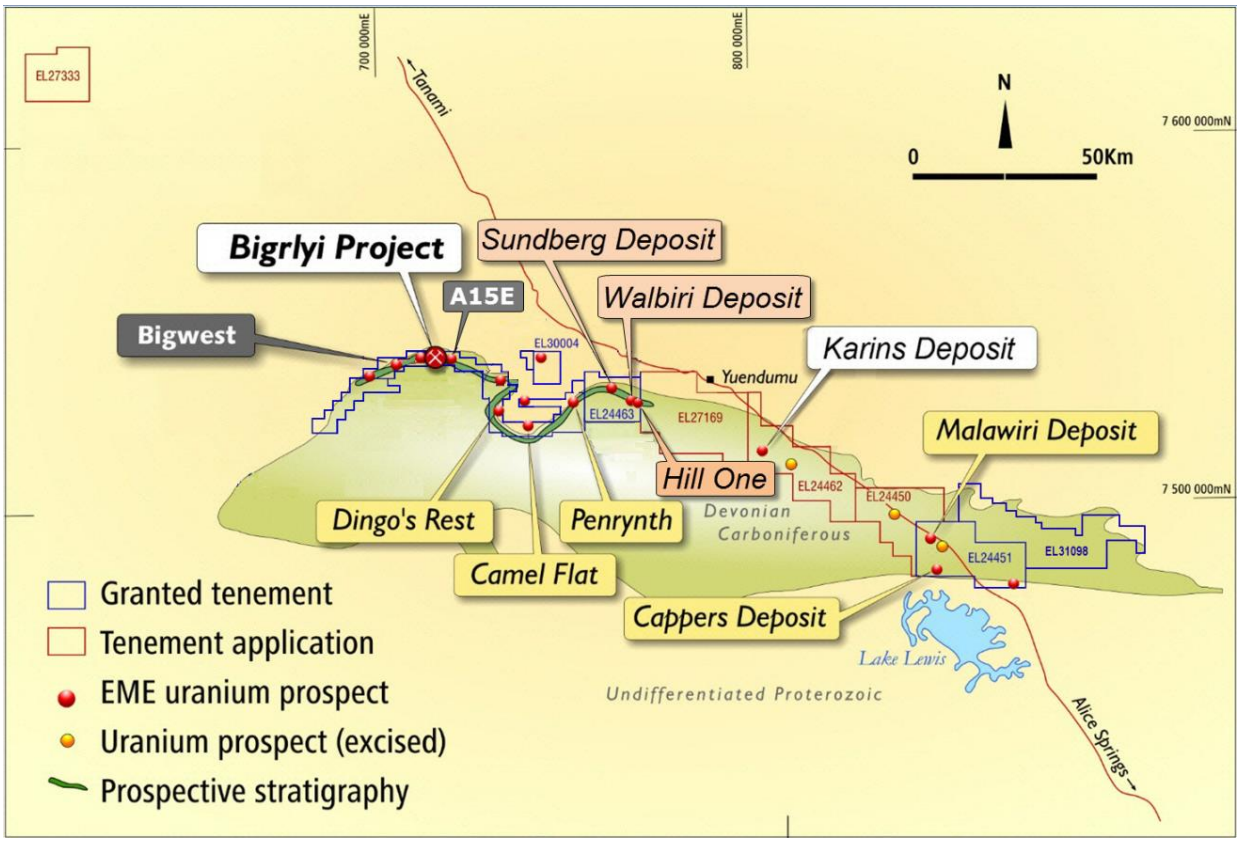

Figure 2: Bigrlyi & Ngalia regional project areas showing uranium deposits and prospects; the Ngalia Basin is shaded in green.

REGIONAL GEOLOGY

The Ngalia Basin is an elongate, intracratonic depression filled by Neoproterozoic to Palaeozoic sedimentary units, surrounded and underlain by a basement of older Proterozoic crystalline and metasedimentary rocks of the Aileron province. The basin is approximately 300km long east-west and 70km wide north-south at its widest part. The basin underwent substantial north-south shortening and consequent internal deformation mainly during the latter part of the Alice Springs Orogeny (ca. 300 Ma) (Schmid et al., 2012). Both continental and marine sediments comprise the sedimentary successions which are estimated up to 6,000m thick. Unconformities and/or thrust faults commonly separate each of the rock units (Dixon, 1976).

The Neoproterozoic Vaughan Springs Quartzite (VSQ) is the oldest unit in the Ngalia Basin and mostly forms ridges along the northern and southern margins. The VSQ contains the Treuer Member, a less-resistant interbedded siltstone and sandstone. The Vaughan Springs Quartzite unconformably overlies the Arunta Inlier basement and is overlain conformably by carbonate units of the Albinia Formation, which in turn is overlain by the Naburula Formation, the Mount Stuart Formation and the Rinkabeena Shale. These are unconformably overlain by glacial deposits of the Mount Doreen Formation which in turn is overlain by the Yuendumu Sandstone, Walbiri Dolomite, Bloodwood Formation, Djagamara Formation and Kerridy Sandstone. Unconformably overlying these formations is the Carboniferous Mount Eclipse Sandstone (Young *et al,* 1995). The Mount Eclipse Sandstone crops out widely in the Ngalia Basin, has a maximum thickness of more than 3,000m, and hosts the known uranium-vanadium mineralisation. It is a medium to coarse-grained feldspathic sandstone, commonly with carbonate cement. Conglomerate, arkose, nodular carbonate and shale are present as lenses. The rocks are dominantly red (oxidised), although restricted zones of light to dark grey (reduced) sandstone are present and mottling is common. Tabular-style uranium-vanadium mineralisation is typically associated with reduced-oxidised (redox) interfaces. The Mt Eclipse Sandstone is unconformably overlain by Cenozoic units in the eastern part of the basin and outcrops mainly along the basin margins in the west where it may be steeply dipping or overturned. The main detrital source for the Mt Eclipse Sandstone is interpreted to be the Carrington Granitic Suite located to the north of the basin (Schmid et al., 2012).

