LUNNON METALS LIMITED ABN: 82 600 008 848

**BOARD/MANAGEMENT** 

Mr Liam Twigger NON-EXECUTIVE CHAIRPERSON

Mr Ian Junk NON-EXECUTIVE DIRECTOR

Ms Deborah Lord NON-EXECUTIVE DIRECTOR

Mr Ashley McDonald NON-EXECUTIVE DIRECTOR

Mr Edmund Ainscough MANAGING DIRECTOR

Mr Aaron Wehrle EXPLORATION & GEOLOGY MANAGER

OFFICE Suite 5/11 Ventnor Avenue WEST PERTH WA 6005

POSTAL ADDRESS PO BOX 470 WEST PERTH WA 6872

CONTACT DETAILS +61 8 6424 8848 info@lunnonmetals.com.au

lunnonmetals.com.au

SHARE REGISTRY Automic Group

ASX CODE: LM8



# **PROGRESS UPDATE FOR BAKER AND KENILWORTH**

#### 27 MAY 2022

## **KEY POINTS**

- Baker Mineral Resource nearing completion
- Baker RC and diamond drilling back in full swing
- Kenilworth deep diamond drilling complete

Lunnon Metals Limited (**ASX: LM8**) (the **Company** or **Lunnon Metals**) is pleased to provide an update on the progress of its discovery programme at the Baker Shoot and Kenilworth target, at its Kambalda Nickel Project (**KNP**).

#### BAKER

The first-time Mineral Resource estimate for Baker is nearing completion. The revised geological wireframes have been used to plan follow up in-fill and extensional RC drilling which is now underway. Diamond drilling is also planned to provide further metallurgical data and geotechnical information, including assessing the potential route of future underground access from the adjacent West Idough pit.

Following the announcement of the initial Mineral Resource, assay results for the new Baker RC drilling will be reported as they are received. A total of 8,000m of RC and 3,000m of diamond drilling has been allocated to these follow up campaigns. Assay results from these programmes will be received in late June through to August.

## **KENILWORTH**

Diamond drilling of the Kenilworth target, part of the Western Australian government's Exploration Incentive Scheme (**EIS**) programme, is complete. The hole, JAN22DD\_004, reached a final depth of 1,521m. This was deeper than the planned depth of 1,450m.

The objective of this co-funded drill hole was to test the 800m long geophysical magnetic anomaly located within and parallel to the Jan Thrust Complex (Figures 1 & 2 below).

The Company is completing detailed logging and sampling for its submission and assessment of the programme as required under its contract with the Department of Mines, Industry Regulation and Safety. The Company acknowledges the contribution of the Western Australian government's EIS Grant towards the funding of this hole.

Based on the orientation of the rock units encountered it is thought that the stratigraphy is steeper and potentially overturned (i.e. west dipping) at depths beyond circa 470m, when compared to the original interpretation prior to drilling. As a result, the hole did not intersect the komatiite-basalt nickel contact before it was stopped due to the drilling rods repeatedly getting "bogged" (stuck) which was placing retrieval of the drilling equipment at risk.

Initial core assessment indicates that the Kapai Slate Formation, which was heavily pyritepyrrhotite banded over extensive lengths, may be the source of the magnetic anomaly.

The hole will be logged and sampled in detail to assess the potential to host gold mineralisation, given its location in a structurally complex setting in the heart of the 15Moz St lves gold camp.



Managing Director, Ed Ainscough, commenting said: "Although we didn't get to see the nickel contact, drilling the first deep diamond hole in a brand new area has thrown up a number of surprises with the orientation of the rock package and the extensive suite of Kapai Slate Formation units, that may be the source of the magnetic anomaly. We will get the detailed logging and sampling done and wait to see if the gold assays have a surprise in store for us".

## JAN22DD\_004 Summary Log

The final report for the Kenilworth programme is required to be submitted to the Western Australian government under the EIS contract by 31 August 2022. The focus for work in the coming months will be to determine the lithostructural setting at Kenilworth from logging/assaying of JAN22DD\_004, and its potential implications for:

- nickel, given its location between Jan Shaft and Baker Shoot/East Trough; and also
- gold, given the significant endowment of the surrounding Gold Fields St Ives' tenements.

Modelling to confirm the magnetic target has been effectively tested will be included.

A summary stratigraphic log of Jan22DD\_004, is presented below.

