

ASX: DAL 24 April 2024

# Diamond drilling program underway at Browns prospect, Lyons River Project

# Highlights

- Diamond drilling program underway at the Browns prospect to test very significant 3km X 2km size Pb-Zn-Ag + Cu, Broken Hill type zone at the Lyons Project, Gascoyne Province in Western Australia.
- Four deep diamond drill holes will test below highly encouraging air core intersections at the Browns prospect including:
  - 10m @ 1.04% Pb, 0.49% Zn, 2.8 g/t Ag from 37m (LRAC010) including 1m @ 3.13%
    Pb, 0.24% Zn, 5g/t Ag from 38m.
- Browns drill program is partly funded by the EIS grant of \$180,00 awarded to Dalaroo in 2023.

Dalaroo Metals Ltd (**ASX: DAL**, "Dalaroo" or "Company") is pleased to announce that it has commenced a deep diamond drilling program at its Browns prospect, Lyons River Project (Figure 1). The diamond drill program will be partly funded by the Exploration Incentive Scheme sponsored by the Government of Western Australia. The grant is for an amount of up to \$180,000. Previous AC drilling has highlighted the prospectivity for discovery of a significant BHT-SEDEX-style deposit at Browns prospect. Evidence that lead-zinc-silver mineralizing fluids have circulated at the basin-wide scale five kilometres east from the already drilled Four Corners Prospect strongly supports this theory. This leads Dalaroo to the conclusion there may be multiple base metal deposits to be defined at its Lyons River Project.

The diamond drill program is expected to be completed by end of May 2024 (Figure 2). Drill core samples will be logged and dispatched for multi-element analyses with assay results expected during the September 2024 quarter. Drill holes will be cased and made ready for downhole geophysical surveys.

# Dalaroo Managing Director Harjinder Kehal commented:



"We consider the diamond drilling now underway at Browns has the potential for discovery of a new economic BHT\* deposit in the Gascoyne Province. This programme of drilling will also strengthen our understanding of the structural features controlling BHT mineralization at Browns positioned in a Proterozoic age large basin setting of 30km by 10km within our Lyons River Project."

Photo 1: Drill rig at Browns prospect

**\*BHT -** Broken Hill Type

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# **Technical Commentary**

# Large Holding in an Emerging Broken Hill Type /Sedimentary Exhalative Deposit Setting

Lyons River comprises a strategic (100% owned) land position of 838km<sup>2</sup> within the Proterozoic age Mutherbukin Zone of the Gascoyne Province in Western Australia. The Gascoyne Province is a deformed and high-grade metamorphic core zone of the early Proterozoic Capricorn Orogen. Geographically Lyons River is located approximately 1,100km north of Perth and approximately 220km to the north-east of Carnarvon. Dalaroo believes the district is an emerging Broken Hill Type ("BHT") /Sedimentary Exhalative ("SEDEX") deposit setting. The Browns Prospect is one of six Pb-Zn soil geochemical prospects identified at Lyons River within a Proterozoic Age basin setting covering an area of 30km by 10km (Figure 1 and 2).