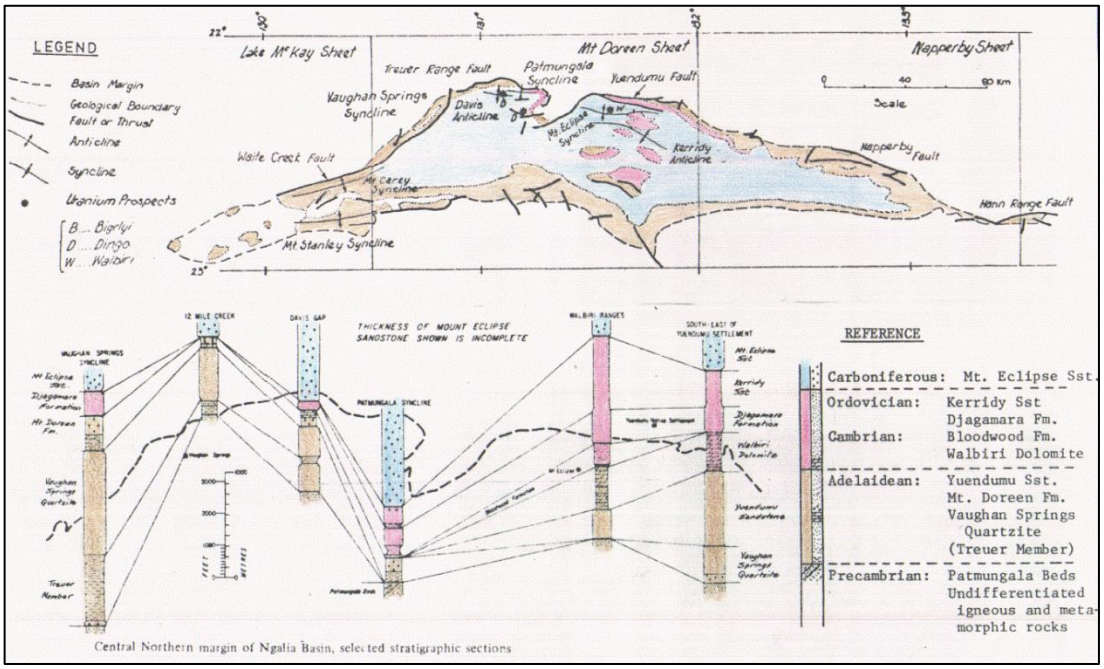

Figure 3: Structure and Solid Geology – Selected Stratigraphic Sections of the Ngalia Basin (Rippert *et al*, 1979).

LOCAL GEOLOGY

The Dingo's Rest South prospect is situated along the northern margin of the Ngalia Basin and lies approximately 25km southeast of the Bigrlyi uranium deposit and 35km west of the Walbiri prospect (Figure 4).

Geology of the Dingo's Rest prospect is made up of outcropping Mount Eclipse Sandstone unconformably overlying the Djagamara Formation which crops out as silicified ribs or ridges marking the basal formation within the tenement; it is unknown whether older formations of the Cambrian and late Proterozoic age are present under cover to the east. The basal Vaughan Springs Quartzite and Arunta block granites crop out along the folded northern margin of the Basin 1km east of the prospect.

During ground prospecting in 1971 carnotite was discovered in the Mount Eclipse Sandstone associated with clay pellets and hematite as interstitial fillings between the grains. The prospect was known as 'Wild Dog' and later 'Dingo's Rest' or 'Dingo's Rest South'. The mineralised rocks are usually white (bleached), light grey or light yellow coloured in contrast to the unmineralised sandstones which are dominantly brick red in colour. Trenching work indicated that the carnotite is only a surface feature and does not extend much more than 3-4m below the surface (Pope, 1977). Medium to coarse sandstones in outcrop strike roughly N/S at Dingo's Rest and dip 45° west with a general flattening of dips across the sequence. Stratigraphy bends and folds to about N55W immediately north of the tenement on EL31821 through the Cusack's Bore area before bending back to a N/S orientation at Dingo's Rest North.

Central Pacific Minerals Ltd (CPM) divided the prospect area into five stratigraphic units (Unit 1-5) and described the outcrops as moderately weathered with common limonitisation and bleaching; arkosic sandstones dominate and are more susceptible to a deep weathering with K-feldspar converted to kaolinitic clay stained with limonite. Oxidised, hematitic, arkosic sandstones dominate the outcrops immediately west of the trenched surface mineralisation. These sandstones are fresh, medium to coarse grained with pebbly sandstones with common mottling; purple micaceous siltstone and mudstone inter-beds mark the tops of sedimentary cycles. Anomalous radioactivity at the Little Cone prospect occurs within bleached sandstone at a similar stratigraphic level as the Dingo's Rest mineralisation (Figure 4).

TENEMENT CONVERSION

Conversion of historical Mineral Claims South tenements MCS270-278 into an Exploration Licence application (ELA30144) took place in 2013 and the EL was subsequently granted on 8th August 2014.

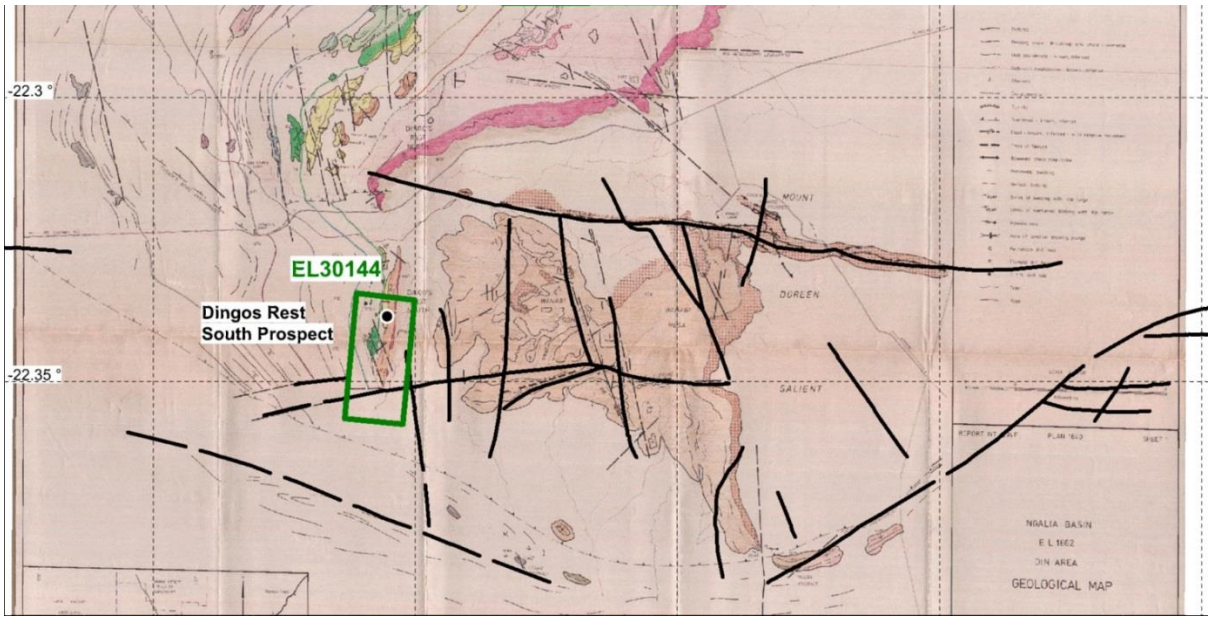

Figure 4: Geological Map (1:25,000 scale) of the southern part of the Patmungala Syncline showing location of the Dingo's Rest South prospect (from Rippert et al., 1979). EL30144 tenement outline shown in green.

