

Historical Data Review outlines Uranium Potential over West Arnhem, South Alligator and North Arunta Projects in the Northern Territory

Eclipse Metals Limited (ASX: EPM) is pleased to announce the preliminary results from an open file desktop review of Exploration Licence Applications (ELA's) in the West Arnhem, South Alligator and North Arunta uranium projects situated in the Northern Territory.

Highlights

- The Devil's Elbow uranium-gold-palladium prospect in the West Arnhem Project area, located within EL27584, yielded high grade surface uranium assays of **3.2% U₃O₈, 3.7% U₃O₈, 4.40% U₃O₈ and 5.8% U₃O₈** with **38.1g/t Au** and **28.02g/t Pd** related to fractures within altered amygdaloidal basalt of the Nungbalgarri Volcanics. Abundant strong untested radiometric anomalies are hosted within the Gumarrinbang Sandstone which is considered prospective for unconformity related uranium mineralisation associated with gold and palladium.
- The South Alligator Uranium Project is hosted in the Pine Creek and McArthur River polymetallic Mineral Field. The project hosts extensive radiometric anomalies in one uranium occurrence known as the "South Anomaly" located in a conglomerate bed of the Kombolgie Sandstone. The radon anomaly is believed to be associated with a fractured anticlinal axis with radioactivity being sourced at depth. The project area is a favourable host for unconformity style and high grade vein uranium deposits.
- The North Arunta Uranium Project covers approximately 243 km² of outcropping calcrete lithologies mapped by the Northern Territory Geological Survey. Highly prospective for calcrete hosted uranium deposits.

The West Arnhem Project consists of four Exploration Licence Applications, totalling 1,239.22 sq km situated in part of the McArthur Basin. The project lies approximately 285 km east of Darwin with uranium mineralisation hosted within the world class Alligator Rivers Uranium Field which hosts large deposits such as Ranger and Jabiluka Uranium Mines.

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Eclipse Metals Limited is an Australian company with a portfolio (over 24,000 km²) of quality iron, manganese, gold, uranium and base metal projects in the highly prospective Archaean and Proterozoic metallogenic provinces of the Northern Territory, Queensland and New South Wales of Australia.

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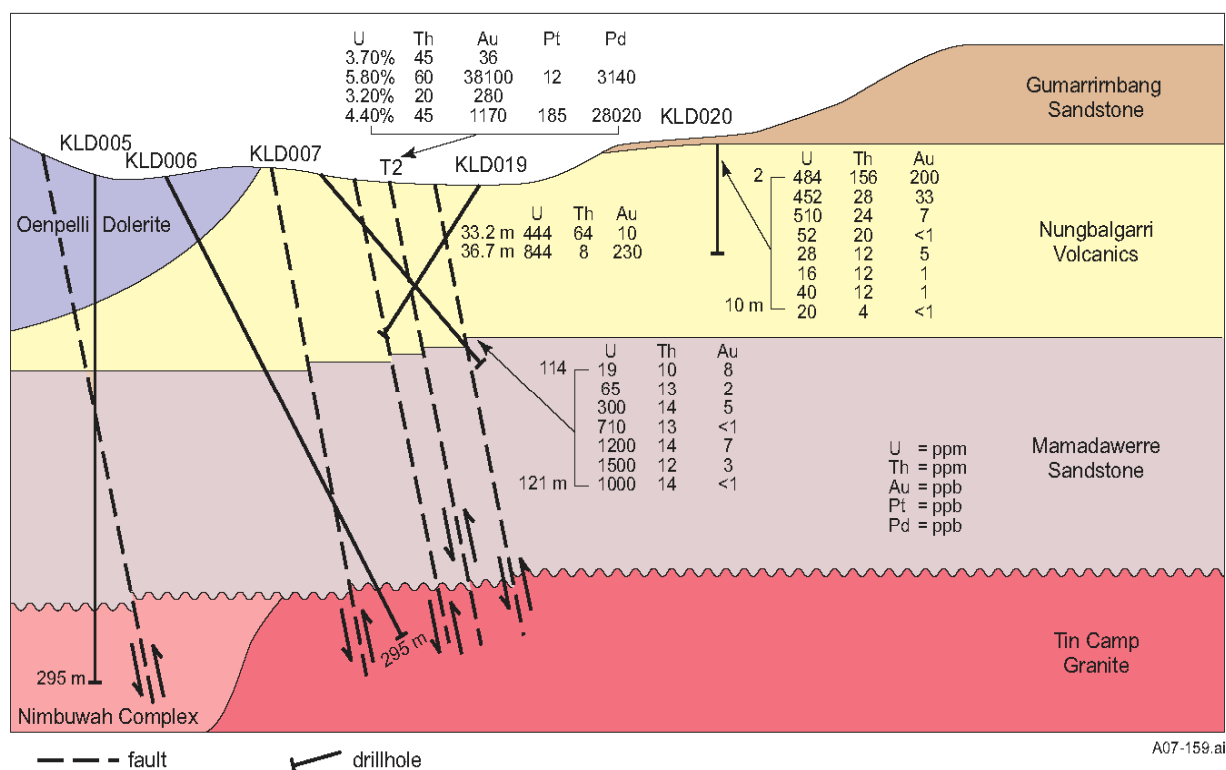
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The tenements are located approximately 41km southeast of the worked out Nabarlek Uranium Mine which produced 12,000 tonnes of uranium oxide (Production: 568,402t @ 1.95% U_3O_8). These mines account for 96% of past production and 95% of known resources in the Northern Territory. As well as uranium, these deposits also contain economic quantities of gold, platinum and palladium (eg Jabiluka, Coronation Hill).