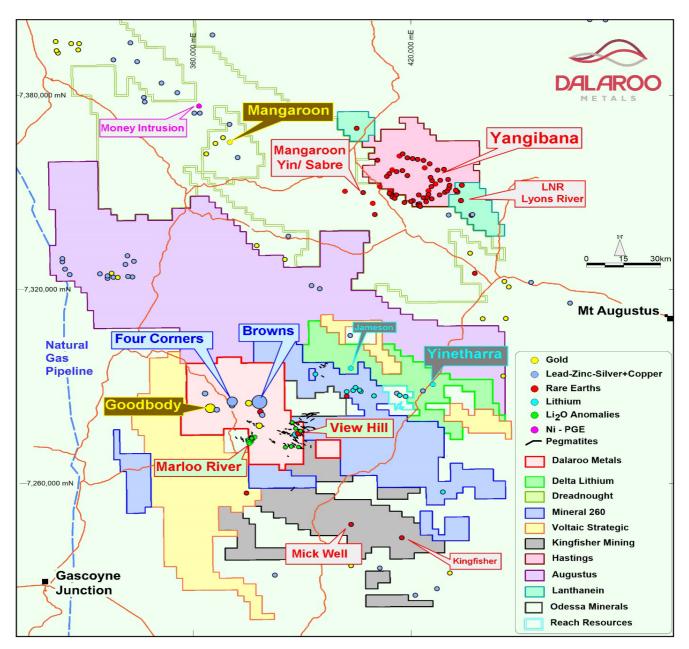


Figure 1: Dalaroo Metals, Lyons River Project in the Gascoyne Province showing neighbouring REE and lithium companies and prospects.



# Diamond Drilling at Browns

Four deep diamond core holes (Figures 3 & 4) will test a highly prospective and a very compelling Pb-Zn-Ag base metal target covering an area of 3km X 2km. Shallow AC drilling completed during second half of 2022 has delineated Pb-Zn-Ag mineralisation with results of 10m @ 1.04% Pb, 0.49% Zn, 2.85g/t Ag from 37m, including 1m @ 3.13% Pb, 0.24% Zn,5g/t Ag from 38m.

Diamond drilling and analysis of core samples will:

- Highlight the geological transition to more pyritic and phyllosilicate-rich units identified at the southern limits of the tested area (from 80m depth in LRAC021). This is interpreted to represent a transition in the pre-metamorphic protolith stratigraphy to lower energy sedimentary units, considered more prospective for base metal deposits. The current diamond drilling will investigate and test southwards into this domain, which also coincides with the "trough" structure epicenter (DAL: refer ASX announcement from 14 February 2023). This was identified from detailed gravity survey plus airborne magnetics geophysical data (Figure 3).
- Confirm the presence of economic Pb-Zn-Ag mineralisation at the Browns Prospect at Lyons River in the Gascoyne Province.

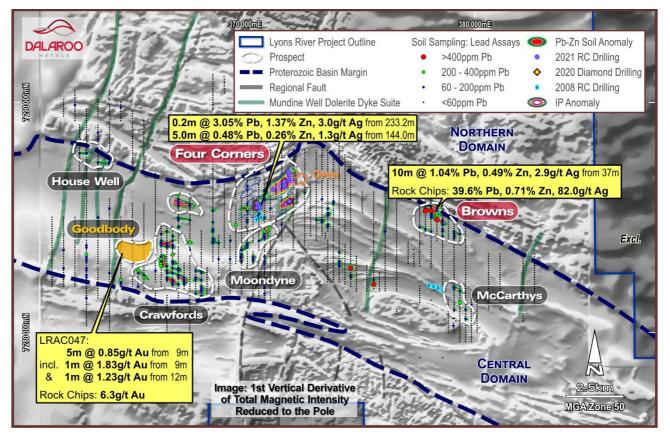


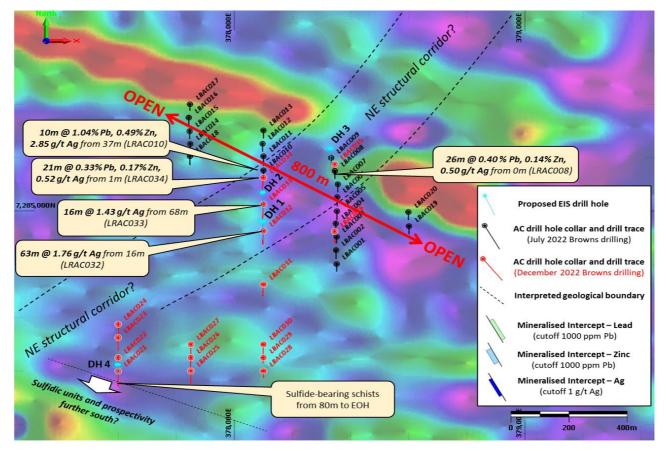
Figure 2: Lyons River, Browns prospect and other five Pb-Zn soil geochemical prospects /targets over greyscale 1 Vertical Derivative Aeromagnetics image.