PREVIOUS EXPLORATION

Bureau of Mineral Resources (BMR)

1967-1972: The BMR (Wells, Evans and Nicholas geologists) mapped the area using 1:42,000 scale aerial photographs (black and white) and a geological map was published in 1972 at a scale of 1:250,000.

Central Pacific Minerals NL (CPM)

1971: Ground prospecting led to the discovery of radiometric anomalies in the Mount Eclipse Sandstone and later the discovery of carnotite in this formation at Dingo's Rest South prospect. Trenching revealed the presence of carnotite in weathered, bleached sandstone with numerous samples reporting high grade U_3O_8 (>1%). Detailed ground radiometric prospecting outlined further anomalies on the southern flank of the Patmungala Syncline, referred to as the Dingo's Rest North prospect. Three diamond holes (NGDD 1, 2 & 3) were drilled at Dingo's Rest South prospect but no major uranium intercepts were found.

1973: Four rotary/percussion holes (NGRH51 to 54) were drilled at the Dingo's Rest prospect with no significant results, two being abandoned before reaching their target. A shallow auger drilling program (140 holes of 2.15m average depth) was also undertaken without significant result. Further airborne surveys were carried out in 1973; first an orientation survey and then a detailed survey but no new anomalies were located at Dingo's Rest South.

1974-1975: A **"**track etch" survey was carried out over part of the area. The spacing was 0.5km north-south along lines and 1km between lines. Several fairly large anomalies were encountered. Follow-up "track etch" surveys were conducted and confirmed the anomalous results. Hole DRS1 was drilled at this stage and it gave an assay value of 1,770ppm U_3O_8 over 0.1m. Three holes were drilled over the "track etch" anomalies but nothing significant was found.

1976: The Dingo's Rest South prospect was geologically mapped at 1:500 scale with five units identified in the Mt Eclipse Sandstone overlying Djagamara Formation. The trench carnotite mineralisation occurs near the contact between Unit 2 (limonitic, bleached arkosic sandstone)

and Unit 3 (red-purple mottled, kaolinised sandstone). Four percussion/diamond holes were drilled in the Dingo's Rest South area including DRPD4 which intersected 1,500ppm U_3O_8 over 0.5m, all other holes were barren.

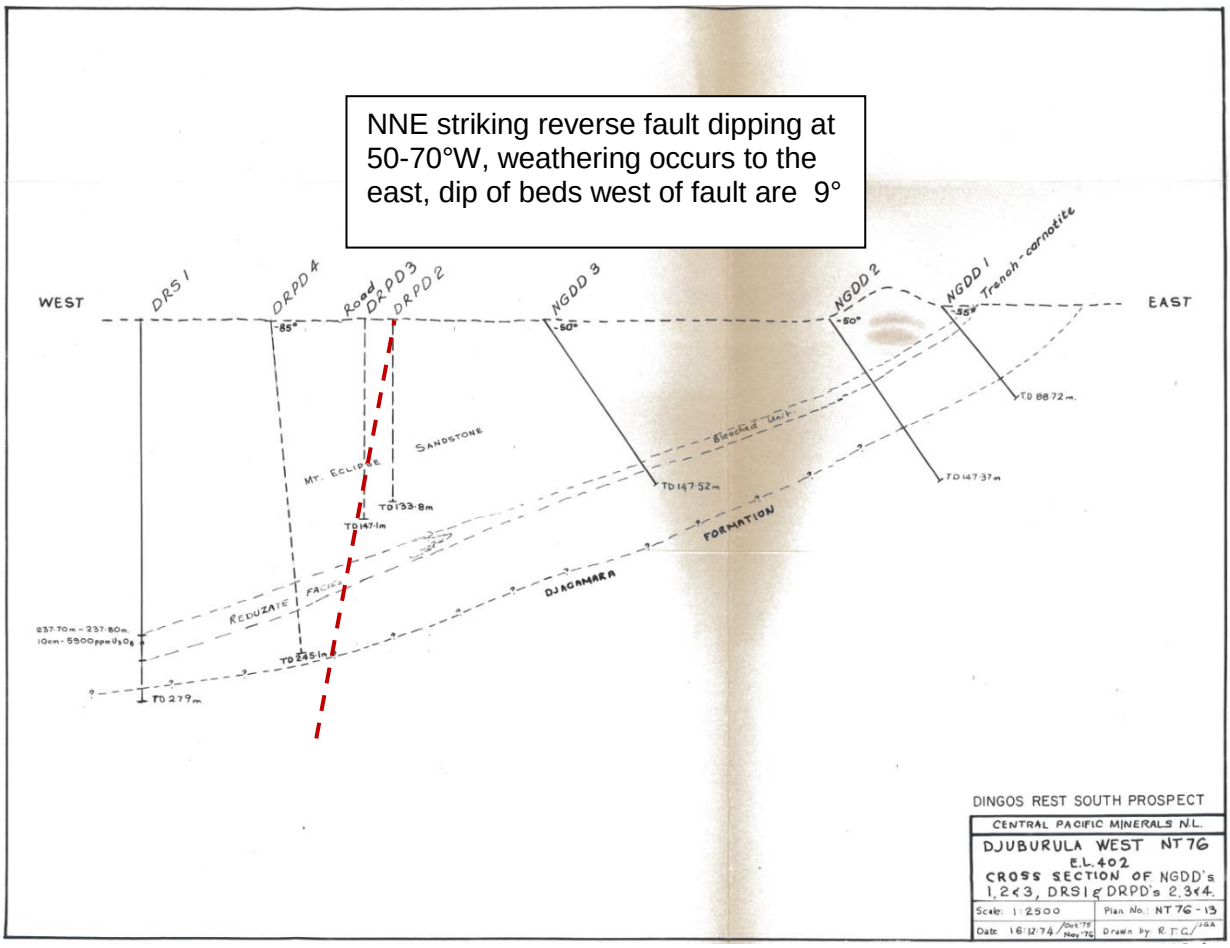

Figure 5: Cross-section through the Dingo's Rest South trench horizon showing drill hole traces; an interpreted fault is dashed in red (Dixon, 1976).

1977: Prior to relinquishment in late 1977, 21 "Wild Dog" Mineral Claims South (MCS) tenements were pegged and applied for; the number was later reduced to nine tenements.

