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ASX CXO

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ASX: CXO Announcement

Exploration Update – Napperby Uranium Project

Summary

- Approvals process underway to conduct Resource extension drilling at the Napperby Uranium Project in the Northern Territory
- Napperby has a current JORC Mineral Resource[1] containing 8.03Mlb U_3O_8 within ~6km of an estimated ~20km of a prospective paleochannel system
- Geophysical survey has identified additional multi-commodity targets within the Project area which will also be advanced
- Napperby exploration forms part of Core's FY25 exploration program focused on low-cost target generation and resource extension in lithium, gold, uranium and critical minerals
- Entia and Fitton uranium projects also being reassessed

Core Lithium Ltd (**ASX: CXO**) (**Core** or **Company**) is pleased to provide an update on its exploration activities at its 100%-owned Napperby uranium project (**Napperby** or **Project**) in the Northern Territory (Figure 1).

Uranium Mineral Resource extension potential

Core's 100% owned Napperby project has a current JORC (2012) Inferred Mineral Resource Estimate of 9.54Mt @ 382ppm U_3O_8 containing 8.03Mlb U_3O_8 at a 200ppm U_3O_8 cut-off with a top cut of 2,500ppm U_3O_8 applied[1]. The calcrete-associated uranium mineralisation occurs within 3 to 8 metres of the surface in semi and unconsolidated sediments along a Tertiary palaeochannel system.

The area covered by the Mineral Resource represents a fraction of the extensive zone of anomalous mineralisation identified along the ~20km palaeochannel system outlined by historic drilling activities[1] (Figure 2). After a recent site visit by Core exploration geologists, preparations commenced to undertake further drilling during FY25 with the aim of extending the Mineral Resource within the prospective palaeochannel.

Core has submitted the requisite approval applications over the areas of interest and expect drilling to commence later this year.

The Project is one of the few undeveloped uranium deposits in Australia within a favourable jurisdiction. Napperby consists of 713.6km^2 of exploration tenure and is strategically located approximately 120km northwest of Alice Springs with access to rail, gas and bitumen highways.

1 Refer to ASX announcement, "Napperby Uranium Resource Update and Increase" dated 12 October 2018. Core confirms that it is not aware of any new information or data that materially affects the information included in previous announcements and that all material assumptions and technical parameters underpinning the Mineral Resource Estimate continue to apply and have not materially changed.