In 1988, Uranerz Australia Pty Ltd conducted regional uranium exploration in the central part of ELA 27584, targeting uranium unconformity type deposits. Through this exploration work, the Devil's Elbow uranium-gold-palladium prospect was delineated which is considered to be a low-sulphide gold-quartz vein system containing uranium and precious metals. Surface costean sample results returned high grade uranium assays of **3.2% U_3O_8** ; **3.7% U_3O_8** ; **4.40% U_3O_8** and **5.8% U_3O_8** with **38.1g/t Au** and **28.02g/t Pd** (see Figure 2).

Mineralisation is related to fractures within altered amygdaloidal basalt of the Nungbalgarri Volcanics. A total of nine percussion/diamond holes were drilled over the Devil's Elbow prospect with the best intersection in Hole KLD 7 of 950ppm U_3O_8 over 5m from 116m depth. Uranium mineralisation was located in Hole 19 which assayed 844ppm U_3O_8 over 0.1m and Hole 20, 480ppm U_3O_8 over three metres in the Nungbalgarri Volcanics (Figure 1). It was concluded that the structures are mineralised and continuous.

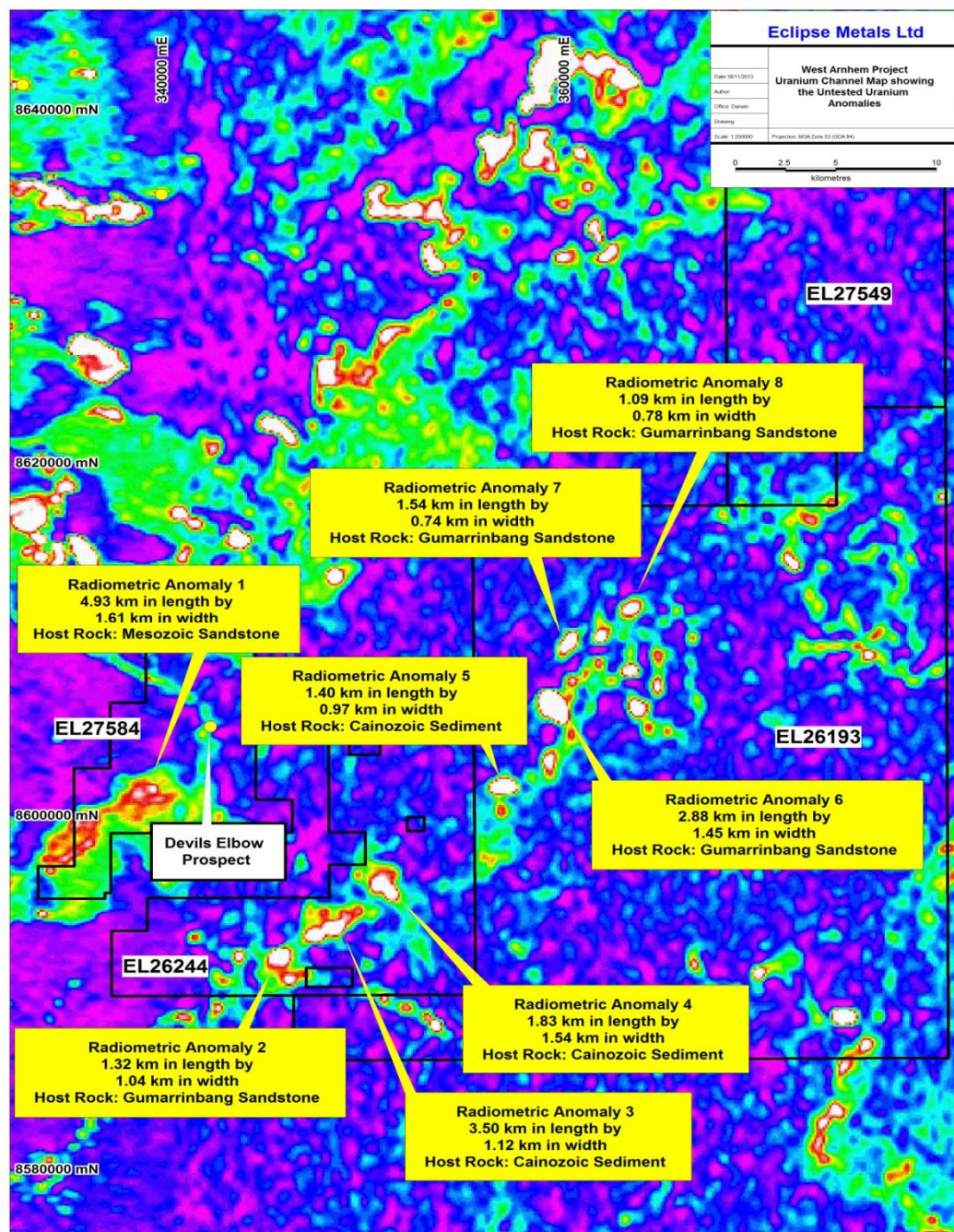
Structural mapping in conjunction with drilling showed that the mineralisation is concentrated in small NNW-SSE and NE-SW trending structures, or has been redistributed in small patches of residual laterite. It is possible that structures similar to those hosting the small scale mineralisation at Devil's Elbow may widen at the contact of the Nungbalgarri Volcanics Member and the Kombolgie Sandstone Formation which appear to form a large dilation zone amenable to economic accumulations of uranium-gold-platinum and palladium. Petrographic studies of the ore from Devil's Elbow identified uraninite as the primary uranium mineral with minor coffinite.



Work Conducted by Eclipse: Based on a desktop review of all the available data from the Northern Territory Geological Survey and the usage of GIS spatial datasets, the following targets were generated. These project areas are considered prospective for unconformity related uranium mineralisation as well as Au-Pt-Pd. Figure 2 shows a large number of untested radiometric targets which warrant further exploration.

