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22 July 2024

Heritage Clearance Survey Complete
West Arunta Stansmore Project

Highlights:

- **Heritage clearance survey over high-priority 'Stansmore' Nb-REE/IOCG target complete**
- **Stansmore is a significant magnetic anomaly high target, potentially representing a carbonatite Nb-REE or an IOCG mineral target, similar to Encounter Resources Crean magnetic anomaly which has returned shallow high-grade niobium-REE mineralisation, including[1];**
    - **52m @ 3.0% Nb2O5 from 81m**
    - **46m @ 3.1% Nb2O5 from 60m to EOH**
    - **18m @ 3.2% Nb2O5 from 76m**
- **The survey encompassed the Stansmore, Volt and Ions target areas**

Mr Thomas Langley, Technical Director commented, "We would like to thank the Central Desert Native Title Services and Parna Ngururrpa traditional owners for their efforts and cooperation to complete this survey."

"Subject to the outcome of the final survey report, this survey could allow the Company to start drilling at our high priority Stansmore, Volt and Ions targets, which is a great achievement within 12 months of signing the land access agreement."

Lycaon Resources Ltd (ASX: LYN) (**Lycaon** or the **Company**) is pleased to advise it has completed a heritage clearance survey (**Survey**) over its high priority Stansmore Project in the West Arunta region of Western Australia, Figure 1.

The Survey, which encompassed 3 high priority drill targets of Stansmore, Volt and Ions, follows the Company's success under Round 29 of the Western Australian Exploration Incentive Scheme (**EIS**) to receive a co-funding grant of up to a maximum of $180,000 for drilling at Stansmore (refer to Lycaon's ASX announcement dated 1 May 2024).

Detailed planning for an initial phase of drilling programs is underway, as are discussions with several drilling contractors regarding availability and potential timing of commencement.

The Company is aiming to commence drilling as soon as practicable, subject to the outcome of the final Survey report and the approval of the program of works.

Stansmore – West Arunta Project *(Nb/REE±PGE)*

The 100% owned West Arunta Stansmore Niobium-REE Project granted tenure extends over 173km² and is approximately 90km north of WA1 Resources' Luni and P2 discoveries, Figure 1. The project consists of two high priority magnetic anomaly drill targets (Stansmore and Volt), and three secondary drill targets (Edi, Earl and Menlo) that may be prospective for Niobium-REE Carbonatite, or Iron-Oxide Copper Gold (IOCG), Figure 2.

The Stansmore Project drilling will target a regionally prominent 700m long magnetic feature (Stansmore) and a larger ~3km wide magnetic anomaly (Volt). Recent discoveries by WA1 Resources and Encounter Resources have demonstrated the potential for the West Arunta region to host significant Nb-REE mineral systems.

Southern Geoscience Consultants (SGC) completed a geophysical review which included re-processing magnetic data and a 3D inversion of the magnetic data to assist with targeting of drillholes ahead of a maiden drill program. 3D inversion efforts utilised the best available public domain magnetic data (circa 2010) consisting of 200m line spacing survey data (north-south lines) with a nominal terrain clearance of ~50m.

The 3D inversion results defined the Stansmore magnetic anomaly as an ellipsoid shape approximately 400m wide by 700m long, starting from ~150m depth with an estimated magnetic susceptibility of >0.15SI unit, Figure 3. The Volt prospect is modelled as a ~600m wide by 800m long magnetic anomaly starting at 200m depth with an estimated magnetic susceptibility of 0.025-0.075SI units, Figure 4.

