

Core Uranium Pty Ltd

**Exploration Licence for Minerals (EL32977)
“Twin Path Project”
6 June 2023 – 1 August 2023
Surrender Report**

September 2023

Contents

| | |
|--|---|
| ACKNOWLEDGEMENT AND WARRANTY | 3 |
| Abstract | 3 |
| Minerals Sought | 3 |
| Targets and Methodology | 4 |
| Regional Geology | 4 |
| Local Geology | 4 |
| Application Area | 5 |
| Conclusion and Recommendation | 6 |

Figure 1: Geology. 5

Figure 2: Sub-blocks, tenement vertices and cadastral. 6

ACKNOWLEDGEMENT AND WARRANTY

1. Subject to 2, the tenure holder acknowledges that this Report, including the material, information and data incorporated in it, has been made under the direction or control of the Northern Territory (the NT) within the meaning of section 176 of the Copyright Act 1968.
2. To the extent that copyright in any material included in this Report is not owned by the NT, the tenure holder warrants that it has the full legal right and authority to grant, and hereby does grant, to the NT, subject to any confidentiality obligation undertaken by the NT, the right to do (including to authorise any other person to do) any act in the copyright, including to:
 - use;
 - reproduce;
 - publish; and
 - communicate in electronic form to the public, such material, including any data and information included in the material.
3. Without limiting the scope of 1 and 2 above, the tenure holder warrants that all relevant authorisations and consents have been obtained for all acts referred to in 1 and 2 above, to ensure that the doing of any of the acts is not unauthorised within the meaning of section 29(6) of the Copyright Act.

Abstract

Core Uranium Pty Ltd (Core Uranium) is a mineral exploration company established for the purpose of exploring for uranium within the Northern Territory.

Core Uranium believes strongly that uranium is set to play an increasingly significant role in the global energy supply. There is currently a resurgence of interest in nuclear energy with many new reactors and life extensions being announced across the world. Many countries are announcing 'zero-carbon' goals and it is becoming apparent that this is unlikely to be achieved without the assistance of nuclear energy. This, together with several years of uranium prices below the average cost of production, has led to a structural supply deficit in the uranium fuel market. Global inventories are currently being consumed to meet this deficit and the spot price of yellowcake is trending upwards. It is now apparent that new sources of supply will need to be brought online in the coming decades to meet not only the current demand shortfall, but also the forecast increase in demand.

Following a review of various publicly available data-sets, Core Uranium believes that the application area has significant potential to host an economic uranium deposit. Core Uranium is growing a strong technical team with vast experience and expertise in mineral exploration and is focused on making a discovery.

Minerals Sought

Core Uranium plan was to naturally assess prospectivity for other minerals, however, our primary focus was uranium.

Targets and Methodology

The majority of the application area is underlain by rocks of the Amadeus and Eromanga basins, which have the potential to host roll-front or similar style mineralisation. There is also a portion in the far south of the area that is underlain by the Musgrave Province, where there may be potential for unconformity or structurally hosted deposits.

Regional Geology

The Amadeus Basin is a large intra-cratonic basin that extends across the south-western part of the Northern Territory, south of Alice Springs and into Western Australia. It is approximately 800 km long in the east-west direction and up to 300 km wide in the north-south direction. It contains up to 14 km of sedimentary rocks of Neoproterozoic to Palaeozoic age. These are partially covered by surficial Tertiary and Quaternary deposits. The basin has had a long-lived multi-event tectonic history.

The basal sequence of Neoproterozoic strata comprises shelf, lagoonal and continental fluvio-glacial sediments, including thick evaporates and minor volcanics. Cambrian sediments of continental and shallow marine origin overlie disconformably and include carbonates and evaporates. Unconformable late Cambrian-Ordovician marine sediments or continental Devonian-Carboniferous sediments complete the sequence. The present day shape of the Amadeus Basin effectively results from two major orogenic cycles. Extensive broad folding and thrusting deformed the southern margin of the basin during the Petermann Orogeny (late Proterozoic). The Alice Springs orogeny (Devonian-Carboniferous) similarly deformed the northern margin. These events are regarded as important to ore forming processes.

The Eromanga Basin is a Jurassic to Cretaceous sedimentary basin that is up to 2,300m thick in places within the south-eastern Northern Territory. The Jurassic succession is mainly terrestrial and comprises fluvial quartz sandstone interbedded with carbonaceous shale. The Early Cretaceous succession is largely marine, whereas late Early Cretaceous strata were deposited in a regressive sea. The early Late Cretaceous part of the Eromanga Basin succession was laid down in a mix of environments, including shallow marine, paralic, lacustrine, paludal and fluvial.