Afmeco Pty Ltd.

1977: In 1977 Afmeco drilled one percussion hole, 1307/1 on the boundary between EL1307 and EL1662 but due to poor drilling performance, no further holes were drilled. A photo-interpretation of the Patmungala Syncline – Dingo's Rest area, divided the very thick Mount Eclipse Sandstone package into manageable sequences numbered 1-9 (as shown in Figure 4; see Rippert et al., 1979).

1978: Drilling programs were conducted in two phases. Phase 1 commenced May through to July and consisted of percussion drilling by Intairdril using a Gardner Denver 15W drilling rig. Phase 2 commenced in August through to October by Longyear using two Longyear 44 Diamond Drills. A total of 2,504.1m was drilled in phase-1 and 4,153.1m in phase-2 within EL1662 – otherwise known as the DIN Area. Further structural and geological mapping was also carried out during this period (see Figure 4). Routine chemical assaying for U, V & Th was carried out on percussion and diamond core across zones of interest with a best result of 0.3m @ 1,933ppm U from 552m in DIN17.

PREVIOUS WORK COMPLETED BY ENERGY METALS LTD

Geophysics

During late 2014, a high resolution airborne (helicopter) magnetic and radiometric survey was flown over several areas within the Ngalia Basin including EL30144; final data and imagery was received in February/March of 2015 from external consultants Resource Potentials. The high resolution (50m line spacing) imagery was produced using a number of different enhancements, including high-pass and deep sensing filters then stitched into regional merged imagery across the Ngalia Basin. In addition, previous geophysical data were reprocessed and stitched to create regional mosaic geophysical imagery covering EL30144 and surrounding areas.

The magnetic, radiometric and DEM imagery showed along strike extensions of key stratigraphic horizons and show tightly folded stratigraphy and structures within EL30144 and the surrounding tenement EL31821 (previously EL24453). The survey data and imagery are available in Kerr & Liu (2015) with further discussion provided in Kerr & Liu (2016).

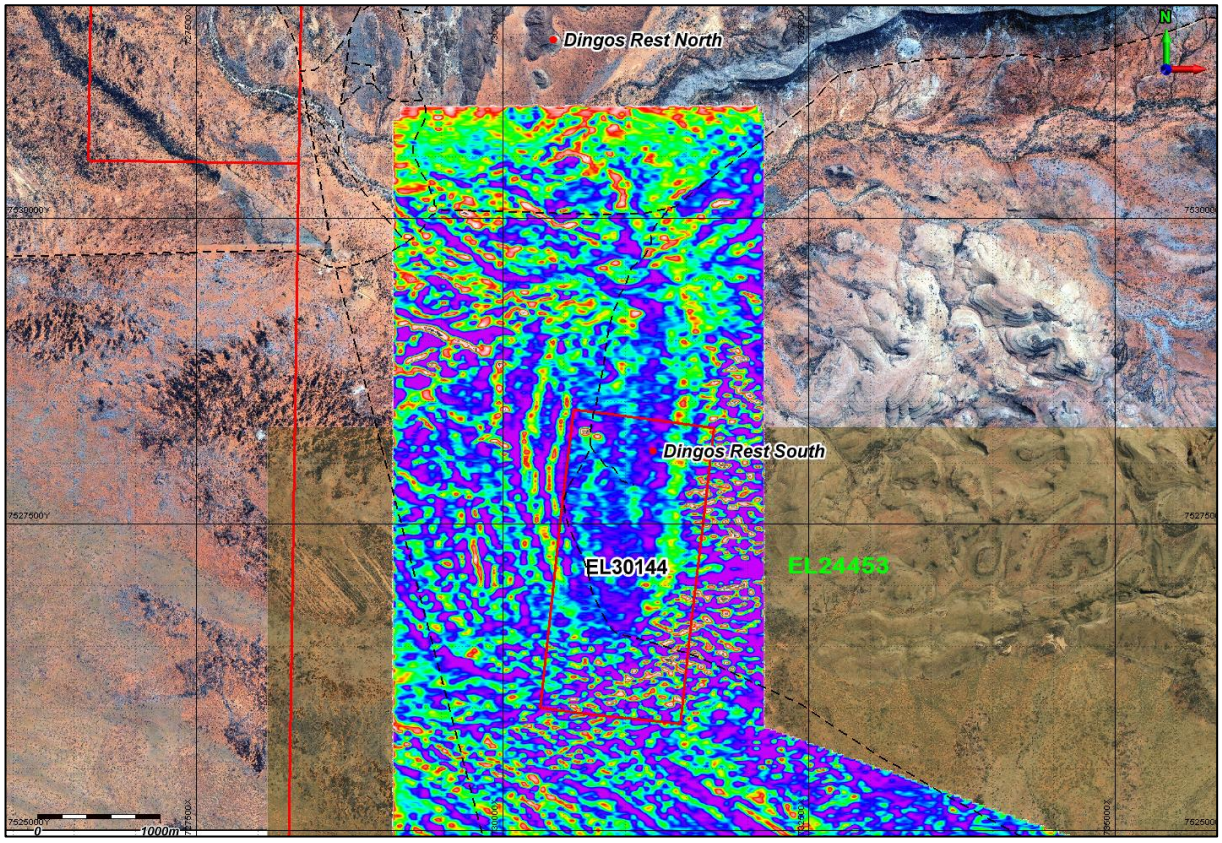

Figure 6: High resolution aerial-magnetic imagery over the Dingos Rest - Carnotite Hill corridor (TMI_RTP_1VD) over air-photo and satellite imagery, Dingo's Rest prospects and tenements labelled; tracks and roads are dashed in black. EL30144 forms part of the survey area (previously reported).

In 2015-2016 an interpretation of high-resolution magnetic-radiometric imagery flown over the Dingo's Rest North-Dingo's Rest South-Carnotite Hill corridor was prepared during the period. Part of this corridor includes EL30144. As well as the trench radiometric anomaly (DRS Trench) several other untested uranium-related radiometric anomalies have been identified to the south (Figure 7).