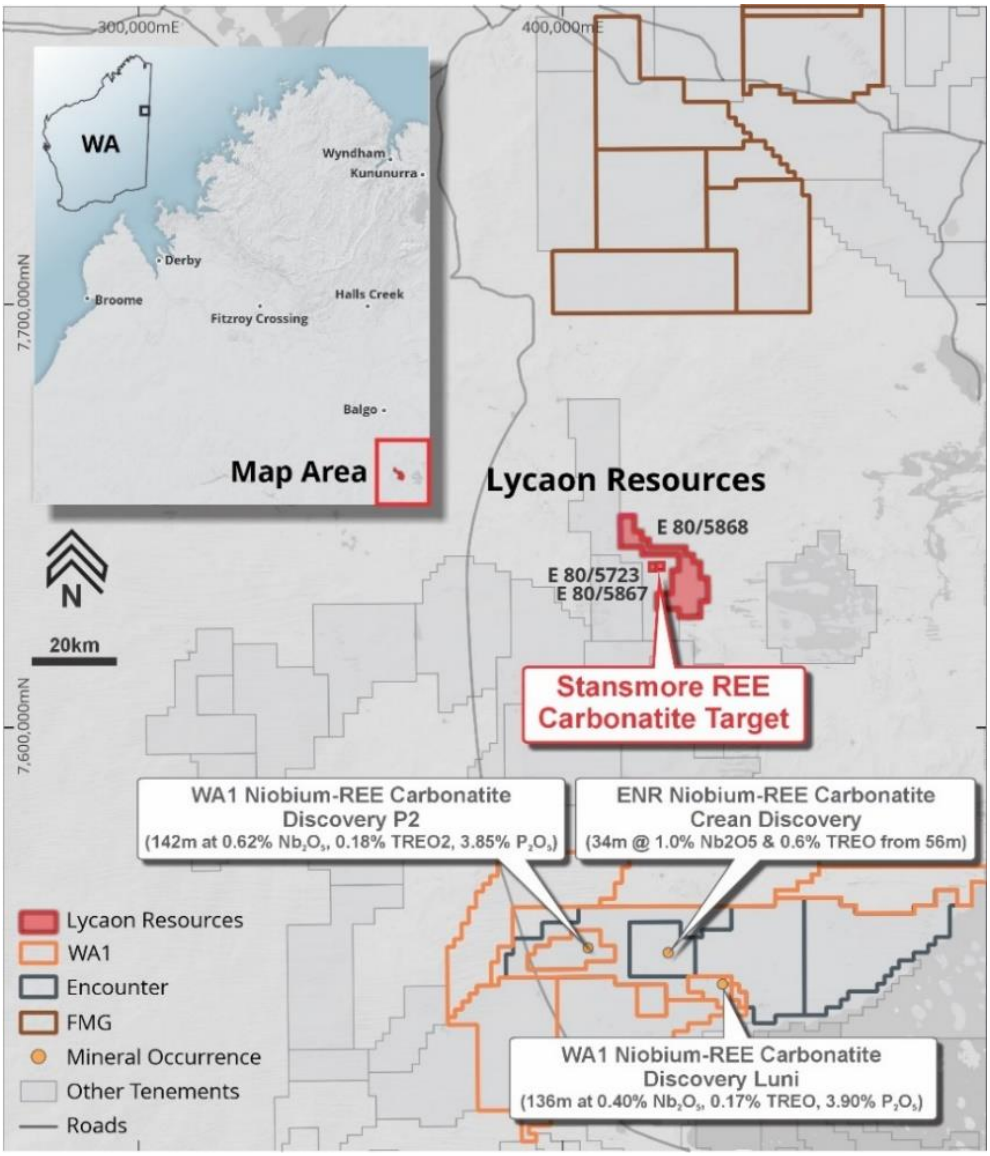

Figure 1. Stansmore Nb-REE Carbonatite ± IOCG Project Location Map

The Company received a $180,000 grant award for two proposed EIS drillholes, which have been designed by SGC to test the centre peak of two different magnetic anomalies being the Stansmore and Volt prospects. The two proposed drillholes are testing beneath cover which is obscuring radiometric responses and will test for iron-oxide alteration, copper, gold, niobium and rare earth mineralisation.

In addition to the two proposed drillholes, SGC has planned an additional five drillholes to test the magnetic gradient and other locations of the main magnetic anomalies identified from the aeromagnetics.

