



NOVEMBER 2022

# INVESTOR PRESENTATION

*Exploring Australia for the Energy Metals of the Future*

ASX:BYH

# COMPETENT PERSON'S STATEMENT & DISCLAIMER

## Competent Persons Statement – Exploration Results

The information in this Presentation that relates to Exploration Results is based on information compiled by Mr Ashley Jones, an employee of Bryah Resources Limited (“the Company”). Mr Jones is a member of the Australasian Institute of Mining and Metallurgy (AusIMM). Ashley Jones 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’. Ashley Jones consents to the inclusion in this Presentation of the matters based on his information in the form and context in which it appears.

## Competent Person Statement — Mineral Resource Estimation

The information in this announcement that relates to Manganese Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd), Dr Joe Drake-Brockman (Consultant with Drake-Brockman Geoinfo Pty Ltd) and Ms Gemma Lee (Principal Geologist with Bryah Resources). Mr Barnes, Dr Drake-Brockman and Ms Lee are members of the Australasian Institute of Mining and Metallurgy (AusIMM) and/or the Australian Institute of Geoscientists (AIG). All have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Barnes is the Competent Person for the estimation, Dr Drake-Brockman is the Competent Person for the geological model and site visits and Ms Lee is the Competent Person for the geological database. Mr Barnes, Dr Drake-Brockman and Ms Lee consent to the inclusion in this announcement of the matters based on their information in the form and context in which they appear.

The information in this presentation that relates to Gabanintha Base metals Mineral Resources (see BYH ASX announcement dated 1st June 2021) is based on and fairly represents information compiled by Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd) and Mr Brian Davis (Consultant with Geologica Pty Ltd). Mr Barnes and Mr Davis are both members of the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG). Both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Barnes is the Competent Person for the estimation and Mr Davis is the Competent Person for the database, geological model and site visits.

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The Company confirms that it is not aware of any new information or data that materially affects the information included in this presentation and all material assumptions and technical parameters underpinning the Mineral Resource estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not materially changed from the original announcement.

## Forward Looking Statements

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The presentation contains “forward-looking information” within the meaning of applicable securities legislation. Forward-looking information may include, but is not limited to, information with respect to the future financial and operating performance of the Company, its affiliates and subsidiaries, potential investments, the estimation of mineral reserves and mineral resources, realization of mineral reserves and resource estimates, costs and timing of development of the Company’s projects, costs and timing of future exploration, timing and receipt of approvals, consents and permits under applicable legislation, results of future exploration and drilling and adequacy of financial resources.

Forward-looking information is based on the reasonable assumptions, estimates, analysis and opinions of management of the Company made in light of their experience and their perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made, but which may prove to be incorrect. The Company believes that the assumptions and expectations reflected in such forward-looking information are reasonable.

Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

# CORPORATE SNAPSHOT

## Capital Structure

**ASX Code** **BYH**

Total Shares on Issue 281,253,474

Options on Issue\* 66,500,000

Market Capitalisation (@ \$0.026) ~\$7.3 million

Cash Balance (as at 30<sup>th</sup> September 22) \$1.2 million

- 2,000,000 Unlisted Options – ex. price \$0.054, expiry 12 Aug 2025.
- 64,500,000 Listed Options (BYHOA) – ex price \$0.09 expiry 31 Jan 2023.

## Active Shareholders - ~1,150

Top 20 Holders, includes: 50.4%

- Board and Management 3.7%

- Australian Vanadium Ltd (ASX:AVL) 4.9%



# OUR PROJECTS

“OUR PROJECTS ARE QUALITY EXPLORATION ASSETS IN WESTERN AUSTRALIA, A TIER 1 EXPLORATION JURISDICTION”



# BOARD AND MANAGEMENT



**Ian Stuart**

Non-Executive Chair

Mr Stuart is a geologist by profession with experience in both the finance and mining industries. He holds an Honours degree in Geology, is a Fellow of the Financial Services Institute of Australasia and a member of the Australian Institute of Company Directors. Ian has extensive experience in capital markets and is conversant with public company governance and management across international jurisdictions.

Mr Stuart is a Non-Executive Director of ASX-listed Star Minerals Ltd.



**Leslie Ingraham**

Non-Executive Director

Mr Ingraham has over 30 years of experience in business. He has performed the roles of Executive Director and Non-executive Director for ASX listed companies. He has extensive experience in capital raising and mineral prospecting and exploration. Core competencies are also in corporate advisory, investor relations and building long lasting relationships with high end investors in Australia and overseas.

Mr Ingraham is currently Executive Director of ASX-listed Australian Vanadium Ltd.



**Brian Davis**

Non-Executive Director

Mr Davis is a 50-year veteran of the resources industry and has been principal of exploration and resource development consultancy group Geologica Pty Ltd for the past 20 years. During his extensive career he has worked in exploration and mining for small and large resource companies, focused on commodities including gold, base metals, vanadium, uranium, iron ore, coal and rare earths, both in Australia and overseas.

Mr Davis is also a Board member for not-for-profit organisation WA Lions Drug Education Foundation (WALDEF) which is committed to drug and alcohol education and abuse prevention programs.



**Ashley Jones**

CEO

Mr Jones has been responsible for the technical direction of Bryah Resources Limited since 2019.

A geologist with over 20 years of experience in exploration, mine geology and management in Australia and Africa, Mr Jones brings significant project development expertise in feasibility level projects with a particular focus on resources and mine development, including manganese, gold and uranium.

Mr Jones is a Non-Executive Director of ASX-listed Star Minerals Ltd.

# PROJECTS WITH PRODUCTION POTENTIAL

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**Manganese Resource 1.8 Mt @21% Mn** with potential to grow - 49% JV with OMM, subsidiary of manganese producer OM Holdings



**Copper, Nickel and Cobalt** Resource in tails of the AVL vanadium project. 36.0 Million Tonnes at 766 ppm Ni, 212ppm Cu and 231 ppm Co



**20%** holding in Star Minerals - aggressive development of the Tumblegum South **Gold** Resource – performance shares vest on Measured Resource and mining commencement