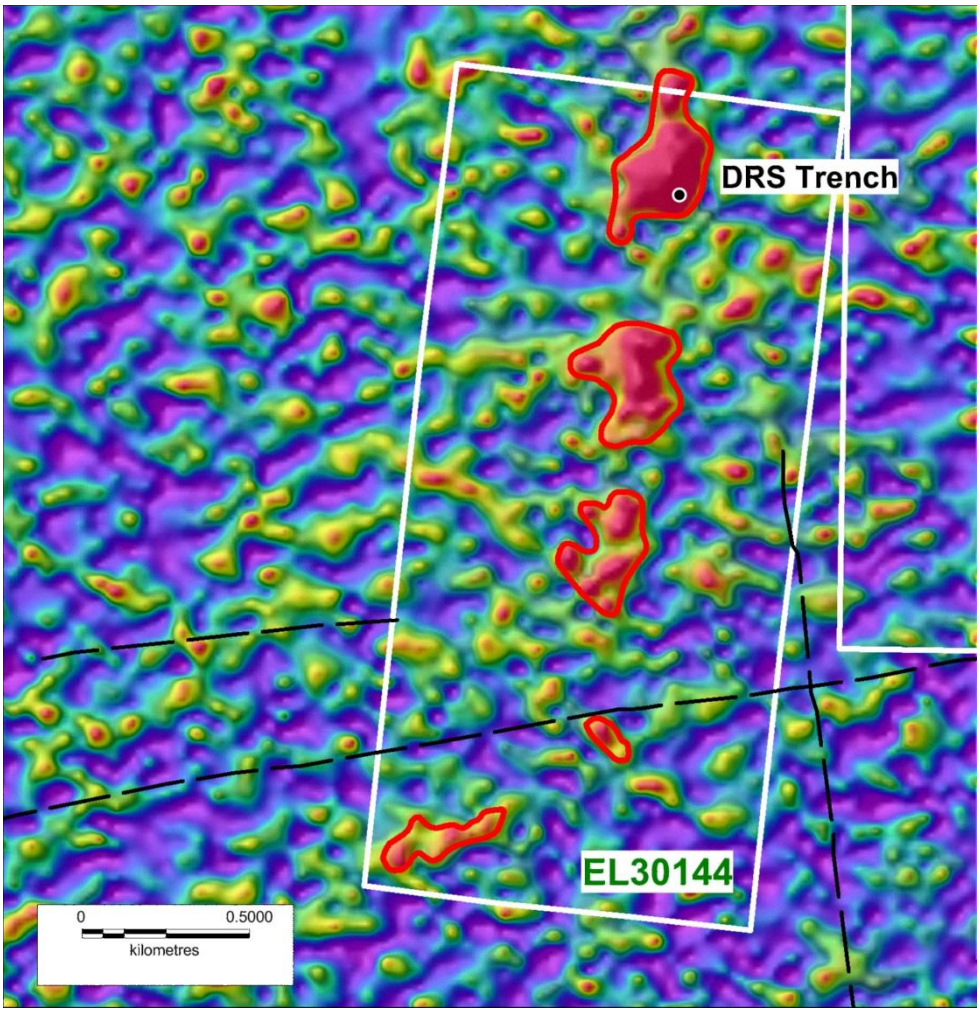

Figure 7: Uranium radiometric anomalies over EL30144 from the 2014 high-resolution survey.

After careful analysis of historical reports, drill hole logs and the inspection of core from several holes (including DRPD5 and DRPD3), it is concluded that CPM did not adequately test the depth extent of the DRS surface mineralisation. The higher resolution imagery has enabled interpretation of key stratigraphic horizons (Mount Eclipse Sandstone) and has helped unravel the structural complexity extending southeast towards the Carnotite Hill prospect (Figure 8).

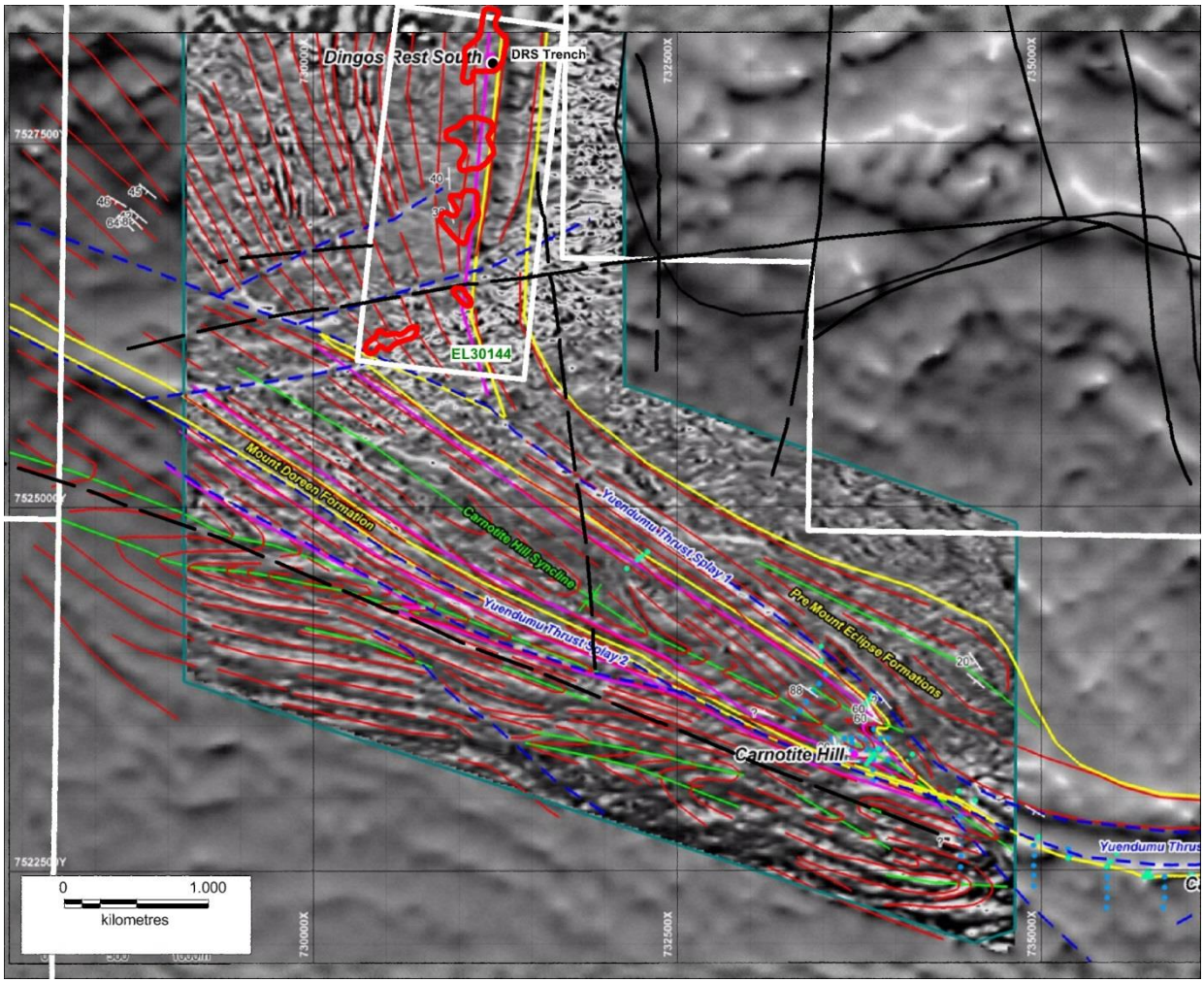

Figure 8: Detailed magnetic interpretation over high resolution TMIRTP_Goussev_gsc_m52 imagery (turquoise outline) underlain by stitched regional TMIRTP_TDR_gsc_m52 merge. Faults dashed in blue, stratigraphic trends in red, fold axis in green. The yellow polylines represent inferred extent of pre-Mount Eclipse Sandstone Formations interpreted as Djagamara and Mount Doreen Formations and/or Vaughan Springs Quartzite. Drill holes are shown as turquoise (historic) and blue (EME) dots.