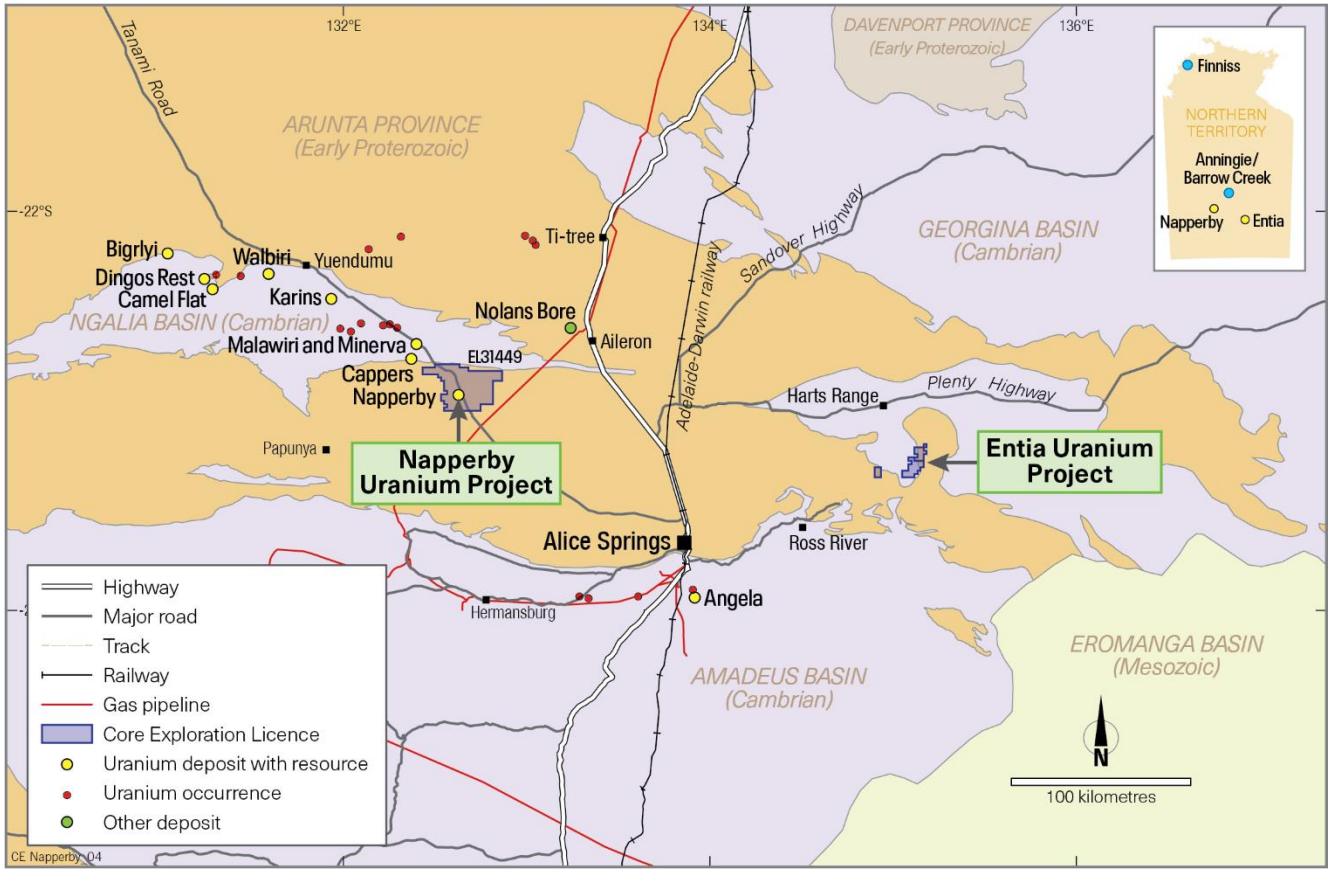

Figure 1 Napperby Uranium Project Location

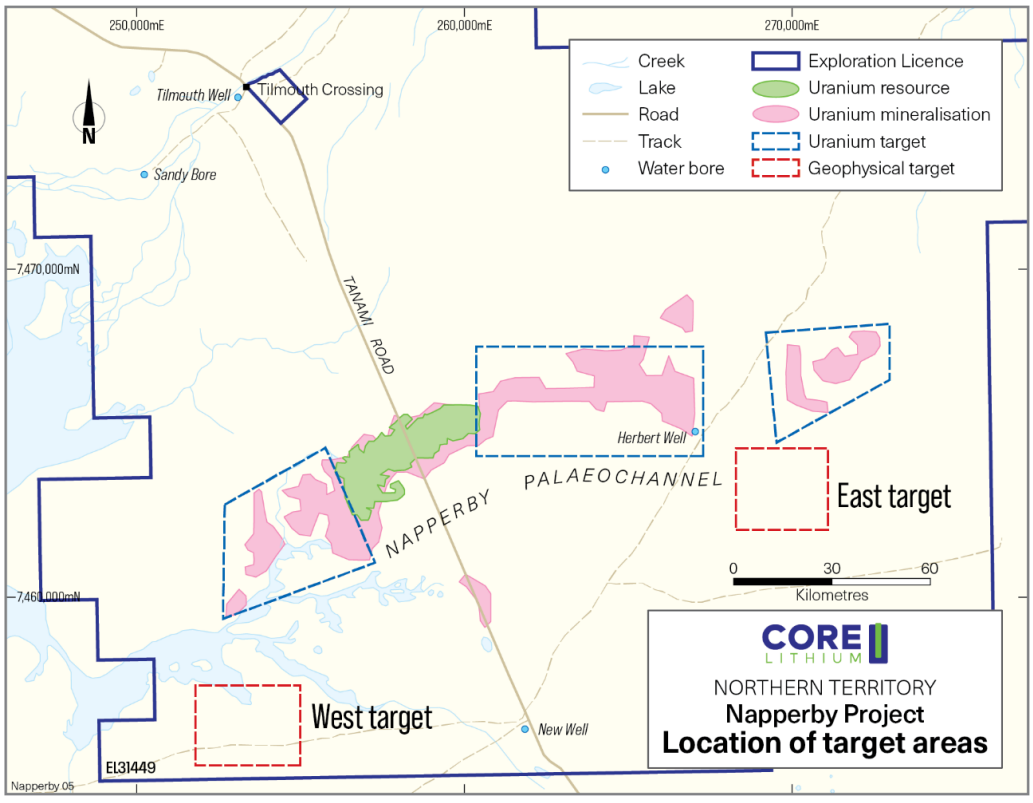

Figure 2 Napperby Uranium Mineral Resource Estimate with uranium and geophysical target areas

Multi-commodity targeting at Napperby

Consistent with the strategy across the Company's exploration assets, Core's technical team has been examining the potential for other styles of mineral deposits at Napperby. An independent consultant was recently engaged to undertake a review of existing geophysical datasets over the tenement. In particular, two areas with coincident positive magnetic and gravity anomalies have been investigated and modelled (Figure 3).