# PROJECTS WITH EXPLORATION POTENTIAL

## **Bryah Basin East – Copper and Gold**

Windalah VMS exploration - ready to drill

Olympus – ready to drill

Area surrounded by JVs with Sandfire Resources

## **Bryah Basin West – Copper, Gold, Uranium, REEs**

Near to Fortnum Gold mine and Auris Minerals' Wodger and

Forrest Copper projects

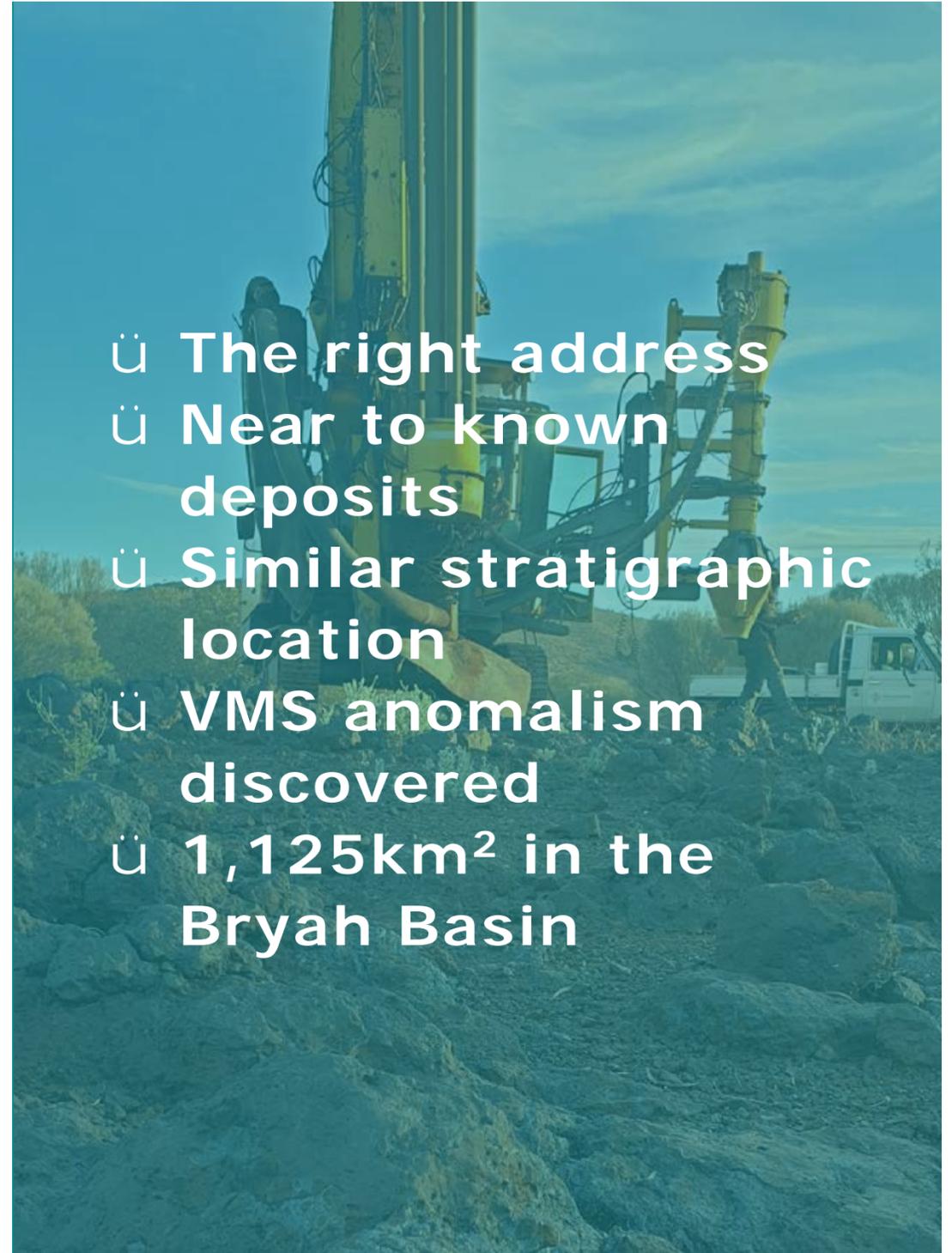
## **Gabanintha**

**Copper, Nickel** and **Gold** exploration

## **Lake Johnston**

**Lithium, Nickel** exposure – **Option Agreement** signed

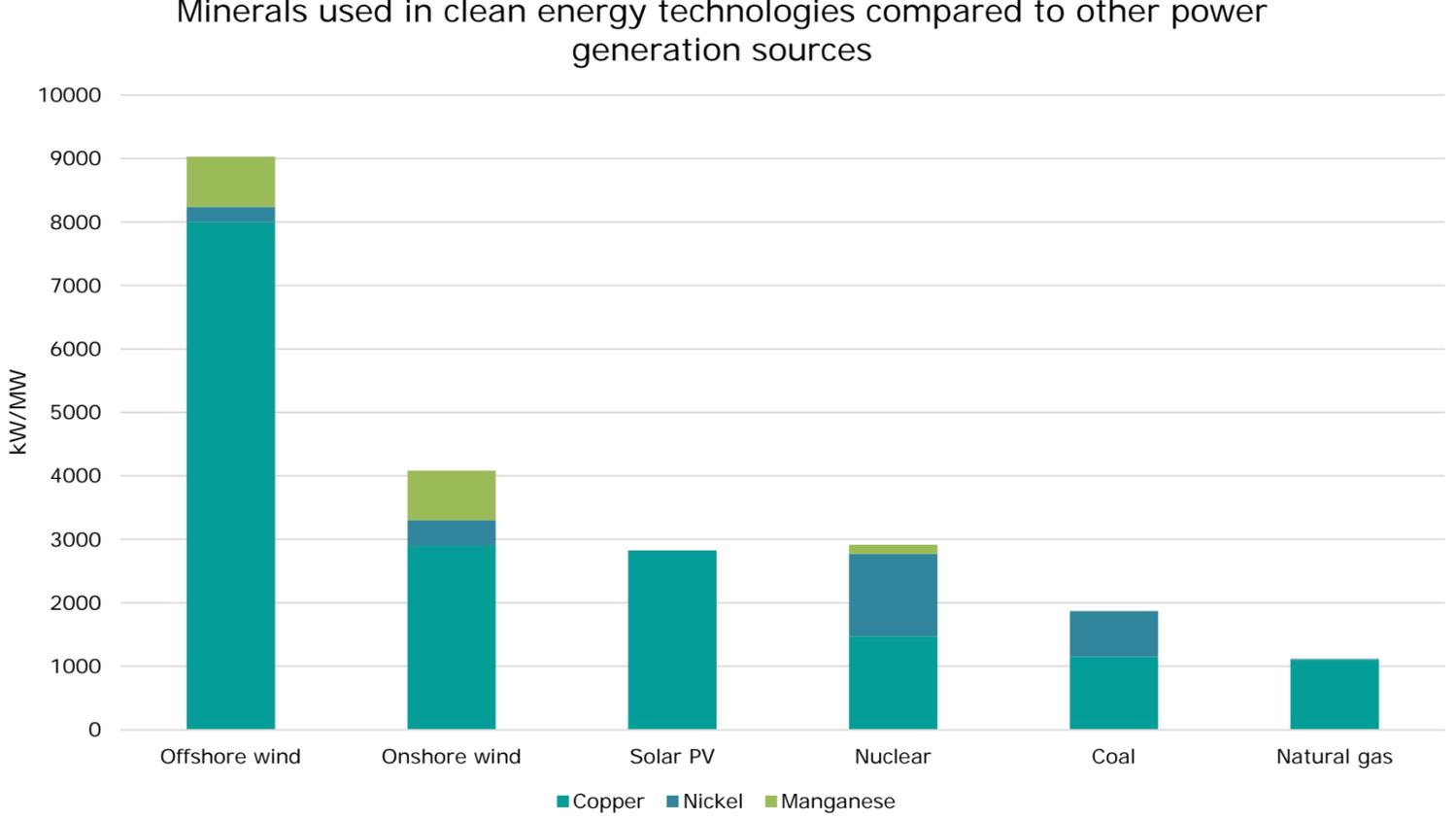
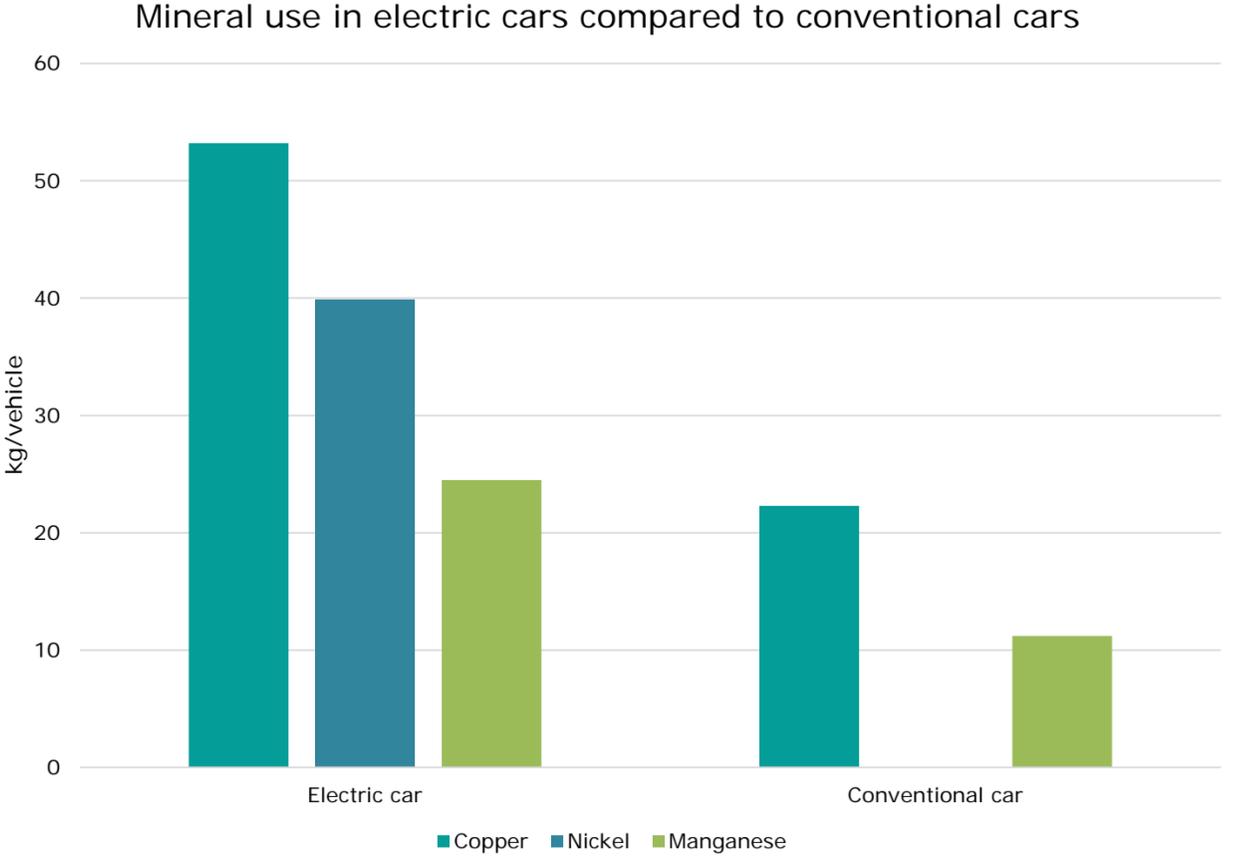
- ü The right address
- ü Near to known deposits
- ü Similar stratigraphic location
- ü VMS anomalism discovered
- ü 1,125km<sup>2</sup> in the Bryah Basin



# MARKETS



Manganese, Copper and Nickel have a significant role to play in both the electric vehicle and renewable energy markets

