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Electromagnetic Survey Commenced at Bow River Nickel Copper PGE Sulphide Project

Highlights:

- **A high-powered ground-based SQUID EM survey covering approximately 8.4km² of the prospective Bow River intrusion has commenced**
- **EM survey will be critical in identifying drill targets beneath the depth of historical investigation**

Lycaon Resources Ltd (ASX:LYN) (**Lycaon** or the **Company**) is pleased to announce that it has commenced an extensive ground moving loop electromagnetic (**MLEM**) survey over ~8.4km² of the Bow River intrusion, host to the Bow River nickel copper prospect (**Bow River**) in the East Kimberley region of Western Australia. The MLEM survey will be critical in delineating conductors and identifying drill targets beneath the depth of historical investigation.

The high temperature superconducting quantum interference device (HT SQUID) survey utilises optimal parameters, low base frequency and high power/current levels which can provide >500m depth of investigation where the target is a high conductance body and of significant size.

Mr Thomas Langley, Technical Director commented:

"It's exciting to get the EM survey underway in an area where historical exploration at Bow River has discovered high grade nickel and copper. The Bow River intrusion shares many similarities to Panoramic's Savannah mine located 60km to the south, yet has not been explored past ~150m vertical depth. The recent discovery of Savannah north in 2014, which was 4x bigger than the original Savannah mine demonstrates the significant exploration potential that remains in the Kimberley for nickel and copper mineralisation."

"I look forward to updating the market with results of the EM survey in October with the aim to be drilling as soon as possible pending necessary heritage and drilling approvals."

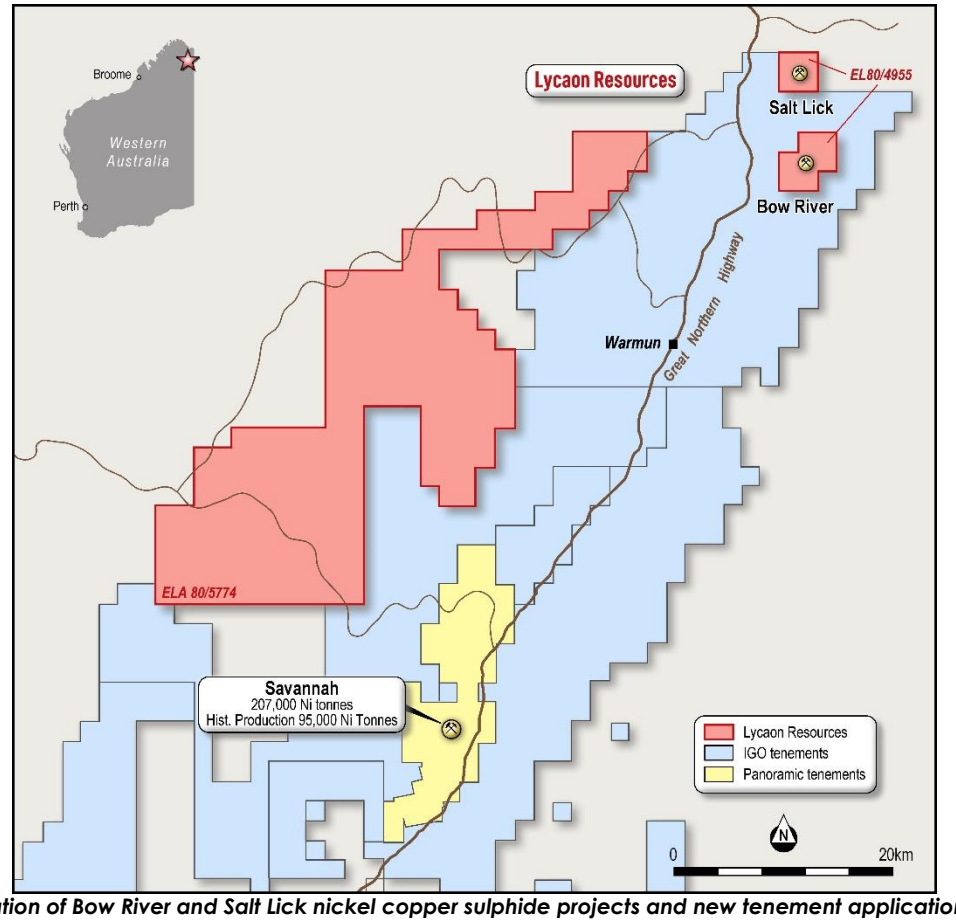

Figure 1. Location of Bow River and Salt Lick nickel copper sulphide projects and new tenement application ELA80/5774

Bow River Prospect *(Ni/Cu/Co±PGE)*

The Bow River Project is located within the Halls Creek Mobile Zone in the East Kimberley region of Western Australia (Figure 1). The Bow River prospect contains the Bow River intrusion, which is inferred to be over 10km². Outcropping gossans and anomalous soil geochemistry has been mapped at surface over an area of 900m x 300m.