The western anomaly is defined by a peak 6mGal gravity anomaly associated with an 832nT magnetic peak. Economically, the possible interpretations of this body include a folded Banded Iron Formation (BIF) unit, which would be prospective for orogenic gold mineralisation, or a north-tilted magnetic intrusive pipe, such as a carbonatite, which would be prospective for niobium and rare earth elements (REE).

The eastern anomaly is defined by a peak 3mGal gravity anomaly associated with 660nT magnetic peak. The anomaly appears to be a composite feature, possibly representing a series of vertical dykes or veins which are denser than typical mafic or ultramafic lithologies, with significant magnetite. Possible explanation of the anomaly includes carbothermalite veins, iron oxide copper gold (IOCG) alteration, or some style of mineralisation between these.

In both cases, depth to the top of the anomalous features is interpreted to be shallow, well within the reach of reconnaissance geochemical programs.

The modelling of these geophysical anomalies is very encouraging. Both targets require further investigation and follow up that will include field investigations in the first instance that may then lead to testing via shallow RAB and/or RC drilling.

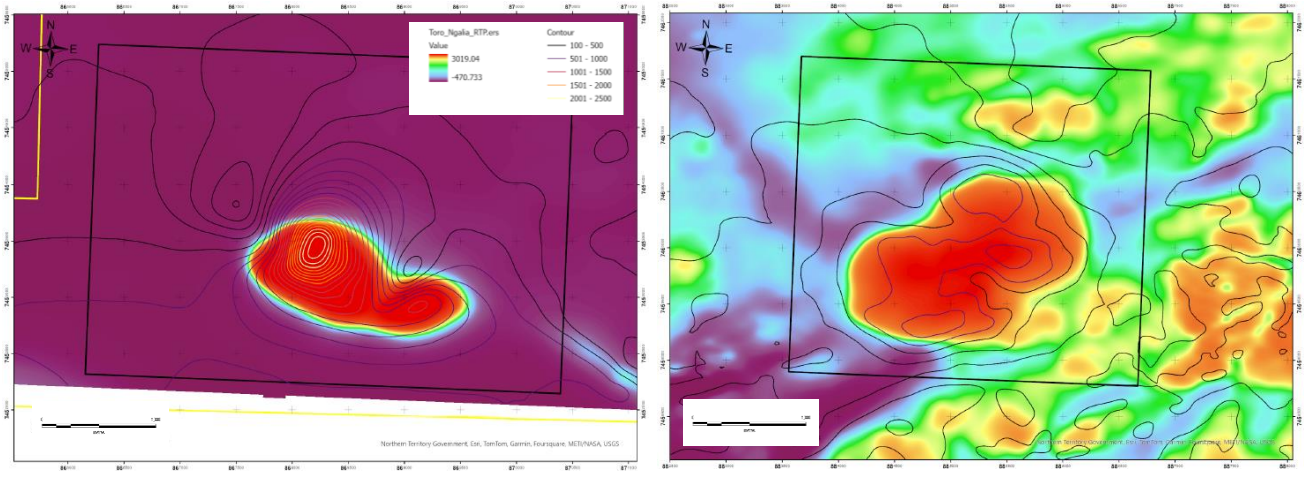

Figure 3 Napperby geophysical target areas, Western target left and Eastern target right. Both images show VRMI (Vector Residual Magnetic Intensity) contours on coloured RTP magnetic image.

Entia and Fitton Uranium Projects

In addition to Napperby, Core is also reassessing its 100% owned Entia and Fitton uranium projects.

Between 1992 - 1997 PNC Exploration Pty Ltd explored the area covered by Core's Entia Project, primarily in the search for uranium. Assessment of the geology by Core's exploration team has further highlighted the uranium prospectivity of the Entia tenure. Entia is located approximately 200km from Napperby (Figure 1).