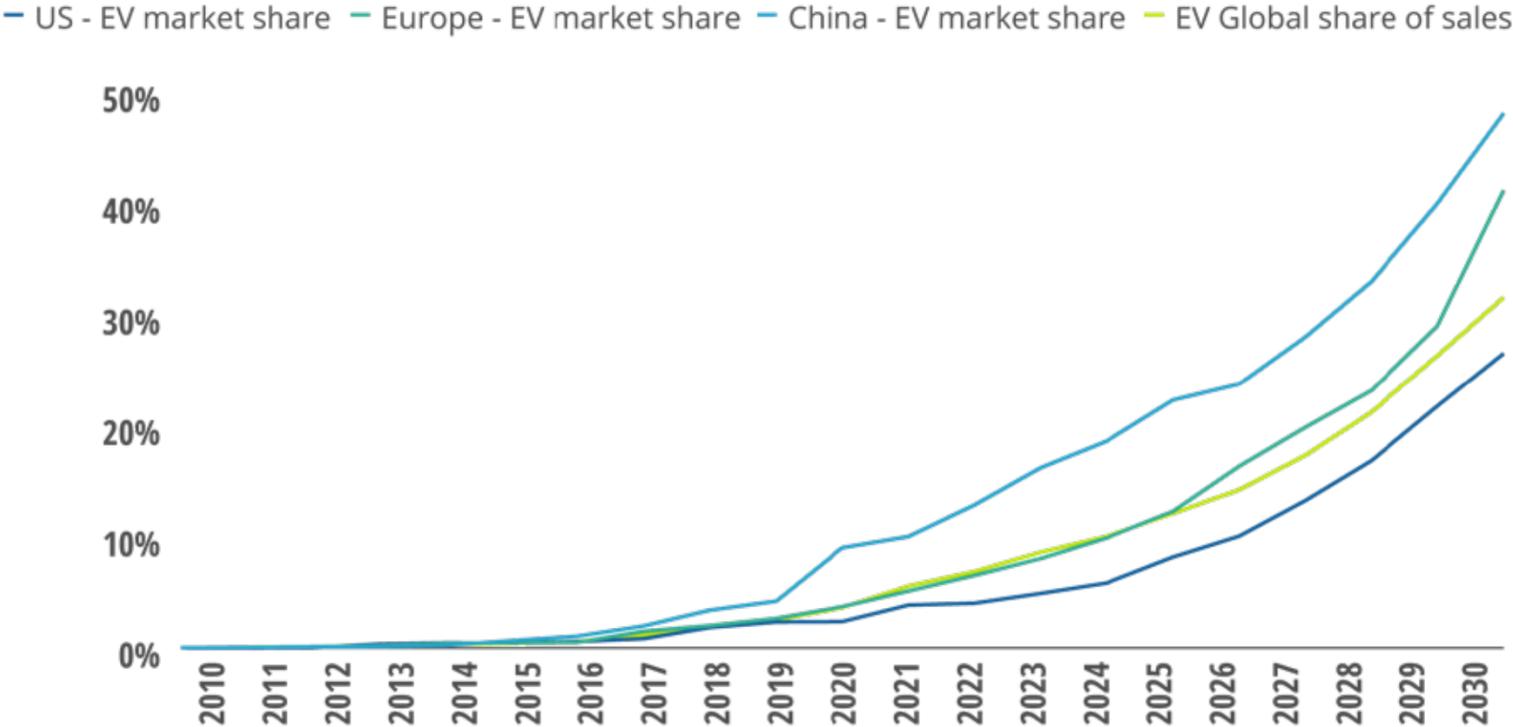


Data sourced from IEA report 'The Role of Critical Minerals in Clean Energy Transitions' dated May 2021