Metres				
To drill depth	Interval	Host	Potential Stratigraphic Interpretation	
17	17	Oxidised mafic	Devices Develt	
53	36	Saprolitic zone	Paringa Basait	
472	419	Weakly zoned mafic intrusion	Expected characteristics and zonation of the Defiance Dolerite absent other than higher MgO base	
517	45	Heavily banded sediment unit, variably carbonaceous and cherty; syngenetic pyrite (+/- pyrrhotite)	Kapai Slate - apparent orientation of units sub parallel to drill angle suggests not true width	
580	63	Fine grained carbonated grey basalt	Devon Consols Basalt	
623	43	Finely laminated pale to dark grey pyritic chert with pyrite (+/- pyrrhotite) in fine- grained bands, brecciated in veins	Kapai Slate – again, apparent orientation of units is sub parallel to drill angle	
871	248	Fine to medium grained mafic rock	Devon Consols Basalt	
978	107	Tremolite-talc-chlorite ultramafic rock	Kambalda Komatiite	
1,017	39	Fine to medium grained, pale grey to		
1,144	127	beige, biotite-chlorite and albite altered mafic rock with interflow sediment	Mafic, yet to determine stratigraphic unit	
EOH (1,521)	377	Ultramafic, variety of textures and structural overprints	Kambalda Komatiite	





*Figure 1: Plan view of the Kambalda Nickel Project illustrating location of the Kenilworth diamond hole (yellow line atop labelled magnetic anomaly) on magnetic imagery.* 



*Figure 2:* Plan view of the Kambalda Nickel Project illustrating surface interpretive geology and structure, the Kenilworth diamond hole (black line in purple ellipse) together with plan projection of current Mineral Resources.



This announcement has been approved for release by the Board of Lunnon Metals Ltd.

Edmund Ainscough Managing Director Phone: +61 8 6424 8848 Email: <u>info@lunnonmetals.com.au</u>

#### **COMPETENT PERSON'S STATEMENT & COMPLIANCE**

No assay results are presented in this report. Any information in this announcement that relates to nickel and gold geology, is based on, and fairly represents, information and supporting documentation prepared by Mr. Aaron Wehrle, who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr. Wehrle is a full time employee of Lunnon Metals Ltd, a shareholder and holder of employee options; he has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Wehrle consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

#### **Annexure 1: Drill Hole Collar Table**

Hole ID	Easting^	Northing^	Elevation (m ASL)	Dip	Azimuth	EOH Drill Depth (m)	Hole Type	Grid
JAN22DD_004	386,540	6,528,810	331	-70.7	298.3	1,521	Surf D	MGA94_51

*^For current drilling, as pegged coordinates, final survey pick up of collar positions to occur on a campaign basis in the future.* 



### ABOUT THE KAMBALDA NICKEL PROJECT ("KNP")

Lunnon Metals currently holds 100% of the mineral rights at the Foster and Jan elements of the KNP, subject to certain rights retained by St Ives\*. Full details of the Company's IPO and the transactions involved are in the Prospectus submitted to the ASX dated 22 April 2021 and lodged with the ASX on 11 June 2021.

KNP, shown in its regional location in Figure 3, inclusive of the acquisition of rights as detailed in the announcement dated 12 April 2022, is approximately 47km<sup>2</sup> in size comprising two parcels of 19 (Foster and Jan) and 20 (Silver Lake and Fisher) contiguous granted mining leases situated within the Kambalda Nickel District which extends for more than 70 kilometres south from the township of Kambalda ("Tenements").

This world-renowned nickel district has produced in excess of 1.4 million tonnes of nickel metal since its discovery in 1966 by WMC Resources Ltd ("WMC"). In addition, close to 15Moz of gold in total has been mined with WMC accounting for 5.9Moz and over 8.3Moz produced by Gold Fields Ltd since the purchase of the operation in December 2001 from WMC, making the Kambalda/St lves district a globally significant gold camp in its own right.



\*St Ives retains rights to explore for and mine gold in the "Excluded Areas" on the Tenements at the Foster and Jan elements of the expanded KNP, as defined in the subsisting agreements between Lunnon Metals and St Ives. This right extends to gold mineralisation which extends from the Excluded Area to other parts of the Tenements with select restrictions which serve to prevent interference with, or intrusion on, Lunnon Metals' existing or planned activities and those parts of the Tenements containing the historical nickel mines. St Ives has select rights to gold in the remaining areas of the Tenements in certain limited circumstances as described in detail in the Company's Solicitor Report attached to the Prospectus submitted to the ASX dated 22 April 2021 and lodged with the ASX on 11 June 2021.