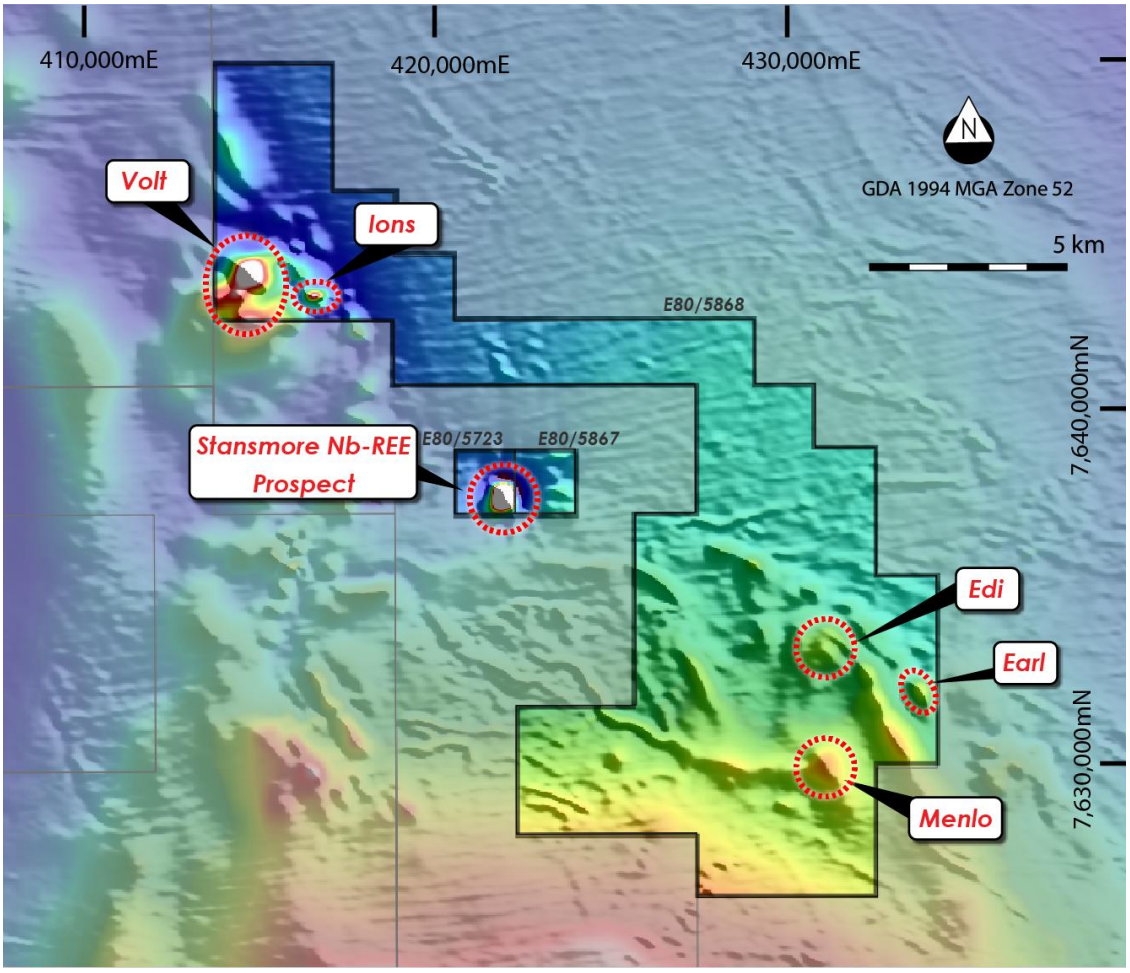

Figure 2. Reduced to Pole Magnetics (TMI grid) highlighting the prominent magnetic anomaly at Stansmore Prospect and other magnetic targets