Table 1: Radiometric Targets warranted for follow up exploration work over West Arnhem Project

Tenure Number	Radiometric Anomalies	Strike Length of Anomaly	Width of Anomaly	Actual Geology Lithology	Geological Model
EL27854	1	4.93 km Max	1.61 km Max	Mesozoic Sandstone	Unconformity Style-Structural Control
EL26244	2	1.32 km Max	1.04 km Max	Gumarringang Sandstone	Unconformity Style
EL26244	3	3.50 km Max	1.12 km Max	Cenozoic Sediments	Unconformity Style
EL26244	4	1.83 km Max	1.54 km Max	Cenozoic Sediments	Unconformity Style
EL26193	5	1.40 km Max	0.97 km Max	Cenozoic Sediments	Unconformity Style
EL26193	6	2.88 km Max	1.45 km Max	Gumarringang Sandstone	Unconformity Style
EL26193	7	1.54 km Max	0.74 km Max	Gumarringang Sandstone	Unconformity Style
EL26193	8	1.09 km Max	0.78 km Max	Gumarringang Sandstone	Unconformity Style

**Figure 2: West Arnhem Project Areas showing Radiometric Target Anomalies warranted for follow-up**

Exploration Potential: The Devil's Elbow project area is hosted within the Alligator Rivers world-class uranium province with mineral endowment, including mined resources, exceeding 500Mlbs U₃O₈. The Alligator Rivers Uranium Field is analogous to the Athabasca Uranium Province, Canada, in terms of uranium endowment. In contrast with the Athabasca, the Alligator Rivers Uranium Field is in the early stage of its exploration history, having received less than 1/100th of the exploration expenditure of its Canadian counterpart.

Geological mapping over the mineralised strike of the Devil's Elbow Prospect may delineate further deformed extensions within the Nungbgarri Volcanics. Ground geophysics such as gravity, IP and EM may delineate untested mineralised zones at depth and along strike of the known mineralised fracture zones. A helicopter borne reconnaissance program is proposed to follow up the strongest radiometric anomalies. Structural mapping along with surface sampling would be conducted on the sites focusing on uranium-gold mineralisation. In conjunction with the geochemical sampling, sampling of the Gumarringang sandstone (using PIMA analysts) will be targeted to determine if any chloritic alteration is present. This is used by many uranium geologists as a strong indicator of unconformity uranium style deposits in the Alligator Uranium Fields as chlorite highlights broad alteration haloes around known uranium mineralised zones.

The South Alligator group of tenements comprises two exploration licence applications totalling 1,541.8sqkm. The projects lie approximately 280km southeast of Darwin and are hosted within the Pine Creek and McArthur River polymetallic Mineral Fields.

In 1971 and 1972, Western Nuclear Australia Ltd carried out airborne and ground radiometric work over the "South Anomaly". The prospect was located in a conglomerate bed of the Kombolgie Sandstone. Here a radon anomaly is believed to be associated with a fractured anticlinal axis; probably caused by leakage along fractures from an unknown deep source.

Work Conducted by Eclipse: Based on open file research from the NTGS database and using uranium channel images, 10 radiometric anomalies have been outlined along with numerous structural targets which could represent the path of hydrothermal uranium bearing fluids, which warrant on-ground reconnaissance.

Table 2: Radiometric Targets warranted for follow up exploration work over EL26259 and EL26260

Tenure Number	Radiometric Anomalies	Strike Length of Anomaly	Width of Anomaly	Actual Geology Lithology	Geological Model
EL26260	1	1.16 km Max	0.51 km Max	Cenozoic Sediments	Vein Type
EL26260	2	13.46 km Max	4.90 km Max	Cenozoic Sediments	Vein Type
EL26260	3	3.17 km Max	1.10 km Max	Cenozoic Sediments	Vein Type
EL26260	4	3.62 km Max	0.77 km Max	Zamu Dolerite	Vein Type
EL26260	5	5.06 km Max	0.73 km Max	Cenozoic Sediments	Vein Type
EL26259	6	1.60 km Max	0.72 km Max	Cenozoic Sediments	Vein Type
EL26259	7	2.17 km Max	0.77 km Max	Cenozoic Sediments	Vein Type
EL26259	8	0.79 km Max	0.68 km Max	Cenozoic Sediments	Vein Type
EL26259	9	3.45 km Max	0.83 km Max	Cenozoic Sediments	Vein Type
EL26259	10	0.72 km Max	0.56 km Max	Cretaceous Sandstone	Vein Type

Exploration Potential: The South Alligator prospects are located within the polymetallic field of the Pine Creek Orogeny. Uraninite is the primary ore mineral and is associated with sulphide-bearing quartz veins in brittle faults that cross-cut structures formed during the Barramundi Orogeny.