# MARKET GROWTH

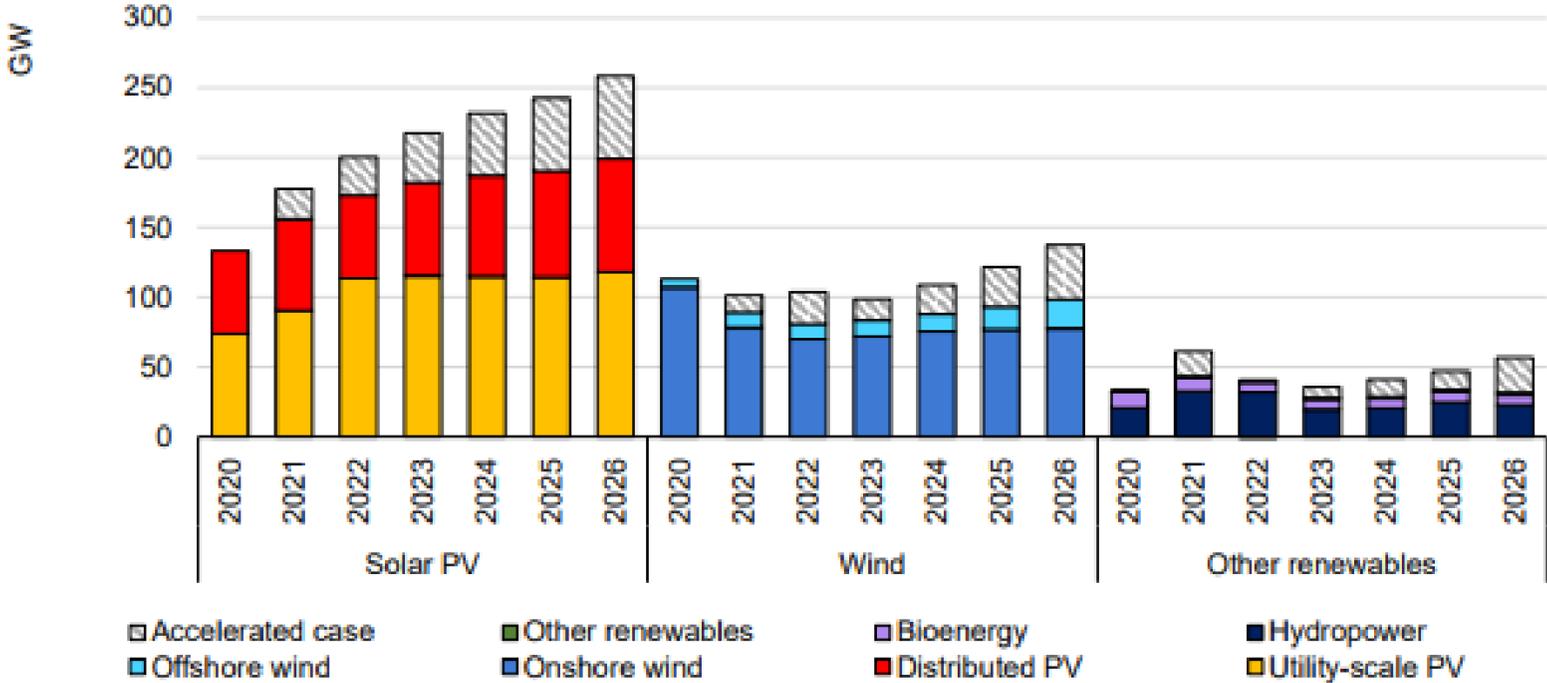


## Outlook for EV market share by major region



Source: Deloitte analysis, IHS Markit, EV-Volumes.com<sup>17</sup>

## Annual capacity additions of solar PV, wind and other renewables, main and accelerated cases, 2020-2026



IEA. All rights reserved



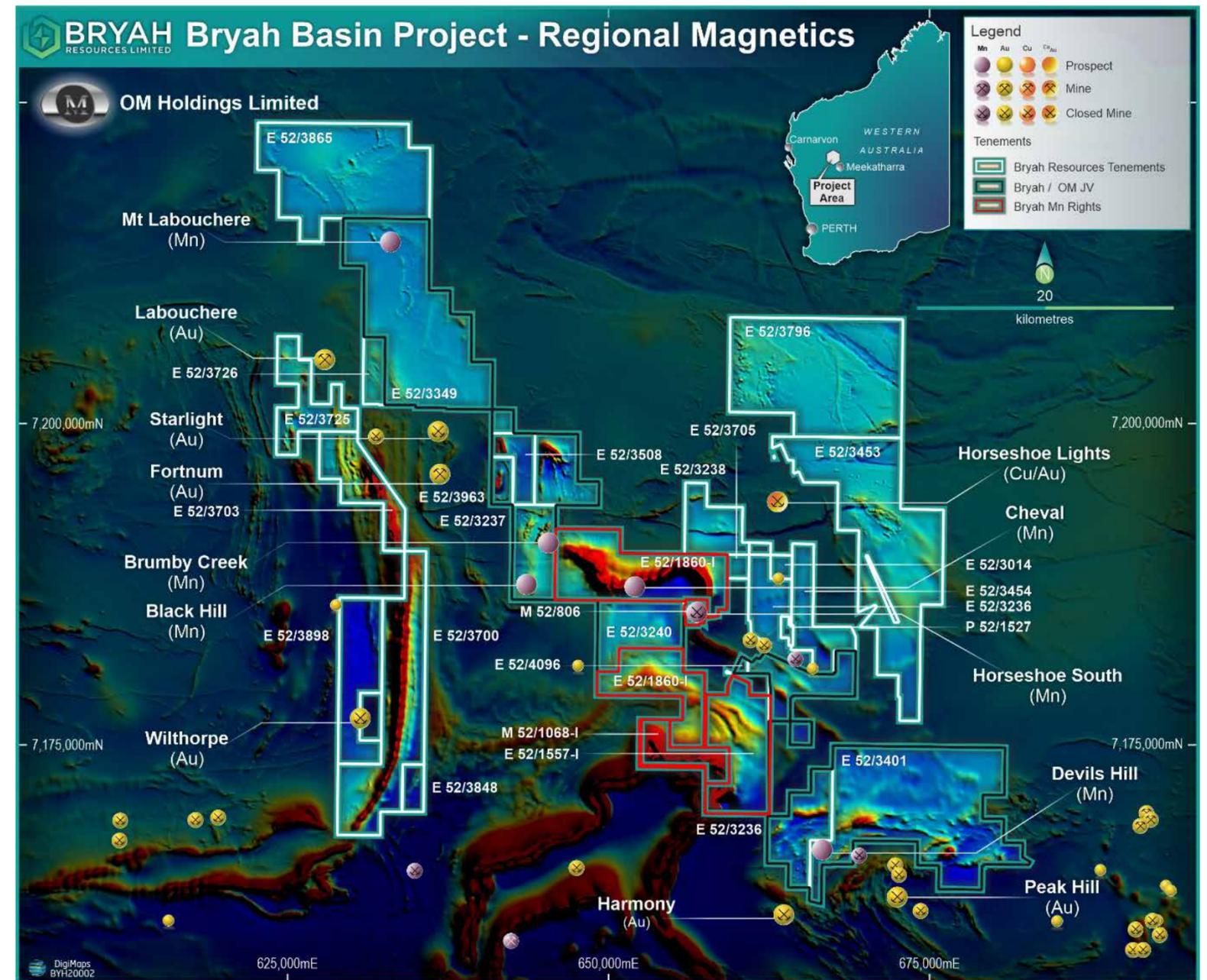