Figure 3: Regional Location of the Kambalda Nickel Project and other nearby nickel deposits



# **JORC TABLE 1**

# SECTION 1 SAMPLING TECHNIQUES AND DATA

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.	<ul> <li>Commentary</li> <li>Diamond Drill holes (DDH) at the Kambalda Nickel Project (KNP) are currently completed by Blue Spec Drilling Pty Ltd (Blue Spec) on behalf of Lunnon Metals following protocols and QAQC procedures aligned with industry best practice as follows.</li> <li>DDH</li> <li>Core samples were collected with a diamond rig drilling HQ3 (61mm) from surface within weathered and saprolite material before casing off within hard rock and completing the hole with NQ2 (51mm) diameter core.</li> <li>All DDH have been reconstructed and orientated over zones of interest, logged geologically, and marked up for assay at a typical maximum sample interval of 1.0m, constrained by geological boundaries.</li> <li>After logging and photographing, selected sample intervals of drill core will be cut in half with a diamond saw, with one half sent to the laboratory for assay and the other half retained.</li> <li>Sample weights vary depending on sample width and density of the rock.</li> <li>All DDH core is stored in industry standard core trays labelled with the drill hole ID and core intervals.</li> <li>Industry prepared independent standards and blanks are each inserted, approximately every 50 samples.</li> <li>The independent laboratory then takes the samples which are dried, crushed and pulverized prior to analysis as described below.</li> <li>For sample weights &gt; 3kg the sample is dried, crushed to 2mm, split and pulverised up to 3kg (with the coarse reject retained).</li> <li>Sample sizes are considered appropriate for the material sampled.</li> <li>The DDH was drilled from surface using HQ3 (61mm) diameter in weathered, broken ground before casing off and drilling NQ2 (51mm) to end of hole.</li> </ul>			
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.).	<ul> <li>The DDH was drilled from surface using HQ3 (61mm) diameter in weathered, broken ground before casing off and drilling NQ2 (51mm) to end of hole.</li> <li>To help accurately test the target, "navi" or motor drilling was sometimes used over short runs to control the direction of the drill hole. In these instances, no drill core or sample is returned from that portion of the drill hole.</li> </ul>			
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.	<ul> <li>DDH core recovery is measured for each drilling run by the driller and then checked by the Company's geological team during the mark up and logging process.</li> <li>No assays results have been reported for this diamond hole to date.</li> </ul>			



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.	<ul> <li>For DDH:</li> <li>Geology logging is undertaken for the entire hole recording lithology, oxidation state, mineralisation, alteration, and veining.</li> <li>DDH structural logging, recovery of core, hardness, and Rock Quality Designation (RQD's) are all recorded from drill core over intervals of interest.</li> <li>Geological logging (and where required, geotechnical logging) is completed in sufficient detail to support future Mineral Resource estimation, mining and metallurgical studies to be undertaken with confidence if needed.</li> <li>No metallurgical testwork is currently contemplated for the Kenilworth, subject to receipt of final assay results.</li> <li>General logging data captured are qualitative (descriptions of the various geological features and units) and quantitative (numbers representing structural attitudes, vein and sulphide percentages, magnetic susceptibility and conductivity).</li> <li>DDH core is photographed in both dry and wet form.</li> </ul>
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.	<ul> <li>DDH</li> <li>DDH core samples were collected with a diamond drill rig drilling NQ2 or HQ3 core. After logging and photographing, diamond core will be cut within a Discoverer® Automatic Core Cutting Facility using a Corewise Auto Core Saw.</li> <li>DDH core will be cut in half, with one half sent to the laboratory for assay and the other half retained where warranted.</li> <li>Holes will typically be sampled over mineralised intervals to geological boundaries on a nominal 1.0m basis with a typical minimum of 0.3m and a typical maximum of 1.0m.</li> <li>Field QAQC procedures will involve the use of certified reference material (CRM) and blank material, each inserted approximately 1 in every 50 samples.</li> <li>Duplicate samples are taken at an approximate rate of 1 in 25 samples whereby the half core is cut into quarter core with both quarters submitted separately to the laboratory for analysis.</li> <li>No assay results have been reported for this diamond hole to date.</li> </ul>
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	No assay results have been reported for this diamond hole to date.



Criteria	JORC Code explanation	Commentary
	of accuracy (i.e. lack of bias) and precision have been established.	
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	No assay results have been reported for this diamond hole to date.
	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.	
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and down- hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	<ul> <li>The DDH hole collar location is located by handheld GPS to an accuracy of +/- 3m.</li> <li>The drill hole was surveyed downhole at 5m intervals using the REFLEX gyro spirit-IQ system (north seeking gyro) for both azimuth and dip measurements.</li> </ul>
	Specification of the grid system used.	<ul> <li>Downhole surveys are uploaded to the IMDEXHUB-IQ, a cloud- based data management program where surveys are validated and</li> </ul>
	Quality and adequacy of topographic control.	<ul> <li>approved by the geologist before importing into the database.</li> <li>The grid projection is GDA94/ MGA Zone 51.</li> <li>Diagrams and location data tables are provided in the report where relevant.</li> </ul>
Data spacing and distribution	Data spacing for reporting of Exploration Results.	<ul><li>This DDH programme involves just this single hole.</li><li>This is the first hole, co-funded by the WA government's EIS</li></ul>
	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	programme, in this part of the KNP.
	Whether sample compositing has been applied.	
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.	The preferred orientation of drilling at KNP is designed to intercept the target approximately perpendicular to the strike and dip of the mineralisation where/if known. At Kenilworth it is believed the hole trajectory ended up being sub- parallel with the country rocks orientation below approximately
	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.	470m, leading to exaggerated thicknesses of the units intersected.
Sample security	The measures taken to ensure sample security.	No assay results have been reported for this diamond hole to date.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• No external audits or reviews have been undertaken at this stage of the programme.