The project area hosts extensive moderate to strong radiometric anomalies surrounded by base metal, gold and small uranium prospects. The project areas are considered favorable to host vein-type deposits in which uranium minerals fill cracks, veins, fissures, pore spaces, breccias or stockworks, associated with steeply-dipping fault systems. Within the Edith River area uranium occurrences are related to steeply dipping north-northwest-trending shear zones within the greisenised Tennysons Leucogranite. Shear zones are up to 100 m wide and consist of a series of parallel quartz-filled shears (Kruse et al 1994). Mineralisation also occurs within tension fracture systems on the margins of shear zones. Autunite and minor torbernite are the main ore minerals, which occur as disseminations in haematitic breccia and coatings on joint and fracture planes (Gardner 1953a).

The Lambell Fault located in the east proportion of EL's 26259 and 26260 represents a major structural target over 20 km in strike length, as shown in Figure 3. The Grace Creek Granite geological model of shear zones hosting uranium minerals within granitic intrusions, as seen in the Edith River uranium prospects, can be applied to this project area. Other faults proximal to the Grace Creek Granite may also represent high grade vein style uranium targets.

Further work should also be concentrated on the "South Anomaly" prospect to define the source of the radon. Geological mapping of the Kombolgje Sandstone and the fractured anticlinal axis should be targeted as a potential structure hosting uranium-gold mineralisation.