# BRYAH BASIN MANGANESE

*THE COMPANY HAS AN OPPORTUNITY TO DEVELOP LOW-COST MANGANESE MINING OPERATIONS IN THE BRYAH BASIN. BRYAH HAS MADE NEW DISCOVERIES AND ATTRACTED A QUALITY GLOBAL MANGANESE BUSINESS JOINT VENTURE PARTNER.*

***Manganese is considered a critical mineral for its use in steel and batteries***

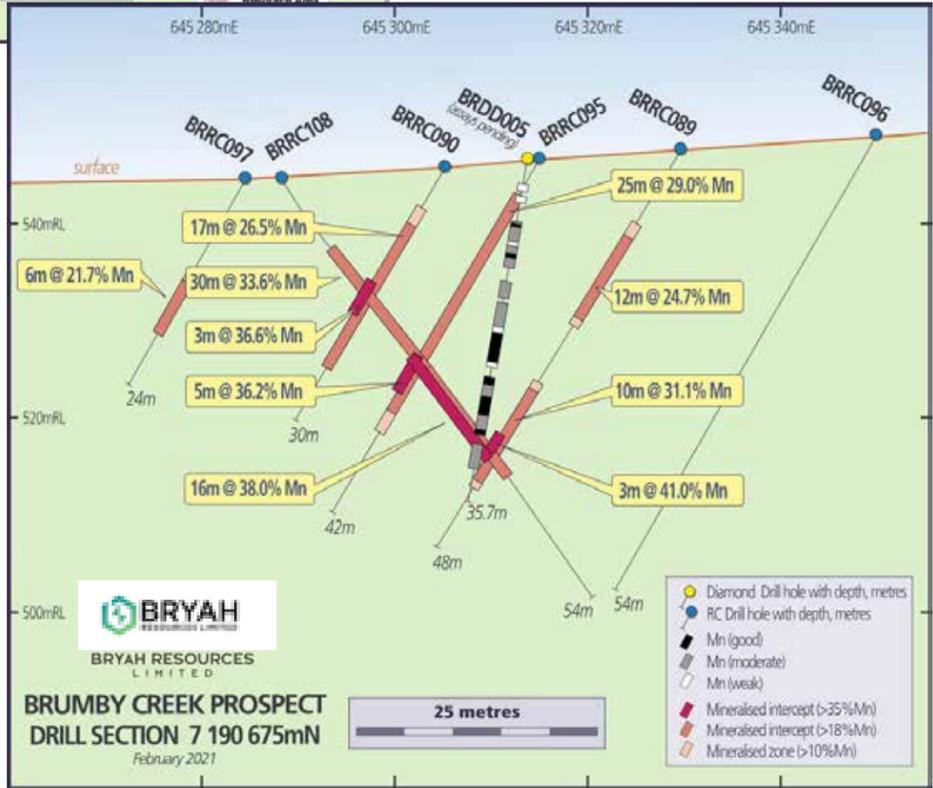
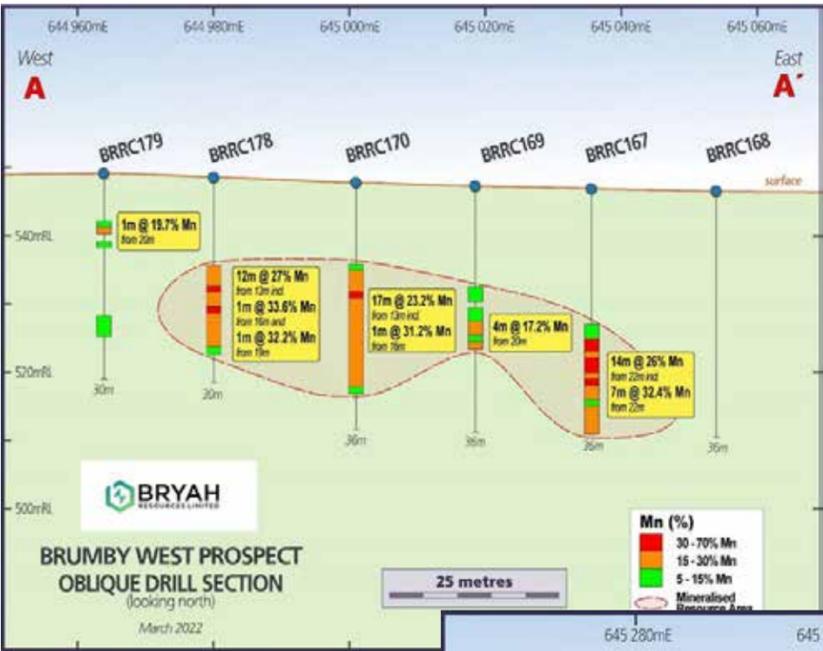
# BRYAH BASIN MANGANESE JOINT VENTURE