## **SECTION 2 REPORTING OF EXPLORATION RESULTS**

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.	<ul> <li>The property is located on granted Mining Leases. Although all of the tenements wholly or partially overlap with areas the subject of determined native title rights and interests in the two Ngadju determinations, the company notes that the original grant of the right to mine pre-dates 23 December 1996 and as such section 26D of the Native Title Act will be applied to exempt any future renewals or term extensions from the right to negotiate in Subdivision P of the Act.</li> <li>The complete area of contiguous tenements that are the subject of this announcement is collectively referred to as the Kambalda Nickel Project ('KNP') area. Gold Fields Ltd's wholly owned subsidiary, St lves Gold Mining Company Pty Ltd (SIGM) was the registered holder and the beneficial owner of the Project area until the Lunnon Metals IPO.</li> <li>Lunnon Metals, upon listing on the ASX, now holds 100% of the rights and title to the Project, its assets and leases, subject to certain select reservations and excluded rights retained by SIGM, principally relating to the right to gold in defined areas and the rights to process any future gold ore mined at their nearby Lefroy Gold Plant.</li> <li>The KNP comprises 19 tenements, each approximately 1,500 m by 800 m in area, and three tenements on which infrastructure may be placed in the future. The KNP area tenement numbers are as follows:</li> <li>M15/1546; M15/1548; M15/1549; M15/1550; M15/1557; M15/1559; M15/1553; M15/1556; M15/1557; M15/1559; M15/1568; M15/1570; M15/1577; M15/1577; M15/1576; M15/1577; M15/1669; M15/1670.</li> <li>There are no known impediments to potential future development or operations, subject to relevant regulatory approvals, over the leases where significant results have been reported.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>In relation to nickel mineralisation, WMC, now BHP Nickel West Pty Ltd and a wholly owned subsidiary of BHP Ltd, conducted all relevant exploration, resource estimation, development and mining of the mineralisation at Foster and Jan mines from establishment of the mineral licences through to sale of the properties to SIGM in December 2001.</li> <li>SIGM has conducted later gold exploration activities on the Project area since 2001, however until nickel focused work recommenced under Lunnon Metals management, no meaningful nickel exploration has been conducted since the time of WMC ownership and only one nickel focused surface diamond core hole, with two wedge holes, have been completed in total since WMC ownership.</li> <li>This is the first hole drilled into this part of the KNP.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The relevant area is host to both typical 'Kambalda' style, komatiitic hosted, nickel sulphide deposits and Archean greenstone gold deposits such as discovered and mined in Kambalda/St lves district</li> </ul>
Drillhole Information	A summary of all information material to the understanding of the	<ul> <li>Drill hole collar location and directional information is provided within the body of the report and also within the relevant Additional</li> </ul>



Criteria	JORC Code explanation	Commentary
Data	exploration results including a tabulation of the following information for all Material drillholes: • easting and northing of the drillhole collar • elevation or RL (elevation above sea level in metres) of the drillhole collar • dip and azimuth of the hole • down hole length and interception depth hole length.	<ul> <li>Details Table in the Annexure.</li> <li>DDH drilling reported herein is included in plan orientation maps where relevant or able to assist the interpretation.</li> <li>No assay results have been reported for this diamond hole to date</li> </ul>
aggregation methods	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.	
Relationship between mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drillhole 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').	<ul> <li>No assay results have been reported for this diamond hole to date.</li> <li>At Kenilworth it is believed the hole trajectory ended up being sub- parallel with the country rocks orientation below approximately 470m, leading to exaggerated thicknesses of the units intersected.</li> </ul>
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 drillhole collar locations and appropriate sectional views.	• A plan is provided in the main body of the report. Pending detailed logging of the hole, cross sectional views will be generated in due course.
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 assay results have been reported for this diamond hole to date.
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.	<ul> <li>There is no other drilling ongoing at the KNP that is directly material to this drillhole's progress or outcomes.</li> </ul>
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or	<ul> <li>This DDH programme involves just this single hole.</li> <li>This is the first hole, co-funded by the WA government's EIS programme, in this part of the KNP.</li> </ul>



Criteria	JORC Code explanation	Commentary		
	large-scale step-out drilling).	• Further work will be subject to the results of detailed logging and future sampling and assay results.		