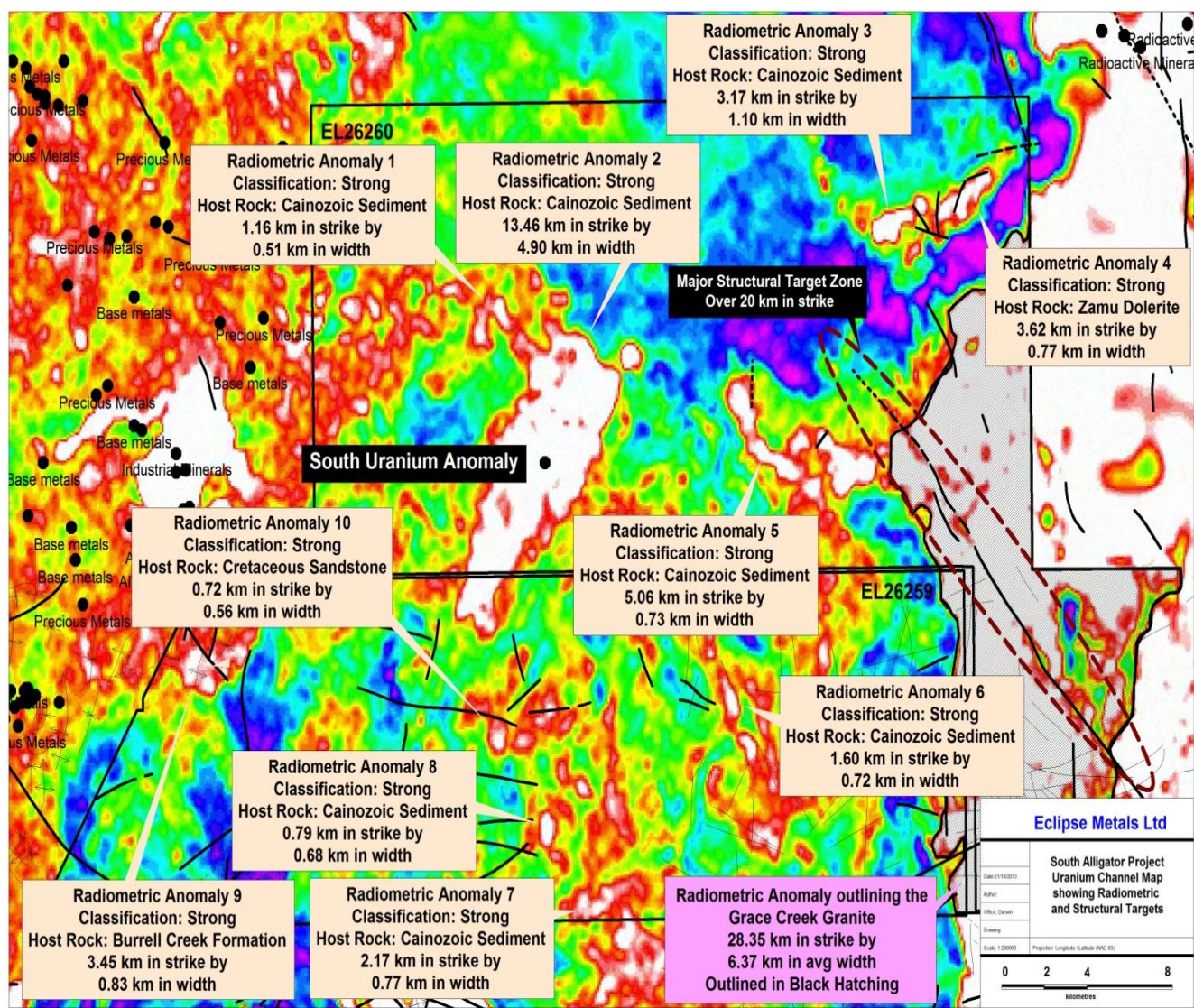


Figure 3: South Alligator Project Areas showing Radiometric Target Anomalies warranting follow-up

The North Arunta Uranium Project consists of six exploration licence applications totalling 6,719 sq km. The projects lie approximately 280 km southeast of Darwin, hosted within the Pine Creek and McArthur River Mineral Fields.

In 1996, 128 holes for 2,180m, from 5m to 24m deep were drilled on the northern boundary of EL26283. Vacuum drilling was carried out west of a NW trending calcrete palaeochannel where cover was relatively shallow.

Work Conducted by Eclipse: Based on open file research from the NTGS database with uranium channel and total magnetic images the following targets were generated. The project area covers approximately 243 km² of outcropping calcrete lithologies mapped by the Northern Territory Geological Survey.

Table 3: Geological Targets warranted for follow up exploration work over North Arunta Projects

Tenure Number	Strike Length of Anomaly	Width of Anomaly	Actual Geology Lithology	Geological Model
EL26283	10.13 km Max	2.77 km Max	Calcrete	Calcrete-Palaeochannel Hosted
EL26284	13.33 km Max	2.07 km Max	Calcrete	Calcrete-Palaeochannel Hosted
EL26490	31.15 km Max	3.21 km Max	Calcrete	Calcrete-Palaeochannel Hosted
EL26491 EL26492	32.98 km Max	1.98 km Max	Calcrete	Calcrete-Palaeochannel Hosted