The Musgrave Province is a large east-west-trending Mesoproterozoic basement inlier that extends along the Northern Territory-South Australia border and into Western Australia. The province has both tectonic and locally unconformable contacts with Neoproterozoic to Palaeozoic sedimentary rocks of the Amadeus Basin to the north. Within the Northern Territory, the province is dominated by the granites of the Pitjantjatjara Supersuite with local occurrences of the felsic Musgravian Gneiss, which is interpreted to have granitic and probably felsic volcanic precursors. The province has been subject to significant deformation during both the Musgrave Orogeny (1220-1150 Ma) and the Petermann Orogeny (580-530 Ma). Major structures associated with the Petermann Orogeny include the Mann Fault and the Woodroffe Thrust

Local Geology

Sub-surface geology of the area is interpreted to consist of sedimentary rocks of the Amadeus and Eromanga basins, with igneous and metamorphic rocks of the Musgrave Province in the south, as described above, see Figure 1.

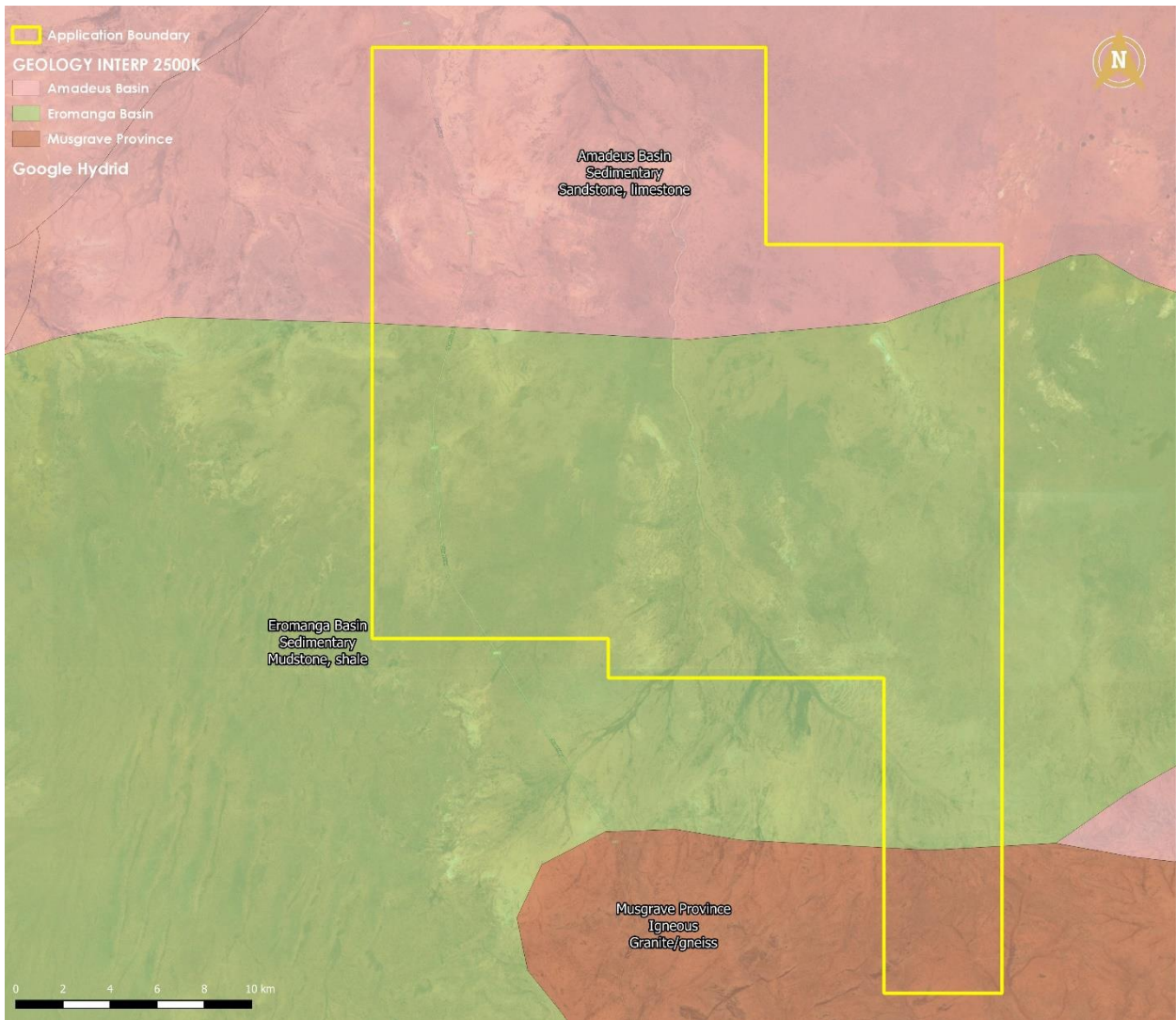


Figure 1: Geology.