#### **Browns Pb-Zn-Ag Prospectivity and Potential**

The Browns Prospect represents the second site of Pb-Zn-Ag intersections discovered by bedrock drilling in the Mutherbukin Zone, 5km east of Dalaroo's Four Corners Pb-Zn-Ag prospect. Two phases of AC drill programs by Dalaroo at the Browns Prospect have tested a very compelling broad Pb-Zn soil and rock chip geochemical anomaly (max 1445ppm Pb, 1080 Zn ppm) covering an area of 3km X 2km, associated with extensive iron-rich and high-grade gossanous material at surface with results of up to **39.6% Pb, up to 0.71% Zn and up to 82g/t Ag**. Detailed gravity work has complemented historical surveys by BHP and show a coincident gravity low suggesting an area of possible deepening basin development. An interpreted sub-basin fold or trough structure at Browns may represent a deeper portion of the paleo-basin architecture and a favourable environment for the formation of prospective host stratigraphy (Figure 3).

Dalaroo's AC drill programs at Browns have been successful in intersecting zones of interbedded psammitic to pelitic lithologies together with multiple zones of disseminated base metal sulphides such as galena and sphalerite. More than 800m of strike length lead-zinc mineralisation has been outlined at Browns which remains open in all directions (Figure 3). Ag intercepts are coincident with Pb and Zn assays and further support the presence of BHT/SEDEX-style of mineralisation (Figure 4). AC drilling programs have intersected thick zones of variably-pyritic, biotite-quartz gneiss, likely representing metamorphosed shales, and found to be enriched in silver, returning **63m @ 1.76g/t Ag from 16m and 16m @ 1.43g/t Ag from 68m** (Figures 3 and 4) and has outlined the footprint of the Pb-Zn-Ag mineralized system at Browns to approximately 400m in thickness at its central portion. Significant Pb-Zn sulphide intercepts of 10m @ 1.04% Pb, 0.49% Zn, 2.85g/t Ag from 37m (LRAC010) Including 1m @ 3.13% Pb, 0.24% Zn, 5g/t Ag from 38m and 63m @ 1.76g/t Ag from 16m adds weight to this thesis.



**Figure 3:** Map view of aircore drilling completed at Browns on ground gravity data basemap. Note location of newly reported mineralized intersections and structural interpretation. See Figure 4 for annotated cross-section A-B.



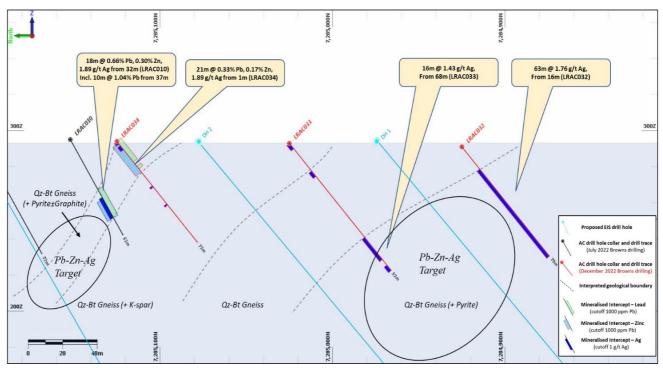


Figure 4: Simplified cross section A-B (see Figure 2) displaying selected mineralised drilling intercepts.

Previous AC drilling has highlighted the prospectivity for discovery of a significant BHT-SEDEX-style deposit at Browns prospect. Evidence that lead-zinc-silver mineralizing fluids have circulated at the basin-wide scale five kilometres east from the already drilled Four Corners Prospect strongly supports this theory. This leads Dalaroo to the conclusion there may be multiple base metal deposits to be defined at our Lyons River Project.

# ENDS

#### For more Information:

Please visit our website for more information: www.dalaroometals.com.au

Authorised for release to the ASX by the Board of Dalaroo Metals Ltd.