- Manganese occurs within the Horseshoe Formation – over 70 line km covered by JV tenements
- In 2019 Bryah acquired the historic Horseshoe South Mine, the largest Manganese mine in the region
- Exploration focus to date has mainly centered on three areas (Horseshoe South Mine, Brumby Creek and Black Hill)
- JV currently split 49% BYH and 51% OMH



# MANGANESE MINERAL RESOURCE

TOTAL MINERAL RESOURCE 1.836 MILLION TONNES (MT) AT 21.0% MN



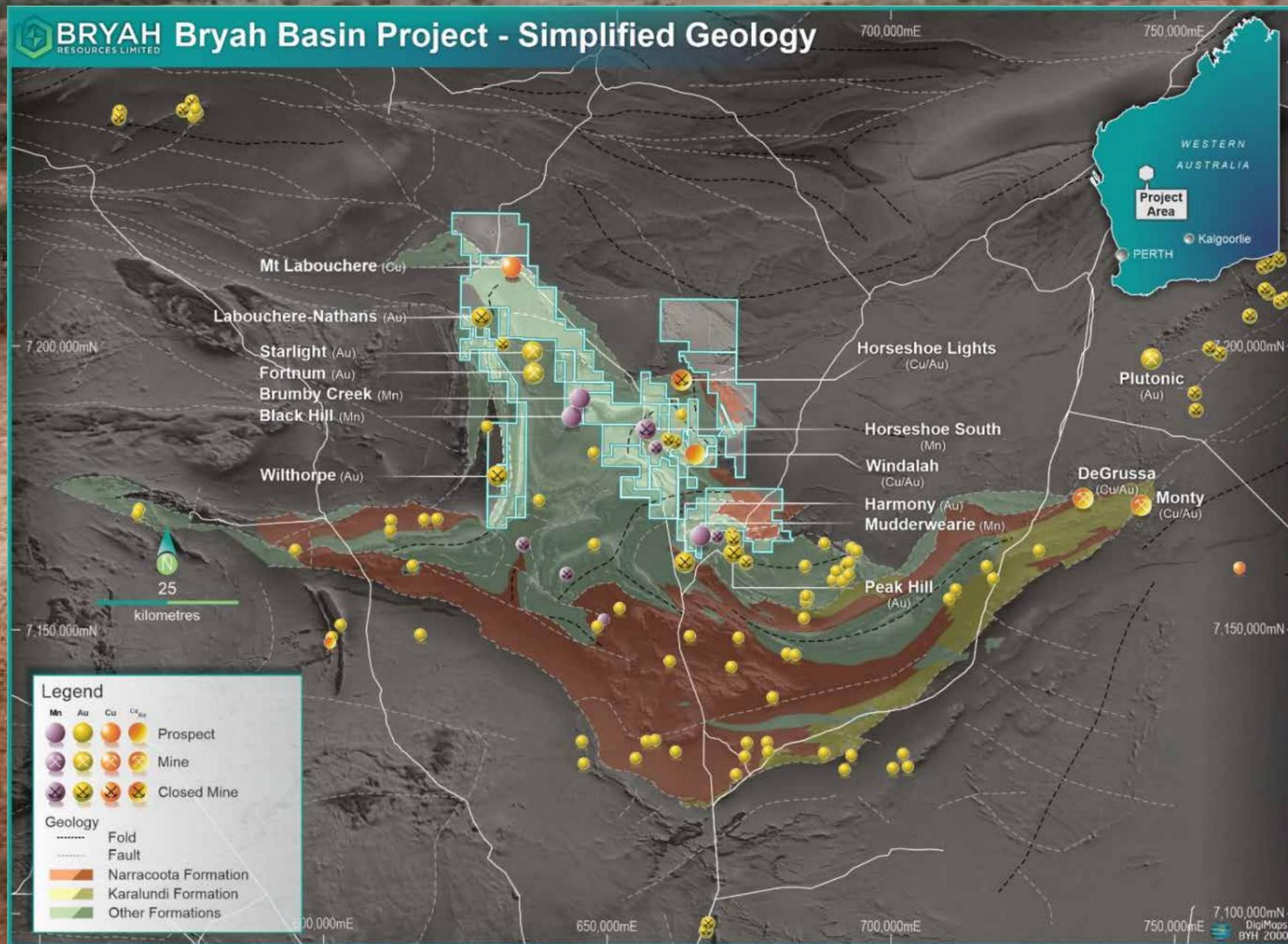
TOTAL MINERAL RESOURCE 1.836 MILLION TONNES (MT) AT 21.0% MN

Over 6 prospects  
0.65 MT on granted ML

JV partner Funding  
Exploration – Currently  
49% BYH

GAIP ground Geophysics identifying new prospect areas  
Drilling in November  
6000m for the year

Targeting 3-5 million Tonnes in resource to get the scale to recommence production



# BRYAH BASIN COPPER-GOLD PROSPECT

BRYAH'S DISCOVERY OF A VMS COPPER-GOLD TARGET AT WINDALAH IN THE BRYAH BASIN CONFIRMS POTENTIAL FOR A NEW COPPER-GOLD DISCOVERY ON THIS HIGHLY PROSPECTIVE LAND PACKAGE.