Application Area

Core Uranium is applying for 244 sub-blocks as described in **Error! Reference source not found.** and shown in Figure 2.

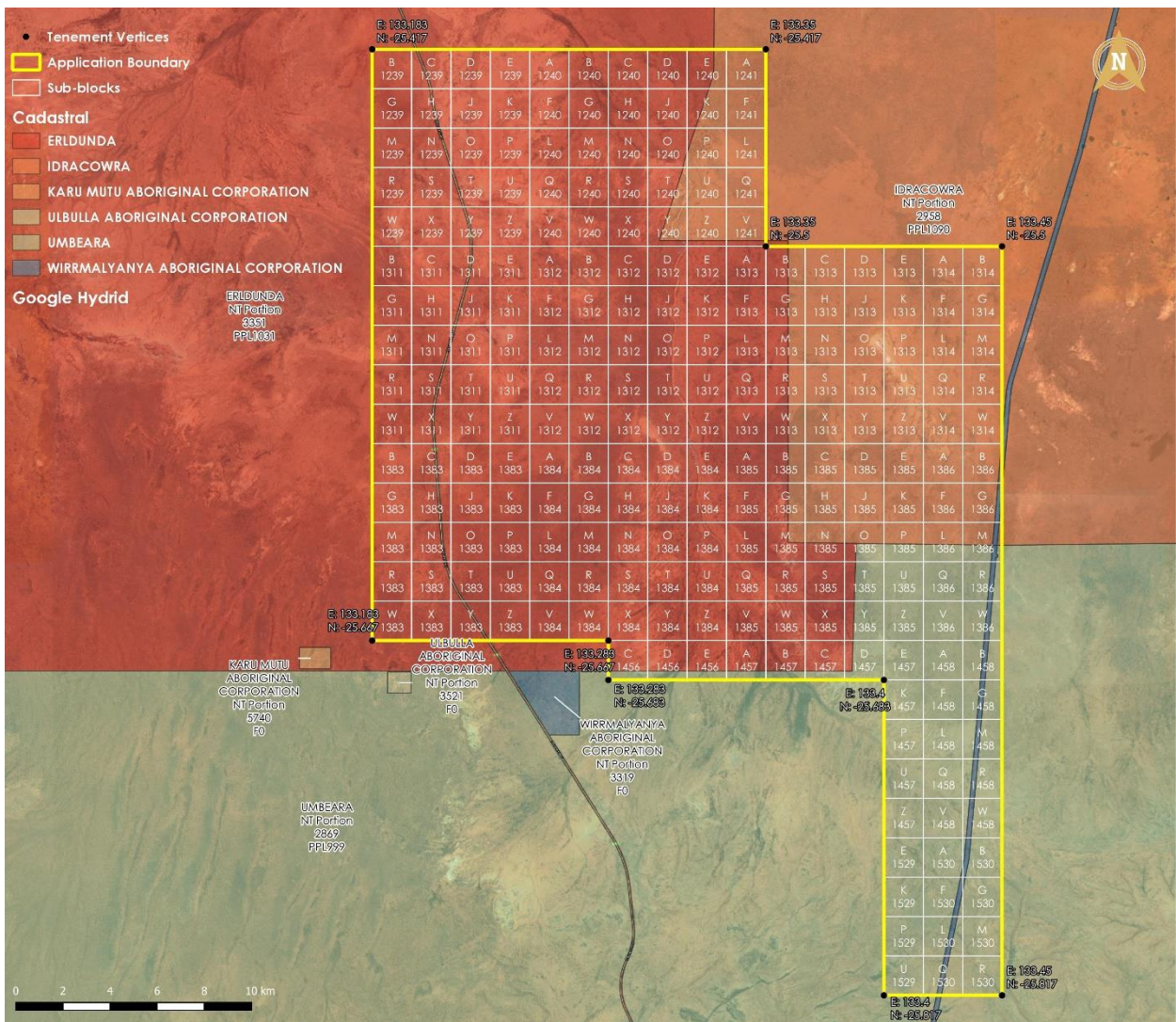


Figure 2: Sub-blocks, tenement vertices and cadastral.

Conclusion and Recommendation

No work was undertaken during the reporting period as Core Uranium decided after the completion of initial field work to relinquish the tenement.