The surface expression of the intrusion has received most of the focus of historical exploration, with drilling and ground EM surveys as detailed below. However, the broader intrusive undercover and at depth has received little attention. In addition, exploration using more powerful modern day geophysical techniques to detect conductors deeper below surface has not been completed.

Previous drilling is limited to a very small area of the Bow River mafic intrusive, Figure 2, 3.

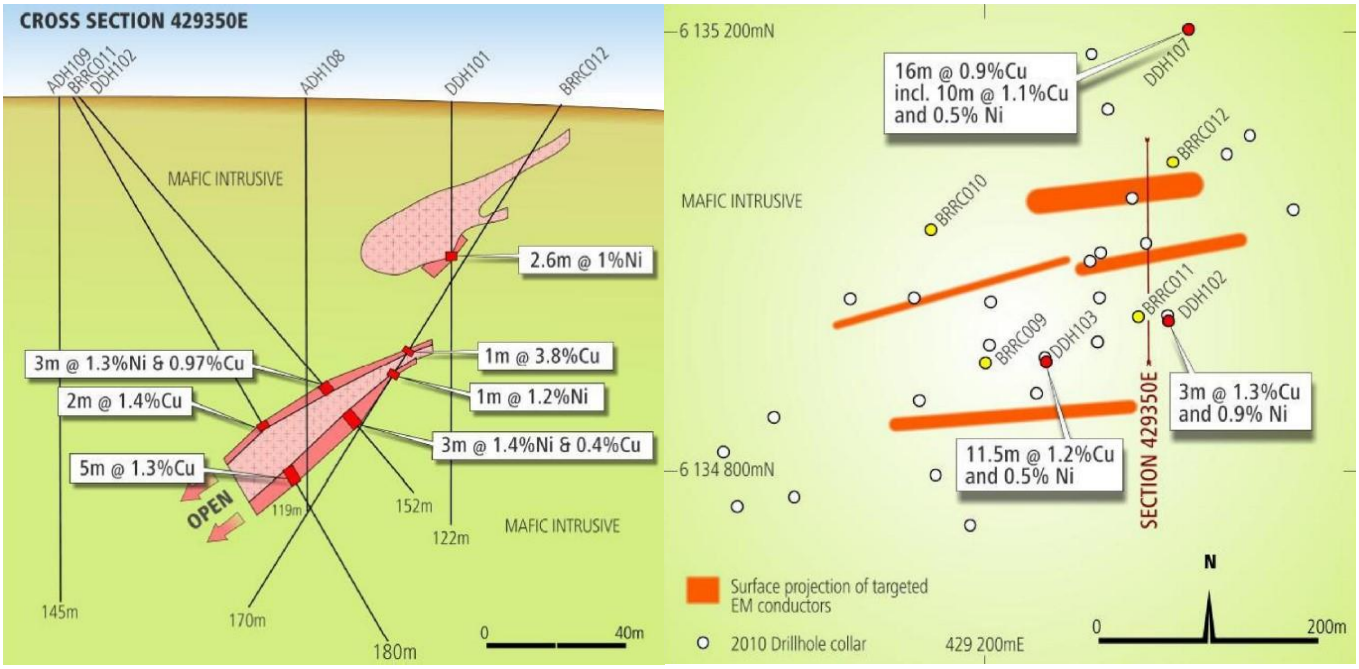

Figure 2. Location of historical drilling at Bow River nickel copper sulphide project.