Figures 8 and 9 show the detailed interpretation of stratigraphic trends (red) and faults (blue). The southern faults have been interpreted as part of the Yuendumu Thrust zone with fault splays extending from the east near Carnotite Hill (Figure 8). The stratigraphy is tightly folded in the southern portion of the survey area and a new feature, the Carnotite Hill Syncline, has been defined between the two main splays of the Yuendumu thrust. In this area squeezing and buckling of the Ngalia Basin stratigraphy has likely occurred as a result of N-S Basin shortening in proximity to an irregularly shaped basement high (the Wanabi Dome) which appears to have acted as a 'rigid buttress' focussing the deformation.

Deep filtering removes or mitigates the effects of surface related magnetic noise, particularly that associated with regolith. In the deep filtered image shown in Figure 9 the distinct deep magnetic signature outlined by the yellow polylines is interpreted as the Djagamara and Mount Doreen (i.e. pre-Mt Eclipse) Formations. Drill hole data and lithology logs from historic AGIP drill holes agree with this interpretation. The splayed Yuendumu Thrust zone west of Carnotite Hill bounds the newly defined Carnotite Hill Syncline where tightly folded (isoclinal) Ngalia Basin stratigraphy has been wedged and squeezed as a result of basin shortening. The Yuendumu Thrust zone and second-order faults would likely have a strong transform or strike slip component, however, no kinematic indicators have been directly measured to date.

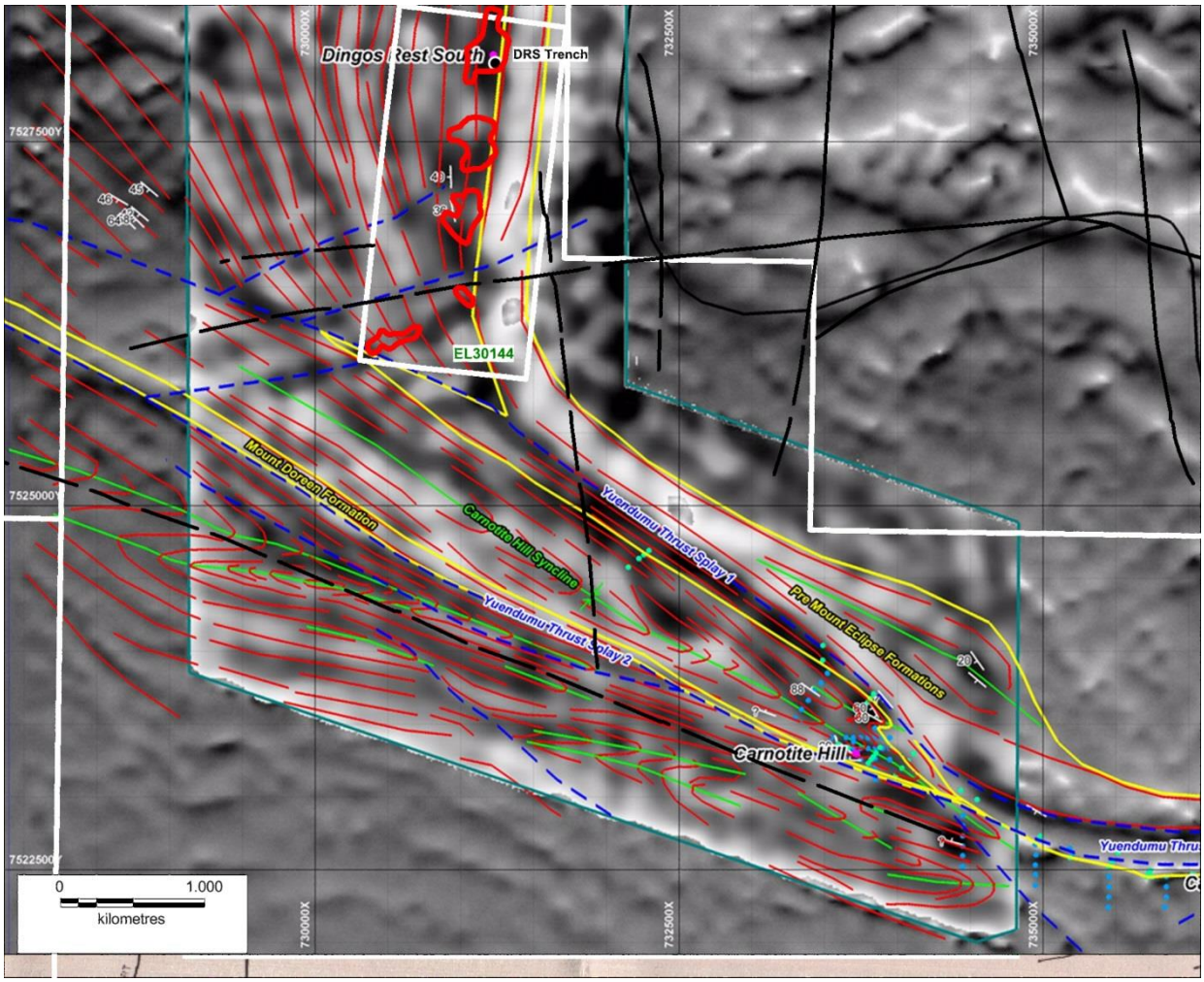

Figure 9: Detailed magnetic interpretation over deep filtered high resolution magnetic imagery underlain by stitched regional magnetic imagery. Interpreted faults dashed in blue, stratigraphy in red, fold axis in green; uranium anomalies on EL30144 are shown as red outlines. The filtered magnetic enhancement shows the very distinct magnetic signature of pre-Mount Eclipse formations in the eastern portion of EL30144 which bends around to the southeast towards Carnotite Hill.