The Fitton project is located in South Australia, approximately 500km north of Adelaide. The project area is considered highly prospective for uranium mineralisation given that it is located in close proximity to a number of existing mines and deposits including Beverly, Four Mile and Mount Gee. Core has previously undertaken exploration on the project throughout 2012-13.

Commenting on the Napperby update, Core CEO Paul Brown said:

"Napperby is one of the few uranium projects with an existing Mineral Resource located in a jurisdiction favourable to uranium mining in Australia. When combined with the significant exploration potential within the known paleochannel system, there is potential to grow and ultimately realise value from Napperby as uranium becomes an increasingly important part of the global energy transition.

We plan to extend the current uranium Mineral Resource at Napperby through targeted drilling when we receive the necessary approvals. This will proceed in parallel with field investigations into potential for other minerals within the tenement which have seen minimal previous exploration.

As drilling continues at our Finniss lithium project in support of our restart studies, we will continue to progress opportunities like Napperby where we believe we can create value for Core shareholders through low cost, targeted exploration in prospective areas."

This announcement has been approved for release by the Core Lithium Board.

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About Core

Core Lithium Ltd (**ASX**: **CXO**) (**Core** or **Company**) is an Australian hard-rock lithium company that owns the Finniss Lithium Operation on the Cox Peninsula, south-west and 88km by sealed road from the Darwin Port, Northern Territory. Core's vision is to generate sustained value for shareholders from critical minerals exploration and mining projects underpinned by strong environmental, safety and social standards.

For further information about Core and its projects, visit www.corelithium.com.au

Important Information

This announcement may reference forecasts, estimates, assumptions and other forward-looking statements. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions, it cannot assure that they will be achieved. They may be affected by various variables and changes in underlying assumptions subject to risk factors associated with the nature of the business, which could cause results to differ materially from those expressed in this announcement. The Company cautions against reliance on any forward-looking statements in this announcement.

Competent Person Statement

The information in this release that relates to Exploration Results has been compiled by Dr Graeme McDonald. Dr McDonald is the Resource Manager for Core Lithium Ltd. Dr McDonald is a member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. He has sufficient experience with the style of mineralisation, deposit type under consideration and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (The JORC Code). Dr McDonald consents to the inclusion in this report of the contained technical information relating to the Exploration Results in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1 Report

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code Explanation	Commentary
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	• No drilling results are being reported
Drilling techniques	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• No drilling results are being reported
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• No drilling results are being reported

Criteria	JORC Code explanation	Commentary
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• No drilling results are being reported
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• No drilling results are being reported
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• No assay results are being reported • Gravity measurements were made using a Scintrex CG-5 Autograv instrument. • Gravity base station readings were taken at the beginning, middle and end of each day. Two base stations were established in the survey area. • Gravity readings of 40 seconds were taken at base stations and all survey points. • Gravity drift corrections were applied between stations and post processing. • There were 41 repeat gravity observation for quality control purposes (7%). • Magnetic survey was undertaken in 2007 via a UTS fixed wing Fletcher FU24 aircraft along N-S flight lines 100m apart and with a sensor height of 30m. • E-W tielines were flown every 1000m. • A Scintrex or Geometrics cesium vapour magnetometer with a 0.001nT resolution and 10Hz sampling rate was used. • A Proton Precession magnetometer with a 0.1nT resolution and a 0.2Hz sampling rate was used as a base station.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• No drilling results are being reported
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• The grid system is MGA_GDA94, zone 53 for easting and northing.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• Gravity station spacing varied but was approximately 100m along the lines. • Three gravity lines cross the western anomaly and only a single line crosses the eastern anomaly.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• The Napperby gravity survey was carried out by OZ Minerals Ltd on behalf of Toro Energy Limited in April 2009. • Gravity survey comprised 565 stations along 12 N-S oriented lines. This is perpendicular to the geological trends that are in an E-W direction. • Magnetic flight line orientation and spacing is deemed appropriate for the geological terrane covered.
Sample security	• The measures taken to ensure sample security.	• No sample results are being reported
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audits or reviews of the data have occurred.