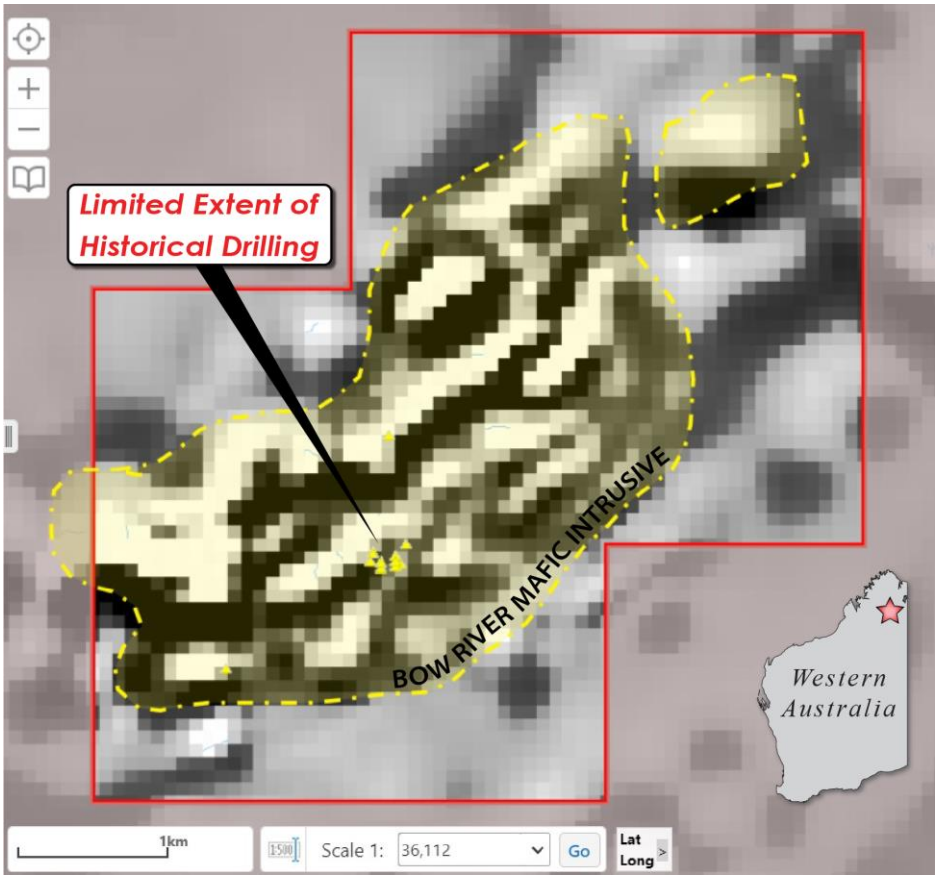

Figure 3. Location of historical drilling at Bow River nickel copper sulphide project, in relation to the large underlying layered mafic Bow River Intrusive

Previous Exploration

The Bow River and Salt Lick prospects were discovered by Pickands Mather in 1965 during routine follow-up of anomalous copper values, obtained in a regional drainage geochemical survey. An extensive work program in 1966-67 included geological mapping, geochemical sampling, ground magnetics, IP surveys, drilling (both cored and percussion holes), and costeaning.

Subsequent work by Australian Anglo American (1977-1983) involved additional geological mapping, photogeology and Landsat studies, soil geochemistry, Dighem II surveys and a wide range of ground geophysical surveys (Crone EM, Pulse EM and ground magnetics), followed by diamond drilling. Soil geochemistry and mapping of gossans led to the identification of the Bow River Intrusive in which "Tickalara contacts" as well as complex "embayment" zones were reported to contain disseminated, stringer or massive sulphide dominated by pyrrhotite, pentlandite and chalcopyrite (NB: the exact percentage of sulphides were not recorded). The highest drill result obtained by Anglo was 3.17m @ 1.45% Ni and 0.41% Cu (DDH102, refer WAMEX report A9748 and Appendix 1).

Airborne magnetic and electromagnetic surveys were completed in 2002, to assess the effectiveness of previous drilling and to define new drill targets. The airborne EM survey outlined a strongly conductive zone coincident with the soil geochemical anomaly. Follow up of the airborne survey anomalies with a ground-based EM system led to the recognition of six discrete conductors, several of which had not been tested by previous drilling. Drilling of electromagnetic conductor targets intersected broad zones of low-grade nickel mineralisation in disseminated to massive sulphides up to 20m thick (WAMEX Report A65634).

The combined results of historical work completed to date provides Lycaon with a compelling prospect to discover primary nickel copper sulphides at depth within the two layered mafic intrusions within E80/4955. Lycaon intends to follow on from this prior work that identified high grade nickel, copper, cobalt (±PGE's) mineralisation with high powered electromagnetic surveys prior to drilling.

Mineralisation and Exploration Models

The East Kimberley Halls Creek Orogen is widely regarded as having excellent potential for magmatic Ni-Cu-Co sulphide and PGE mineralisation, and Hoatson and Blake (2000) considers it one of the most extensively mineralized igneous associations in Australia.