In 2016-17 Energy Metals proposed that a small RC drill program of approx. 1,500-2,000m be undertaken to test mineralisation at shallow depth (approx. 40m) along strike from the DRS trench exposure (Jordan & Taylor, 2017). Holes were planned at 50-100m intervals over both the DRS trench and the southern radiometric anomalies. However, as ground disturbing works were involved, this program was subject to completion of a sacred site clearance survey and no drilling occurred in the period. A sacred site clearance survey was scheduled for late 2017.

To better understand the undercover geology in the southern part of the tenement, where prospective Mt Eclipse units transition toward the Carnotite Hill and Camel Flat prospects to the southeast, a 1.2 km x 600 m Gradient Array Induced Polarisation (GAIP) grid was also planned for the 2017 field season.

WORK COMPLETED BY ENERGY METALS DURING THE REPORTING PERIOD (8TH AUGUST 2017 – 7TH AUGUST 2018)

Field Geophysics - Gradient Array Induced Polarisation (GAIP) Survey

In late August – early September 2017 acquisition of a 1.2 km (N-S) x 600 m (E-W) GAIP survey was undertaken on EL30144 by contractors Zonge Engineering and Research Organisation. The aim was to better understand the undercover geology in the southern part of the tenement, where prospective Mt Eclipse units transition toward the Carnotite Hill and Camel Flat prospects to the southeast. This area is structurally complex, involving several fault splays interpreted as part of the Yuendumu Thrust zone, which extends from the southeast near Carnotite Hill. The stratigraphy is tightly folded in the southern portion of the survey area with the Carnotite Hill Syncline being defined between the two main splays of the Yuendumu thrust (Figure 9).

The GAIP grid (Figure 10) was arranged on 50 m line spacings (25 lines oriented approx. E-W over 1.2 km) with 25 m receiver dipoles (25 stations along the 600 m length of the line) and transmitter dipoles separated by 1.6 km. Approximately one half of the planned GAIP grid is within EL30144 with remainder located on EL31821 (previously EL24453). For a breakdown of logistics and acquisition parameters refer to Mann (2017) in the Digital Data Appendix attachment: EL30144_2018_A_03_GroundGeophysics_IP_LogisticsReport170308.pdf.

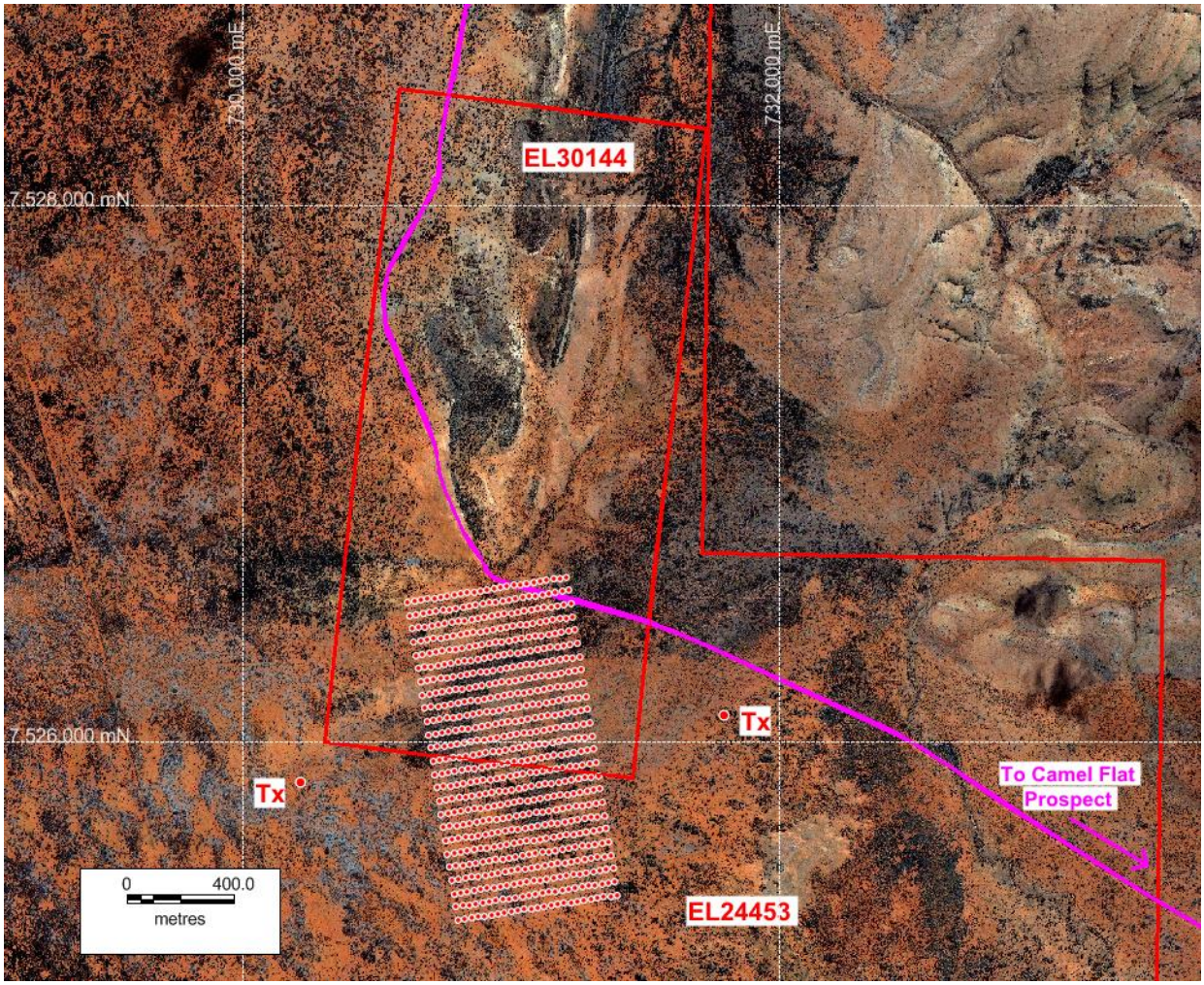

Figure 10: Planned GAIP grid (red dotted array) and transmission pit (Tx) locations designed to test the undercover geology in the south of EL30144; a portion of the survey is located on EL31821 (previously EL24453). Access track to Camel Flat prospect shown in pink.