#### **COMPETENT PERSON**

The information in this report that relates to Exploration results is based on information compiled by Dalaroo Metals Ltd and reviewed by Mr Harjinder Kehal who is the Managing Director of the Company and is a Registered Practicing Geologist and Member of the AusIMM and AIG. Mr Kehal has sufficient experience that is relevant to the style of mineralisation, the type of deposit 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". Mr Kehal consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

#### FORWARD-LOOKING INFORMATION

This report may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning the planned exploration program and other statements that are not historical facts. When used in this report, the words "could", "plan", "estimate", "expect", "intend", "should" and similar expressions are forward-looking statements. Although Dalaroo believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

#### **CAUTIONARY NOTE**

The statements and information contained in this report are not investment or financial product advice and are not intended to be used by persons in deciding to make an investment decision. In releasing this report, Dalaroo has not considered the objectives, financial position or requirements of any particular recipient. Accordingly, potential investors should obtain financial advice from a qualified financial advisor prior to making an investment decision.

#### NO NEW INFORMATION

Except where explicitly stated, this report contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.



# About the Lyons River Project

Lyons River is located approximately 1,100km north of Perth and approximately 220km to the north-east of the coastal town of Carnarvon, Western Australia. The Lyons River Project lies within the Mutherbukin Zone of the Gascoyne Province, which is the deformed and high-grade metamorphic core zone of the early Proterozioc Capricorn Orogen (Figure 5).

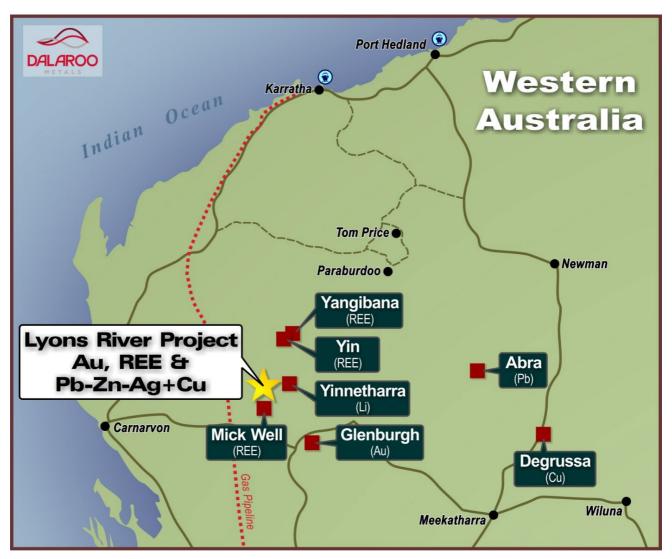


Figure 5: Lyons River Project location diagram

The majority of exploration to date at Lyons River had focused on the Four Corners prospect where an EIS funded diamond drill programme was completed in late 2020 by previous explorer Serena Minerals Limited. This intersected an encouraging primary zinc (sphalerite) and lead (galena) sulphide mineralisation intercept in drill hole LRDD003 of **0.2m @ 3.05% Pb, 1.37% Zn and 3g/t Ag** from 223.2m) along the strike extent of the *NE zone* of the 2.5km Induced Polarisation anomaly peaking at 33 mV/V (Figure 6).

Subsequently follow up RC holes drilled in the December quarter of 2021 by the Company were successful in intersecting zones of interbedded psammitic to pelitic plus mafic lithologies together with multiple zones of disseminated base metal sulphides associated with significant pyrite intervals (ASX: DAL – see announcement from 16 March 2022).



Multi-element assay results received have highlighted encouraging Pb, Zn and Ag intersections including:

- Drill LRRC001 intersected 1m @ 0.43% Pb, 0.95% Zn and 7.5g/t Ag from 47m
- Drill hole LRRC006 with 9m @ 0.34 % Pb, 0.21% Zn and 1g/tAg from 141m including 5m @ 0.48%
  Pb, 0.26% Zn and 1.3g/t Ag from 144m

Of special note are the significant intervals of Ag assays that have been intersected in the RC drill programme at Four corners with two holes (LRRC001 and LRRC006) returning Ag values of up to 7.5g/t (Figure 5). The presence of Ag confirms the Pb-Zn base mineralization outlined to date supports a BHT/SEDEX setting model over Lyons River.