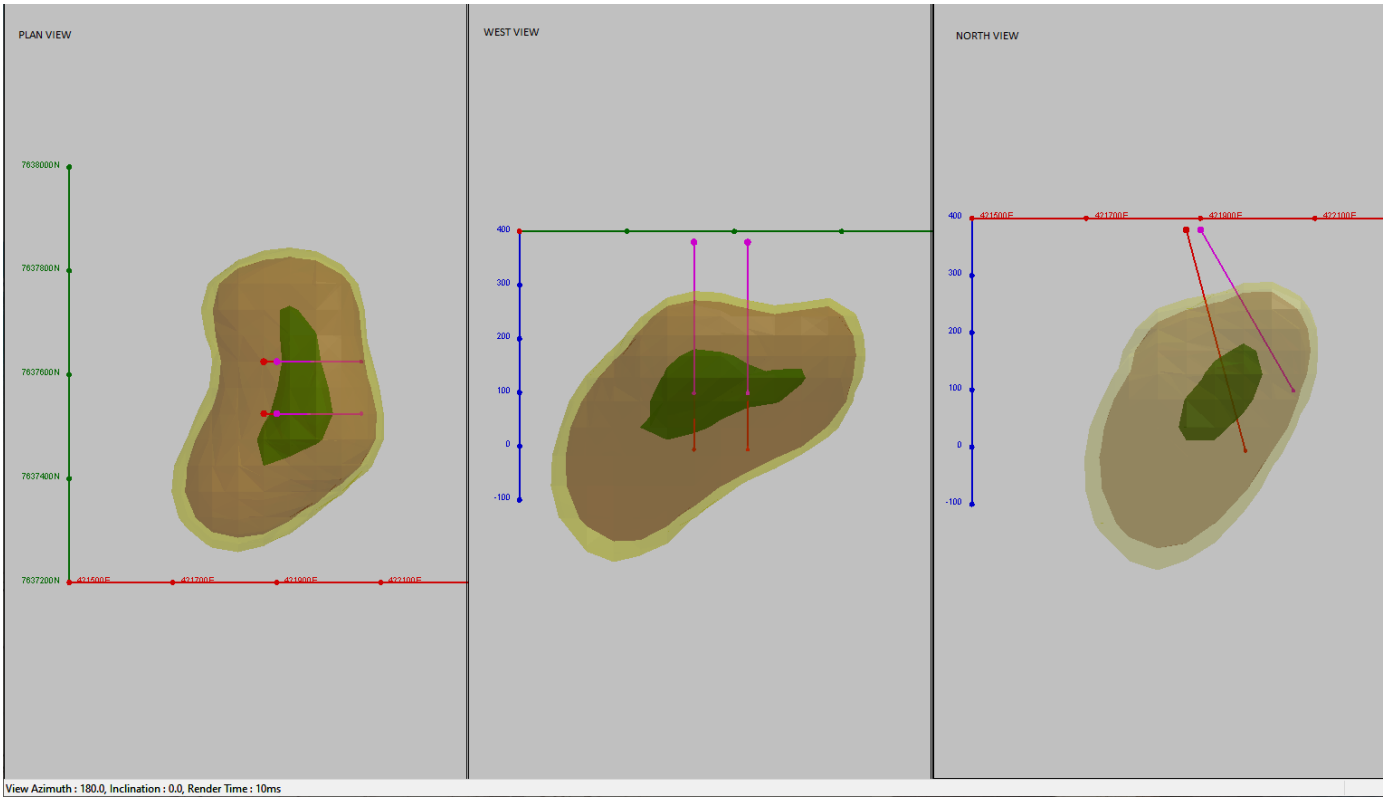

Figure 3. Stansmore Prospect Magnetic Inversion (green shell 0.15SI) with proposed drill traces (red and pink)