The GAIP survey was completed in September 2017 with final results received in November and interpretative work completed by year end. The method is able to target buried, reduced pyrite-bearing beds (chargeable beds) prospective for Bigrlyi-style mineralisation. At Dingo's Rest, the amplitude of GAIP chargeability anomaly values that were measured in the 2013 North survey and the 2017 South survey are very similar, and range from 0.9 msec to 8.5 msec. In the Dingos Rest-Carnotite Hill corridor, a strong chargeable anomaly, located to the south of the known surface mineralisation, was detected in an interpreted tightly folded nose of a syncline (Figure 11). It is also apparent that IP chargeability has been affected within an interpreted cross-cutting fault zone probably due to groundwater penetration into the faults causing pyrite alteration and deep weathering. Georeferenced chargeability, conductivity and resistivity imagery is provided in the Digital Data Appendix attachment:
EL30144_2018_A_04_GroundGeophysics_IP_Imagery.zip

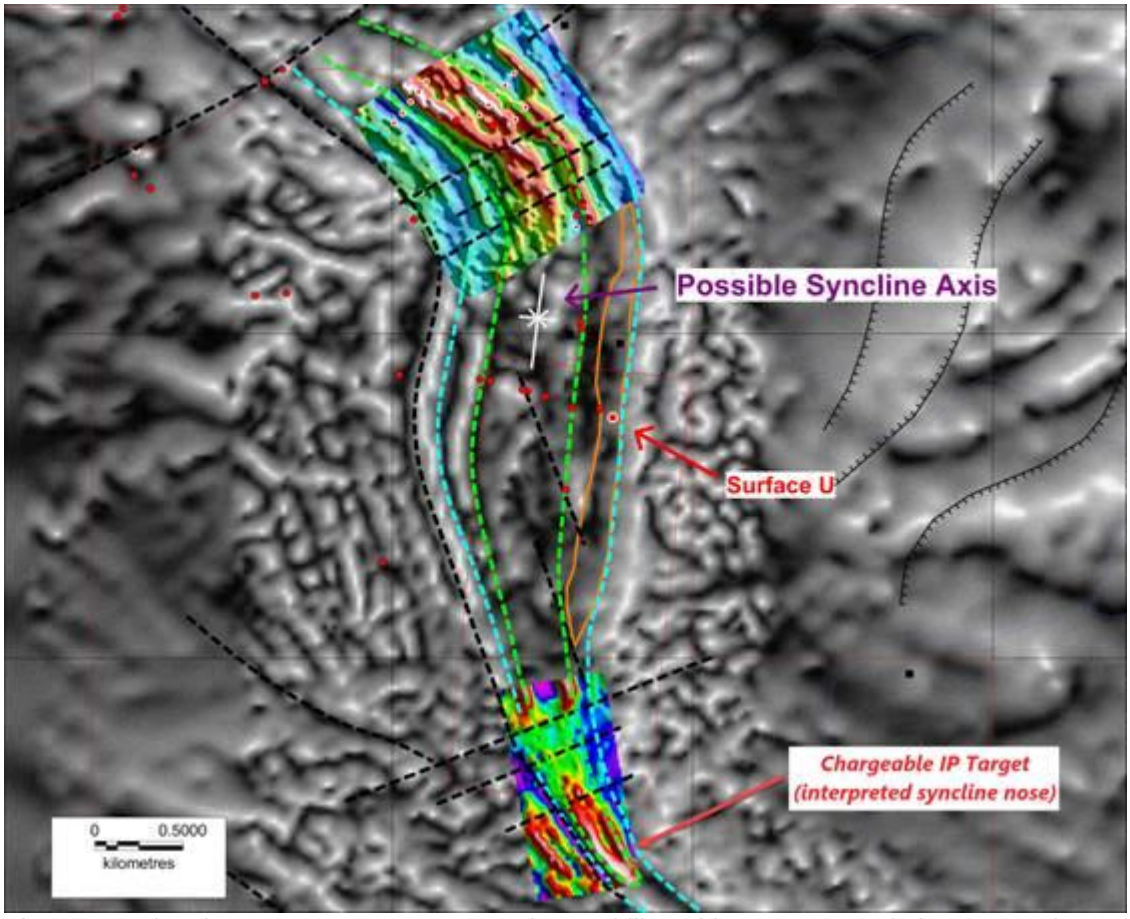

Figure 11: Dingo's Rest area GAIP survey chargeability grids over magnetic imagery – the 2017 survey is the area to the south of surface U mineralisation, also shown is the 2013 GAIP survey over the Dingo's Rest North prospect. EME's proposed geological model for the area is shown in which the new IP target beds are located in the nose of a tightly folded syncline that can be correlated with 2013 IP survey results to the north. Magnetic imagery backdrop. Red dots – previous drill holes. Black dashed lines – inferred faults. Green and light blue dashed lines – interpreted trace of Mt Eclipse Sandstone stratigraphic units within the inferred syncline. The orange-outlined polygon is Mt Eclipse Sandstone outcrop.

AAPA Sacred Site Survey

In October 2017 the Aboriginal Areas Protection Authority (AAPA) conducted a sacred site clearance survey over EL30144 and an Authority Certificate C2017-111 was issued on 8th December 2017. Access to all key proposed drilling areas is permitted.

Field Reconnaissance

In June 2018 EME staff conducted field trip to uranium prospective areas within the tenement to assess vehicular access to proposed drill sites. It is proposed to repair the historical road used by CPM in the 1970s to drill the original holes.

WORK PROPOSED FOR THE NEXT REPORTING PERIOD (8TH AUGUST 2018 – 7TH AUGUST 2019)

Activities which are planned for 2018-2019 period, subject to budget constraints, include:

(i) Formulation of a joint venture budget in accordance with the JV agreement;
(ii) Optimisation of GAIP survey interpretation and targeting as required;
(iii) Review of drillhole placement and site access planning;
(iv) Field reconnaissance;
(v) Preliminary site access earthworks.

CONCLUSIONS

Desk-top studies including historical data compilation, digitisation and interpretation of geophysical imagery were on-going during the period. Results of the GAIP survey on EL30144 and adjacent ground were received in November 2017. The IP survey results combined with interpretation of magnetic imagery and historical drilling results suggest that the Dingo's Rest area lies within a largely undercover, fault-bounded synclinal structure analogous to that present in the Carnotite Hill area to the southeast although with an axis oriented north-south. Uranium prospective chargeable beds are interpreted to occur within the tightly-folded nose of the syncline where it pinches out in proximity to the Yuendumu Thrust fault zone. These are considered encouraging results that provide additional drill targets and enhance the potential of the project. An AAPA Authority Certificate was issued in December 2017 following a sacred site clearance survey with access to key drill targets permitted. Future exploration programs on EL30144 are subject to budgetary constraints in the currently depressed uranium market.

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DIGITAL DATA APPENDIX

EL30144_2018_A_02_GroundGeophysics_GAIP_DingosRestSth.dat
EL30144_2018_A_03_GroundGeophysics_IP_LogisticsReport170308.pdf
EL30144_2018_A_04_GroundGeophysics_IP_Imagery.zip
EL30144_2018_A_05_FileListing.txt