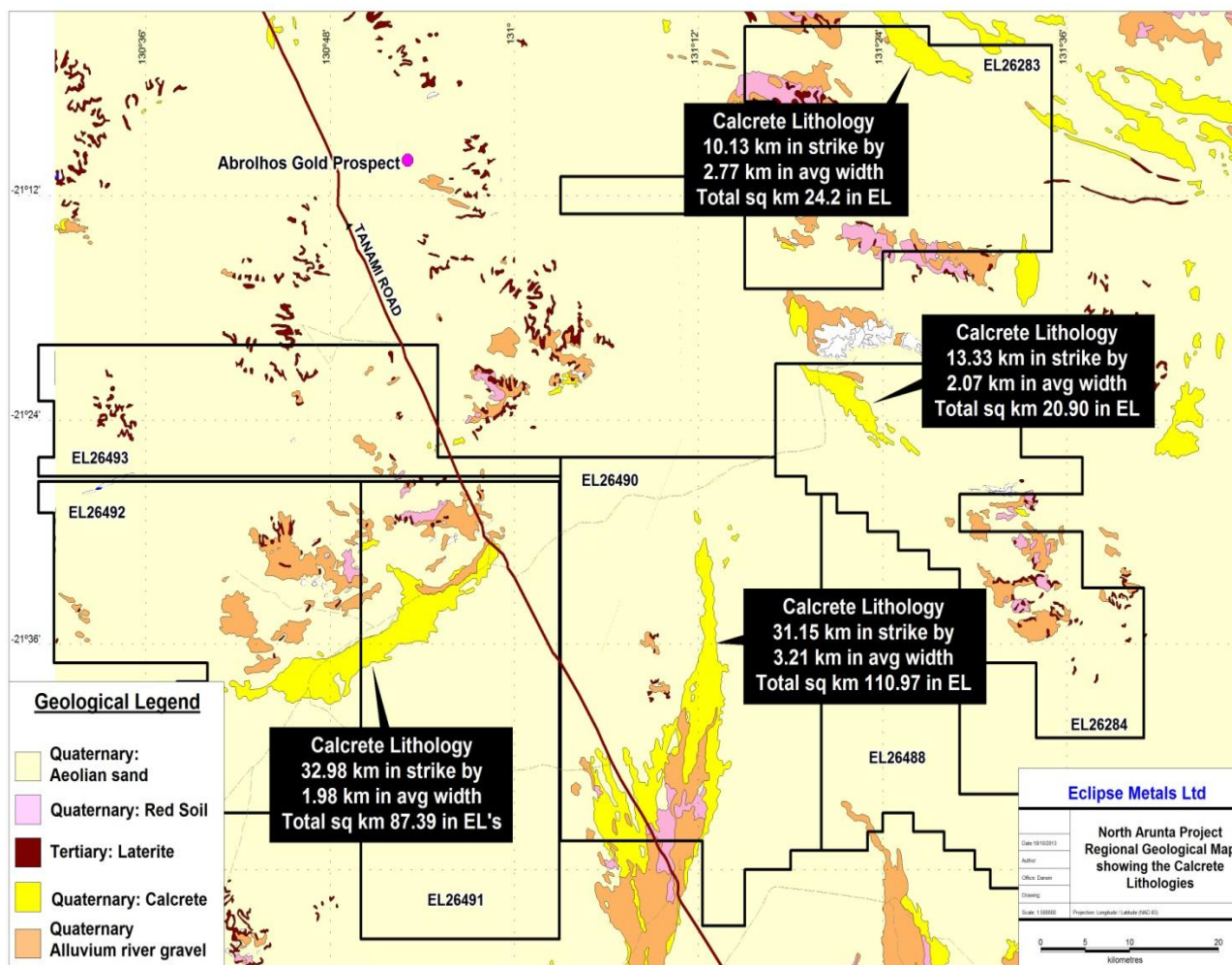


Figure 4: North Arunta Project Areas showing extensive calcrete lithologies for follow-up

Exploration Potential: The project hosts approximately 243 km² of outcropping calcrete lithologies mapped by the Northern Territory Geological Survey. Future drilling may encounter anomalous uranium values at shallow levels over a distance in excess of several kilometres with the mineralisation associated with calcareous alluvium using the Napperby deposit geological model **(9.34 Mt @ 359 ppm for 3,351 tonnes (7.39 Mlbs)).**

In commenting on these positive results, Carl Popal, Executive Director of Eclipse Metals Ltd, said:

“We are delighted to have received such excellent results from the open file desktop review. The work has delineated an abundant of uranium targets for various geological models. These areas have the potential to host uranium mineralisation based on radiometric, structural and lithological factors outlined.”

For and on behalf of the Board



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The information in this report that relates to Exploration Results together with any related assessments and interpretations is based on information compiled by Kastelco Geological Consultancy on behalf of Mr Giles Rodney (Rod) Dale. Mr Dale is a fellow of the Australasian Institute of Mining and Metallurgy. Mr Dale is a Director of the company. Mr Dale has sufficient experience relevant to the styles of mineralisation under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 edition of the “Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr Dale consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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