The Savannah Intrusion (held by Panoramic Resources Ltd) hosts the largest Ni-Cu-Co sulphide resource discovered to date within the East Kimberley. Hoatson and Blake (2000) comment on the similar tectonic, stratigraphic and mineralisation features between Savannah and the world class Voisey's Bay deposit in Labrador, Canada. Within the East Kimberley the Voisey's Bay deposit provides a robust and realistic model to guide exploration strategies and targeting. Importantly the Voisey's Bay and Savannah models indicate even small intrusive bodies can host giant nickel deposits and that mineralisation may not outcrop at surface.

Hoatson also recognized broad similarities between the HCO intrusions and the major mineralised layered intrusions at Sudbury, the Bushveld Complex and the Stillwater Complex. The HCO also has a number of similarities to the Tornio - Narankavaara (T-N) intrusive belt in northern Finland. This belt contains the Portimo and Penikat intrusive complexes that are known to host PGE mineralisation of potential economic grade and size. The mineralisation in the Penikat intrusive is analogous to the PGE mineralisation at the Panton and offers some similarity to the chromite layers within the Salt Lick Creek intrusive.

The vast majority of Ni-Cu sulphide deposits are magmatic in origin and are hosted or linked to igneous rocks that formed from magma ranging from ultramafic to mafic in composition. The vast majority of the world's mafic and ultramafic rocks are not associated with any sulphide occurrences however, and special processes are required to form magmatic sulphides with nickel and copper and to concentrate them into economic deposits. Three processes are viewed as critical:

- First is the generation of suitable sulphur under saturated magma from a mantle derived

source.

- Secondly the host magma has to have been contaminated by crustal material with resulting sulphur saturation and the formation of an immiscible sulphide melt scavenging copper and nickel from the magma.
- Thirdly the presence of a suitable physical trap site is required to allow the dense sulphide melt to separate from the rest of the magma body and form an ore body.

Within the Halls Creek Orogen all three critical processes have occurred and the adjacent Savannah Ni-Cu deposit demonstrates these sulphide occurrences can be focused into economic deposits.

- ENDS -

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

Thomas Langley - *Technical Director*

For additional information please visit our website at www.lycaonresources.com

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 forma and context in which the Competent Person's findings are presented have not been materially modified from the original reports.

Appendix 1. Historical Drilling Results from the Bow River Project

Hole ID	Hole Type	Easting	Northing	Dip / Azi	From	Length	Intersection
BRRC001	RC	429200	8135700	-60 / 180			
BRRC002	RC	429200	8134850	-60 / 000	84	12	0.45% Cu+0.12% Ni
					84	4	0.77% Cu, 0.12% Ni
BRRC003	RC	429200	8134800	-60 / 000	116	8	0.26% Cu+0.37% Ni
BRRC004	RC	429100	8134750	-60 / 180	73	2	1.43% Cu
BRRC005	RC	429100	8134800	-60 / 180			
BRRC006	RC	428000	8134050	-60 / 180			
BRRC007	RC	429200	8134750	-60 / 000	157	1	1.21% Ni+ 0.11% Co
BRRC008	RC	429000	8134800	-60 / 180			
BRRC009	RC	429200	8134900	-60 / 180			
BRRC010	RC	429150	8135020	-60 / 180			
BRRC011	RC	429340	8134940	-60 / 000	108	2	1.4% Cu
					123	5	1.3% Cu
BRRC012	RC	429370	8135080	-60 / 180	81	1	3.8% Cu
					88	1	1.2% Ni
DDH101	DD	429350	8134500	-90 / 000		2.6	1% Ni
DDH102	DD	429360	8134940	-45 / 000		3	1.3% Ni + 0.97%Cu
						3	1.4% Ni + 0.4%Cu
DDH107	DD	429375	8135200	-90 / 000		10	1.1% Cu + 0.5%Ni

Appendix 2. 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*	Re-reporting of historical drilling data. Cored and percussion drilling completed. Methodology detailed in WAMEX reports; A9748 Australian Anglo American Prospecting Pty Ltd; A65634 Southdale Holdings Pty Ltd; A87523 Jindalee Resources Pty Ltd; A128314 East Kimberley resources Pty Ltd.

Criteria	JORC Code explanation	Commentary
	problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	
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).*	Cored and reverse circulation drilling.
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.*	Re-reporting of historical drilling data. No comments on recovery in reports.
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.*	Re-reporting of historical drilling data. Geological logging of RC drilling has been completed to an acceptable standard.
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.*	Re-reporting of historical drilling data. No details of sub sampling techniques or sample preparation for cored drilling. For BRRC001 – 008 both four metre composite samples and one metre riffle split samples were collected. For BRRC009 – 012 single metre rotary split samples were collected but only selected samples were submitted for analysis.
Quality of	• *The nature, quality and*	Re-reporting of historical drilling data.