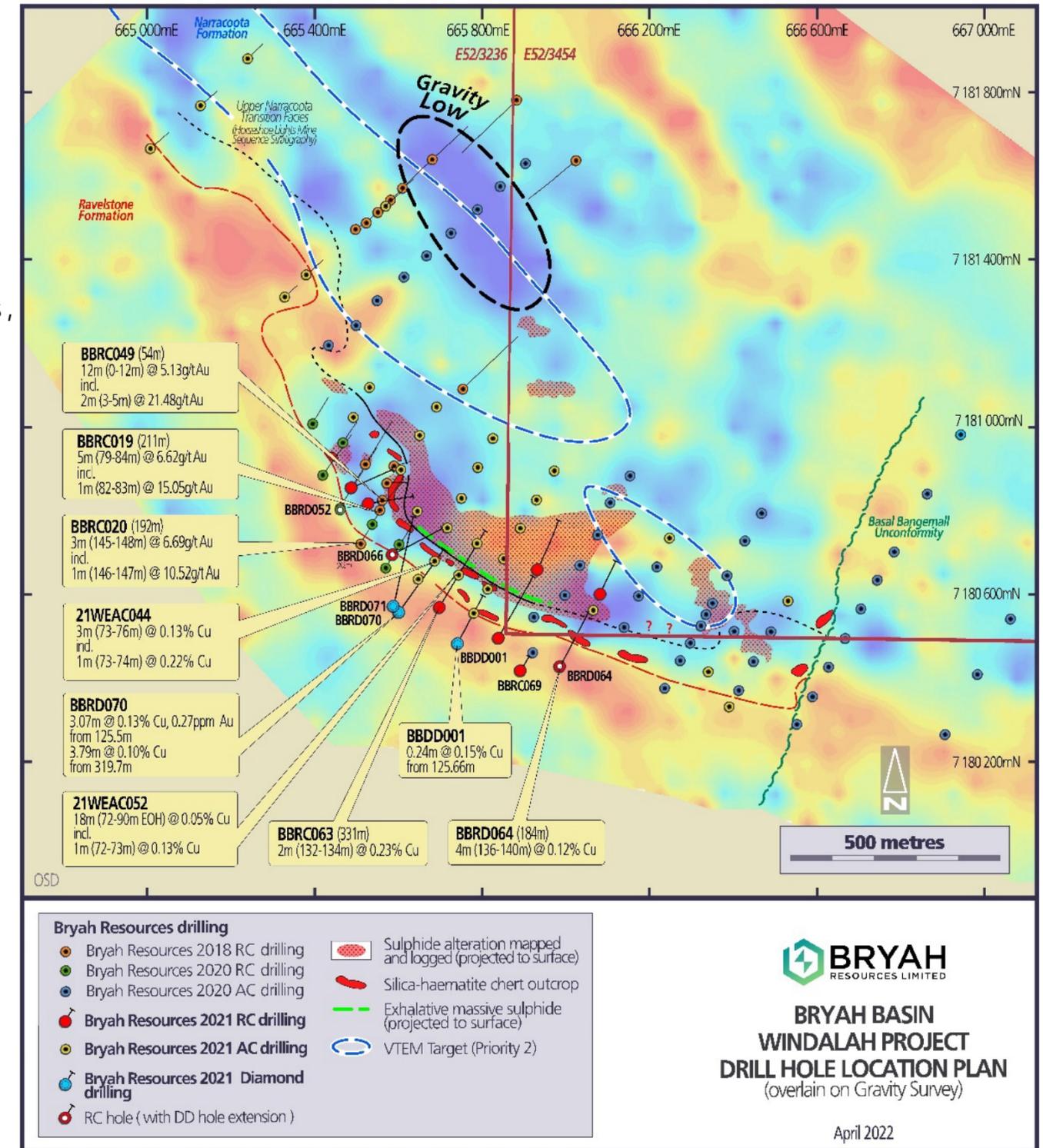
# WINDALAH PROSPECT

## EMERGING VMS COPPER-GOLD TARGET

- Geology displays textbook high sulphidation VMS geological features and textures, confirming a syngenetic hydrothermal volcanogenic massive sulphide (VMS) system.
- Broad sulphide-rich zone with copper mineralisation and VMS pathfinder element enrichment intersected. Large intersections of significantly sulphide enriched rocks include:
  - **146m @ ~15.7 weight percentages (wt%) sulphide stringer zone from 182m in BBDD0011 (includes 3.12m massive sulphide zone)**
  - **89m @ ~19.4 wt% sulphide stringer zone from 176m in BBRD0701 (includes 5.95m massive sulphide zone)**
- Supergene upgrade and visual identification of copper minerals including Bornite, Chalcopyrite and Malachite. Best assays include:
  - **3.07m @ 0.13% Cu and 0.27ppm Au from 125.5m in hole BBRD070**
  - **3.79m @ 0.1% Cu from 319.7m in hole BBRD070**
  - **0.24m @ 0.15% Cu from 125.66m in hole BBDD001**

wt% pyrite estimates are based upon sulphur assays. The accepted estimation is pyrite wt% = S% x 1.87 (assuming all sulphur is in pyrite)

<sup>2</sup>Cautionary Note: In relation to disclosure of visual mineralisation, the Company cautions that visual estimates of mineralisation content/intensity should not be considered a proxy or substitute for laboratory analyses, which are required to determine the widths and grade of the mineralisation.