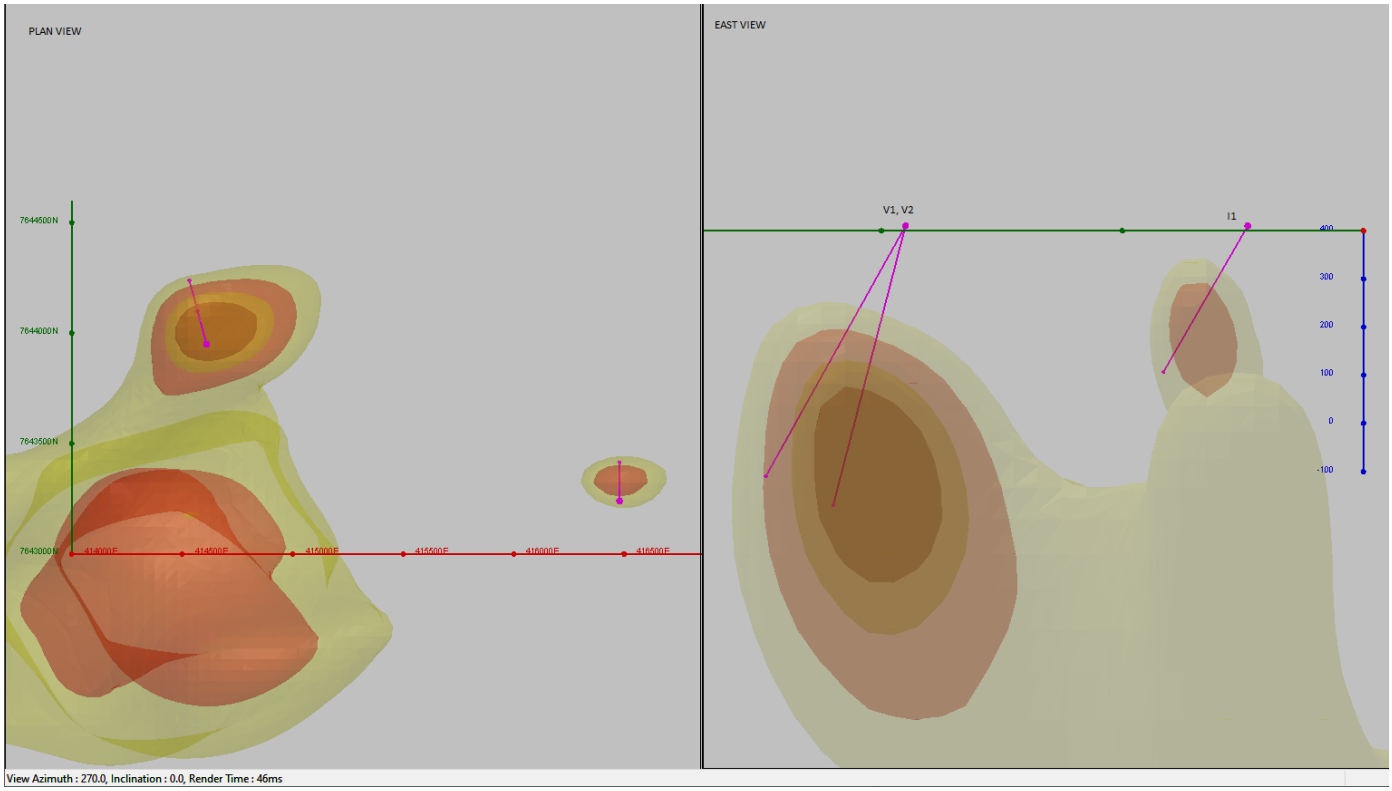

Figure 4. Volt and Ions Prospects Magnetic Inversion (brown shell 0.075SI, red shell 0.025SI) with proposed drill traces (red and pink)

Understanding of the structural setting and its intersection with any structural corridors such as the Balgo Fault will be essential to understanding the orientation and geometry of a potential large mineral system as part of a broader magnetic intrusive complex demonstrated in 3D modelled magnetics.

The Stansmore Project has had limited historic work completed within the project area with the broader area having limited exploration focussed on gold, copper and diamonds. BHP Minerals Limited completed 6 shallow RAB drillholes over the Stansmore magnetic anomaly in 1983 (WAMEX Report A12302) exploring for diamonds. Drilling at the main Stansmore magnetic anomaly (ST2) consisted of 5 drillholes with a maximum depth of 12m. Lithologies intersected by the drilling included ultrabasic rock, 'possibly pyroxenite', and sericitic altered claystone. Overall, the results did not display kimberlitic affinities to potentially host diamonds and the tenement was surrendered in the following year. Encouragingly the RAB drilling has highlighted the shallow depth of cover and saprolite interface. The drilling did not adequately test the magnetic anomaly which starts at ~150m depth.

The WA1 discoveries at Luni and P2 have been large first order geophysical anomalies which had never been drilled.

The niobium mineralisation discovered to date at WA1 Resources' Luni Project are unique to Niobium deposits globally due to the high tenor of niobium with results >2% niobium. The identification of Niobium and Rare Earth mineralisation associated with carbonatite intrusions by WA1 Resources and Encounter Resources nearby in their first ever drill programs signifies the extremely prospective and underexplored nature of the West Arunta.

Table 1. Proposed drillhole locations at Stansmore Project

Drillhole ID	Easting (MGA Z52)	Northing (MGA Z52)	Depth	Dip	Azimuth
ST001	421875	7637525	400	-75	90
ST002	421900	7637525	325	-60	90
ST003	421875	7637625	400	-75	90
ST004	421900	7637625	325	-60	90
V001	414610	7643950	350	-75	350
V002	414610	7643950	450	-75	350
I001	416480	7643240	350	-60	0
		Total Metres	2600		

- ENDS-

This announcement has been authorised for release by the Directors of the Company.

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[1] ASX: ENR, New West Arunta high-grade niobium intercepts – Crean & Emily, 8 July 2024

Cautionary Statement

This announcement and information, opinions or conclusions expressed in the course of this announcement contains forecasts and forward-looking information. Such forecasts, projections and information are not a guarantee of future performance, involve unknown risks and uncertainties. Actual results and developments will almost certainly differ materially from those expressed or implied. There are a number of risks, both specific to Lycaon, and of a general nature which may affect the future operating and financial performance of Lycaon, and the value of an investment in Lycaon including and not limited to title risk, renewal risk, economic conditions, stock market fluctuations, commodity demand and price movements, timing of access to infrastructure, timing of environmental approvals, regulatory risks, operational risks, reliance on key personnel, reserve estimations, native title risks, cultural heritage risks, foreign currency fluctuations, and mining development, construction and commissioning risk.

Competent Person's Statement

The information in this document that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Thomas Langley who is a member of the Australian Institute of Geoscientists (MAIG) and a member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr. Thomas Langley is a full-time employee of Lycaon Resources Limited, and is a shareholder, however Mr. Thomas Langley believes this shareholding does not create a conflict of interest, and Mr. Langley has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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".
Mr. Langley consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information in the original reports, and that the form and context in which the Competent Person's findings are presented have not been materially modified from the original reports.