Criteria	JORC Code explanation	Commentary
assay data and laboratory tests	*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 details of analytical techniques or QA/QC procedures for cored drilling. For BRRC001 – 008 both four metre composite samples were sent to Amdel, Perth for base metal analysis by IC2E.and one metre riffle split samples were sent to ALS Perth and analysed for Ni, Cu, Co by AA62 and Au, Pt, Pd by PGM-MS24. For BRRC009 – 012 single metre rotary split samples were collected but only selected samples were submitted for analysis.
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.*	Re-reporting of historical drilling 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.*	• Re-reporting of historical drilling data • GDA94 MGA Z52.
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.*	Re-reporting of historical drilling data
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.*	Re-reporting of historical drilling data

Criteria	JORC Code explanation	Commentary
Sample security	*The measures taken to ensure sample security.*	Re-reporting of historical drilling data
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	No audits have been completed.

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.*	*The Bow River and Salt Lick Projects are located on one (1) granted Exploration Licence E80/4955 covering approximately 25.6km²* *Lycaon has entered into a binding sale agreement with East Kimberley Resources Pty to acquire a 100% interest in the tenements.* *The tenements will be owned 100% by Lycaon Resources Limited* *A Royalty Deed exists for 1% payable to East Kimberley Resources Pty Ltd and Uramin Pty Ltd in respect of all saleable minerals, concentrates, metals produced.* *The Project is overlain by the Malarngowem (WC1999/044 and WAD43/2019) Native Title Claim* *East Kimberley Resources Pty executed a Heritage Agreement with Kimberley Land Council Aboriginal Corporation in July 2016.* *The Heritage Agreement allows Lycaon access to the project area provided relevant protocols are observed to preserve Aboriginal heritage.* *The tenements are in good standing and no known impediments exist.*
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	*The area comprising the Bow River and Salt Lick Project have been explored for a variety of commodities over a protracted period. Previous exploration activities within the project area commenced in the 1960's with Pickand Mather exploring base metals. Airborne magnetic and electromagnetic surveys were completed in 2002, to assess the effectiveness of previous drilling and to define new drill targets. The airborne EM survey outlined a strongly conductive zone coincident with the soil geochemical anomaly. Follow up of the airborne survey anomalies with a ground-based EM system led to the recognition of six discrete conductors, several of which had not been tested by previous drilling.* *Drilling of electromagnetic conductor targets intersected broad zones of low-grade nickel mineralisation in disseminated to massive sulphides up to 20m thick.* *The combined results of historical work completed to date provides Lycaon with a compelling prospect to discover primary nickel copper sulphides at depth within the two layered mafic intrusions within E80/4955. Lycaon intends to follow on from this prior work that identified high grade*

Criteria	JORC Code explanation	Commentary
		nickel, copper, cobalt (±PGE's) mineralisation with high powered electromagnetic surveys prior to drilling.
Geology	*Deposit type, geological setting and style of mineralisation.*	*The Bow River and Salt Lick Project area is underlain by early Proterozoic metamorphic and igneous rocks of the Halls Creek Mobile Zone (HCMZ). This composite orogenic belt comprises three tectonostratigraphic terranes (Western, Central and Eastern Zones) bounded by northeast trending strike-slip faults (Griffin and Grey, 1990).* *The Central Zone is dominated by the Tickalara Metamorphics, a regionally metamorphosed assemblage of mafic volcanics and sediments. These are intruded by several generations of felsic and layered mafic to ultramafic intrusions, which are also deformed and metamorphosed to varying degrees.* *The Central Zone hosts the majority of the Ni-Cu-Co deposits known in the east Kimberley, including Bow River.*
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.*	Re-reporting of historical drilling data
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade 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.*	Re-reporting of historical drilling data
Relationship	*These relationships are particularly*	Re-reporting of historical drilling data

Criteria	JORC Code explanation	Commentary
between mineralisation widths and intercept lengths	*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').*	
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.*	*Appropriate maps and sections are provided in the text*
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.*	The accompanying document is a balanced report with a suitable cautionary note.
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.*	*Historical exploration activity over the Bow River and Salt Lick project areas have included airborne electromagnetic and magnetics surveys, surface geochemical sampling, RC and Diamond drilling also completed within the project area. Data is being systematically compiled and reviewed to aid in current exploration programmes.*
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.*	*Ground based geophysical surveys, heritage surveys, geological mapping and review prior to drilling.*