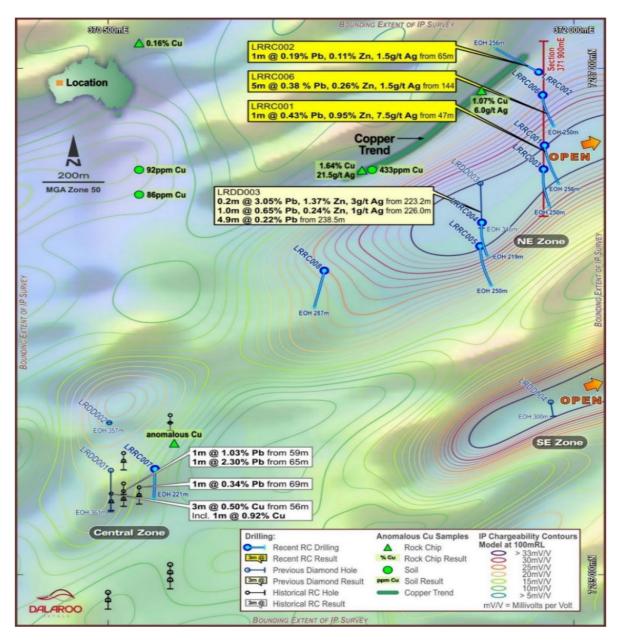


Figure 6: Four Corners prospect, drill hole location map with historical holes, DAL's recently completed RC drill holes and base metal results.



# Sweet Spots for SEDEXs/BHTs

Geoscience Australia's 2019 study, using *surface wave tomography and a parameterisation for anelasticity at seismic frequencies* shows 85% of the world's sediment hosted base metal deposits occur within 200km of the edges of thick lithosphere. The Australian model shows striking correlation between major sediment hosted deposits and the edge of the thick lithosphere. This is defined by a 170km lithosphere-aesthenosphere boundary (LAB) contour. Lyons River Project is located 156km away from the 170km LAB contour (Figure 7).

Lyons River with incremental exploration work completed to date at the Four Corner and the Browns prospects has the potential for discovery of a BHT base metal deposit in the Proterozoic age rocks of the Gascoyne Province. An economic Pb-Zn-Ag discovery would open this province for a hitherto unrecognised style of mineralisation.

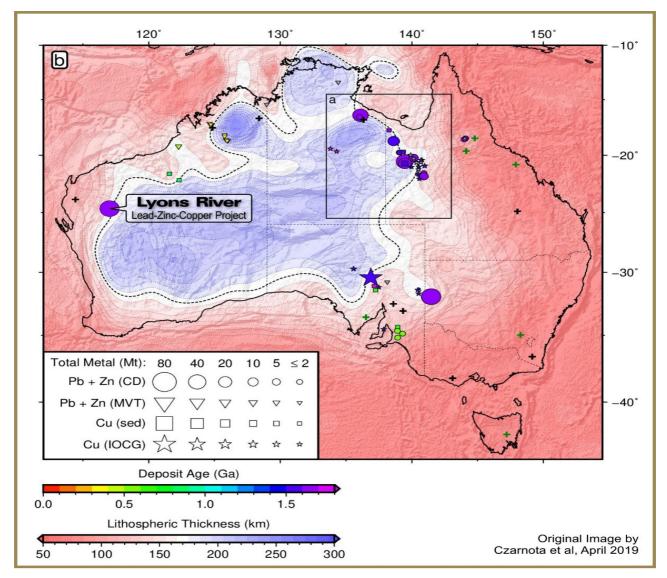


Figure 7: Distribution of BHT/SEDEX deposits, function of lithospheric thickness in Australia