Section 2: Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• EL31449 is held by Uranium Generation Pty Ltd, a 100% owned subsidiary of Core Lithium Ltd. • There are no related royalty arrangements, contracts or caveats. • The tenements are in good standing with the NT DPIR Titles Division.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• All modern exploration to date was carried out by Deep Yellow and Toro (2005–2009). Prior to 2005, exploration was carried out by Paladin and Uranerz. All exploration was focused on uranium mineralisation. • The Napperby (New Well) deposit was first discovered and explored by CRA Exploration and Uranerz in the late 1970s and early 1980s. They drilled wide-spaced auger and aircore holes and defined a 'mineralised area', but did not publish a mineral resource. • The deposit remained dormant for over a decade until Paladin applied for the ground in the early 2000s. Deep Yellow subsequently acquired the Project from Paladin in 2005, then after undertaking drilling, secured an option to purchase with Toro Energy Ltd. • In 2007, Toro Energy drilled 515 sonic core holes, 123 auger holes and 814 aircore holes, followed in 2008 by a further 333 sonic core holes and 784 aircore holes. • Following that work, in 2009, Toro Energy expanded the historic Napperby resource. Only 50% of the known mineralised area was included in the 2009 Mineral Resource. • This option to purchase was not executed following Scoping Studies that concluded the Project was uneconomic at the current scale/ grade. In 2010, the Project fell 100% back into the hands of Deep Yellow. No further exploration took place. The Napperby deposit and a small part of the original EL24246 was relinquished in October 2016. • Core has inherited an excellent database that includes 2,308 auger, sonic core and aircore drillholes from Toro/Deep Yellow, downhole gamma and assay data, PFN and disequilibrium data, metallurgical test-work, scoping study, airborne electromagnetics and high-resolution magnetics/ radiometrics, gravity, and baseline groundwater environmental monitoring data. Core has also digitised the 820 Uranerz drillholes,

Criteria	JORC Code explanation	Commentary
		including assay and gamma data. • Toro undertook metallurgical test-work from bulk representative samples derived from Napperby in 2008 and 2009, aimed at characterising the ore and gangue, determining how suitable the mineralisation is for beneficiation and the optimal conditions for leaching. • Toro proceeded to a Scoping and Conceptual Study conducted by URS Australia, which examined various conventional mining and processing options available at the time, such as heap leach, agitated leach, direct precipitation and resin-in-pulp. • Alternative mining cut-off grades and the potential for nearby deposits were also considered, as was initial up-front beneficiation. A high-level review of infrastructure requirements, environmental management and CAPEX and OPEX scenarios was also undertaken. • Recent geophysical modelling commissioned by Core and reported in this release was performed by Mitre Geophysics, who undertook forward modelling of two coincident gravity and magnetic anomalies
Geology	• Deposit type, geological setting and style of mineralisation.	• The Napperby Project (historically known as the New Well deposit) comprises an extensive, consistently mineralised zone within 2–8 m of the surface in semi-consolidated and unconsolidated sediments within a Tertiary paleochannel over a 20 km length (striking NNE) in the Arunta Region in the Northern Territory. • Carnotite mineralisation resides mostly in sands and sandy clays as finely disseminated particles and blobs up to 5 cm long, but can also be found in overlying calcrete as joint coatings. • The current geological model has it that uranium is released from basement rocks into the aquifer system due to the presence of acidic-oxidised surface waters. Uranium is carried in solutions with vanadium until it reaches a critical point of supersaturation, caused by evaporation. Uranium precipitates as a vanadate, along with carbonate and silica within the paleochannel system. It is thus effectively controlled by the modern groundwater regime. • Geophysical targets identified require further work, however possible models for the western anomaly include folded Banded Iron Formation (BIF) unit, which would be prospective for orogenic gold mineralisation, or a north-tilted magnetic intrusive pipe, such as a carbonatite, which would be prospective for niobium and rare earth elements (REE). Possible explanation of the eastern anomaly includes carbothermalite veins, iron oxide copper gold (IOCG) alteration, or some style of mineralisation between these.

Criteria	JORC Code explanation	Commentary

Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
	  ○ easting and northing of the drill hole collar
	  ○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
	  ○ dip and azimuth of the hole
	  ○ down hole length and interception depth
	  ○ hole length.
	• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.
		• No drilling results are being reported

Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No drilling results are being reported.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	• No drilling results are being reported.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• Refer to Figures in the release.

Criteria	JORC Code explanation	Commentary
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Only significant geophysical anomalies within the tenement area have been modelled and discussed in detail.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• All other meaningful and material exploration data has been previously reported as referenced in the release.
Further work	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Follow up field work including drilling is being planned at the Napperby Project. • Areas of interest within the tenement area are shown on Figures included within the release.