Appendix 1. JORC Code, 2012 Edition – Table 1 report template

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 (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	The aircraft used for the survey was a Cessna 210, specifically modified for geophysical surveys with a tail boom and various other survey configuration modifications. The magnetic geophysical sampling was completed via a stinger mounted G-823A caesium vapour magnetometer. Nominal traverse separation of 200m, with an average ground clearance of 50m. Sampling rate was at approximately 20Hz. Base station was a GSM-19 Overhauser & Scintrex EnviMag proton precession unit sampling at 1 Hz intervals. Elevation data was derived from SRTM (Shuttle Radar Topographic Mission) and has a resolution of 1 arc-second (approx. 30 metres).
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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 new drilling is being reported in this announcement.

Criteria	JORC Code explanation	Commentary
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 new drilling is being reported in this announcement.
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 new drilling is being reported in this announcement.
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 new drilling is being reported in this announcement.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	No new drilling is being reported in this announcement.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.*	No new drilling is being reported in this announcement.

Criteria	JORC Code explanation	Commentary
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	
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.*	Final products are delivered in a MapInfo-compatible format using the GDA94 datum and MGA zone 52 projection.
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.*	Line spacing of the airborne survey is 200m which is considered appropriate for the level of geological and structural interpretation that was completed.
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.*	No new drilling is being reported in this announcement.
Sample security	*The measures taken to ensure sample security.*	No new drilling is being reported in this announcement.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	No new drilling is being reported in this announcement.

Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding sections.)

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.*	Lycaon Resources Ltd entered into a conditional agreement to acquire one exploration licence E80/5723, in the West Arunta Region of Western Australia, called the Stansmore Project. • The Stansmore Project consists of 1 granted Exploration License (E80/5723). • The tenement is 100% owned by Thomas Edward Langley. • Lycaon subsidiary company West Arunta Resources Pty Ltd applied for 2 pending exploration licences ELA 80/5867 and ELA 80/5868. • The Stansmore Project (E80/5723, ELA80/5867 and ELA80/5868) covers 1 Native Title. Determination the Parna Ngururrpa Aboriginal Corporation (WAD357/2006).

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Stansmore Project has had limited historic work completed within the Project area with the broader area having limited exploration focussed on gold and diamonds. • Significant previous explorer of the Project area included BHP Minerals Limited. Only 6 shallow RAB drillholes were completed (WAMEX Report A12302).
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Stansmore Project is located in the West Arunta Orogen, representing the western-most part of the Arunta Orogen which straddle the Western Australia–Northern Territory border. • Outcrop in the area is generally poor, with bedrock largely covered by Tertiary sand dunes and spinifex country of the Gibson Desert. As a result, geological studies in the area have been limited, and a broader understanding of the geological setting is interpreted from early mapping as presented on the MacDonald (Wells, 1968) and Webb (Blake, 1977 (First Edition) and Spaggiari et al., 2016 (Second Edition)) 1:250k scale geological map sheets. • The West Arunta Orogen is considered to be the portion of the Arunta Orogen commencing at, and west of, the Western Australia-Northern Territory border. It is characterised by the dominant west-north-west trending Central Australian Suture, which defines the boundary between the Aileron Province to the north and the Warumpi Province to the south. • The broader Arunta Orogen itself includes both basement and overlying basin sequences, with complex stratigraphic, structural, and metamorphic history extending from the Paleoproterozoic to the Palezoic (Joly et al., 2013).
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *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 new drilling is being reported in this announcement.
Data aggregation	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade*	No new drilling is being reported in this announcement.

Criteria	JORC Code explanation	Commentary
methods	*truncations (eg 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.*	
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 (eg 'down hole length, true width not known').*	No new drilling is being reported in this announcement.
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.*	No new drilling is being reported in this announcement.
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.*	No new drilling is being reported in this announcement.
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 material data and information has been included in the body of this ASX announcement.

Criteria	JORC Code explanation	Commentary
Further work	• *The nature and scale of planned further work (eg 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.*	• Desktop review on tenement; • Acquire public available information; • Exploration targeting and prospect ranking; • Reconnaissance trip to determine land access; • Field validation of geological concepts; • Geological mapping and surface sampling; • Geochemical surveys of rock, soil, sediments; • Airborne geophysical surveys; • Ground geophysical surveys; • Aboriginal heritage clearance surveys; and • Drill testing.