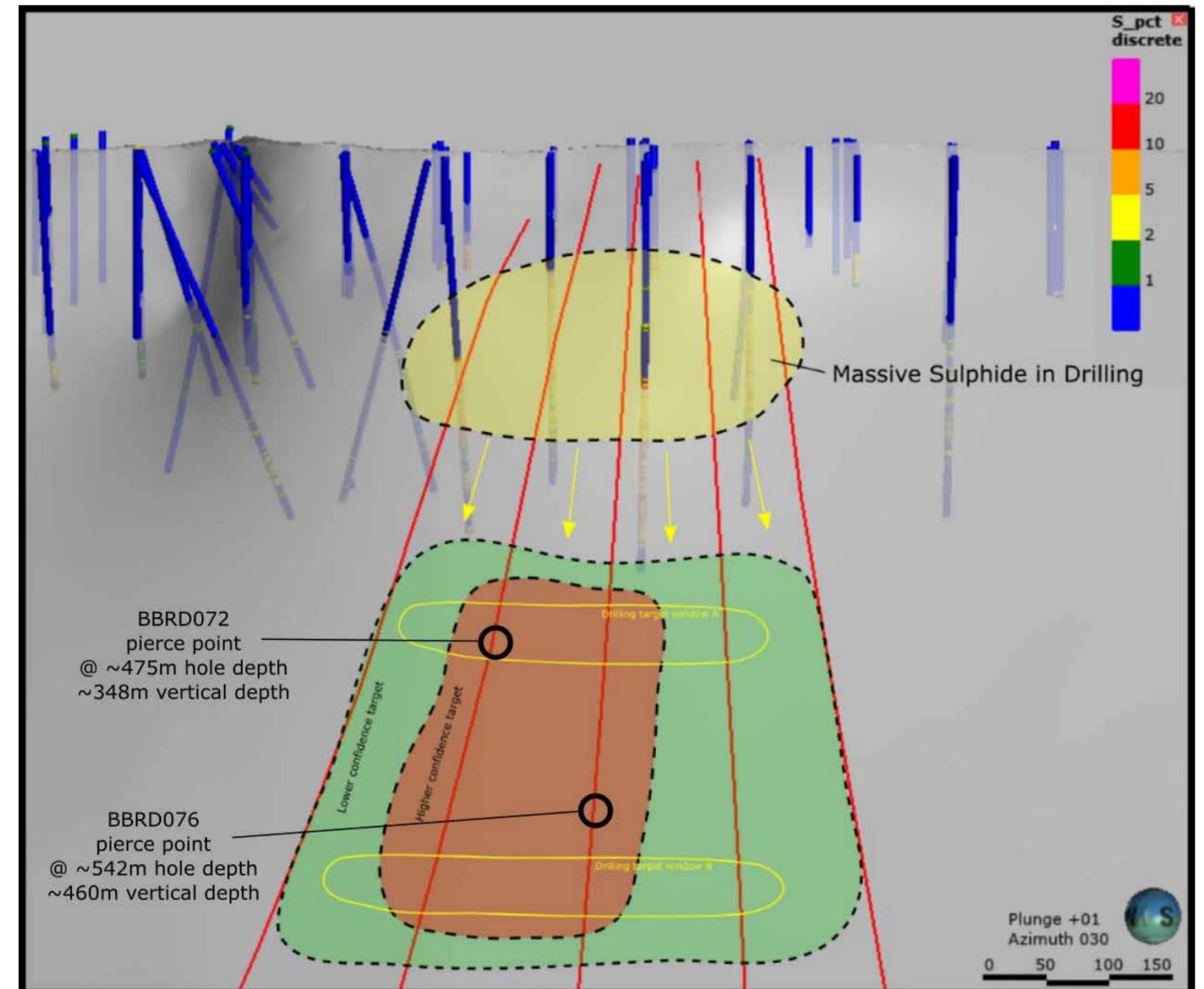


**BRYAH BASIN  
WINDALAH PROJECT  
DRILL HOLE LOCATION PLAN**  
(overlain on Gravity Survey)

April 2022

# WINDALAH PROSPECT

## Diamond Drilling to test target at depth



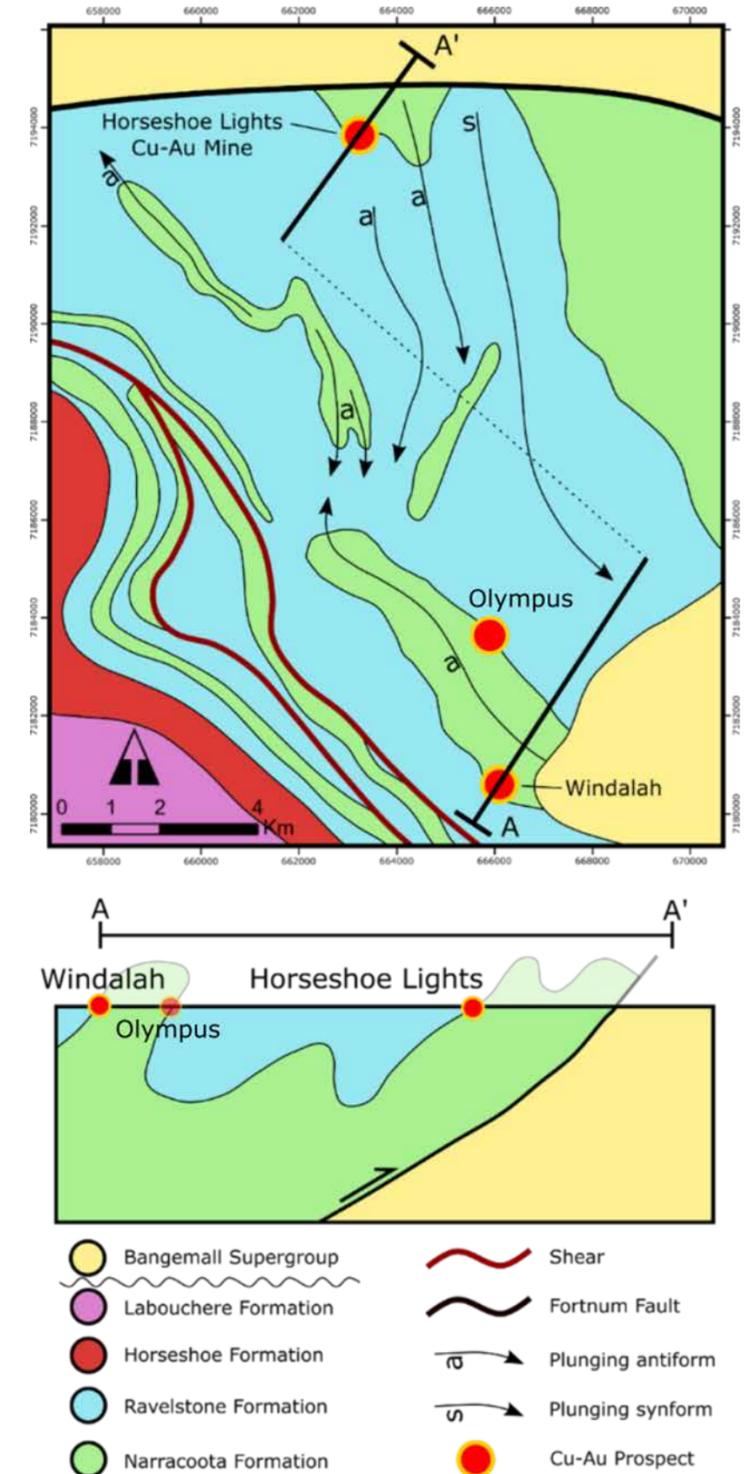
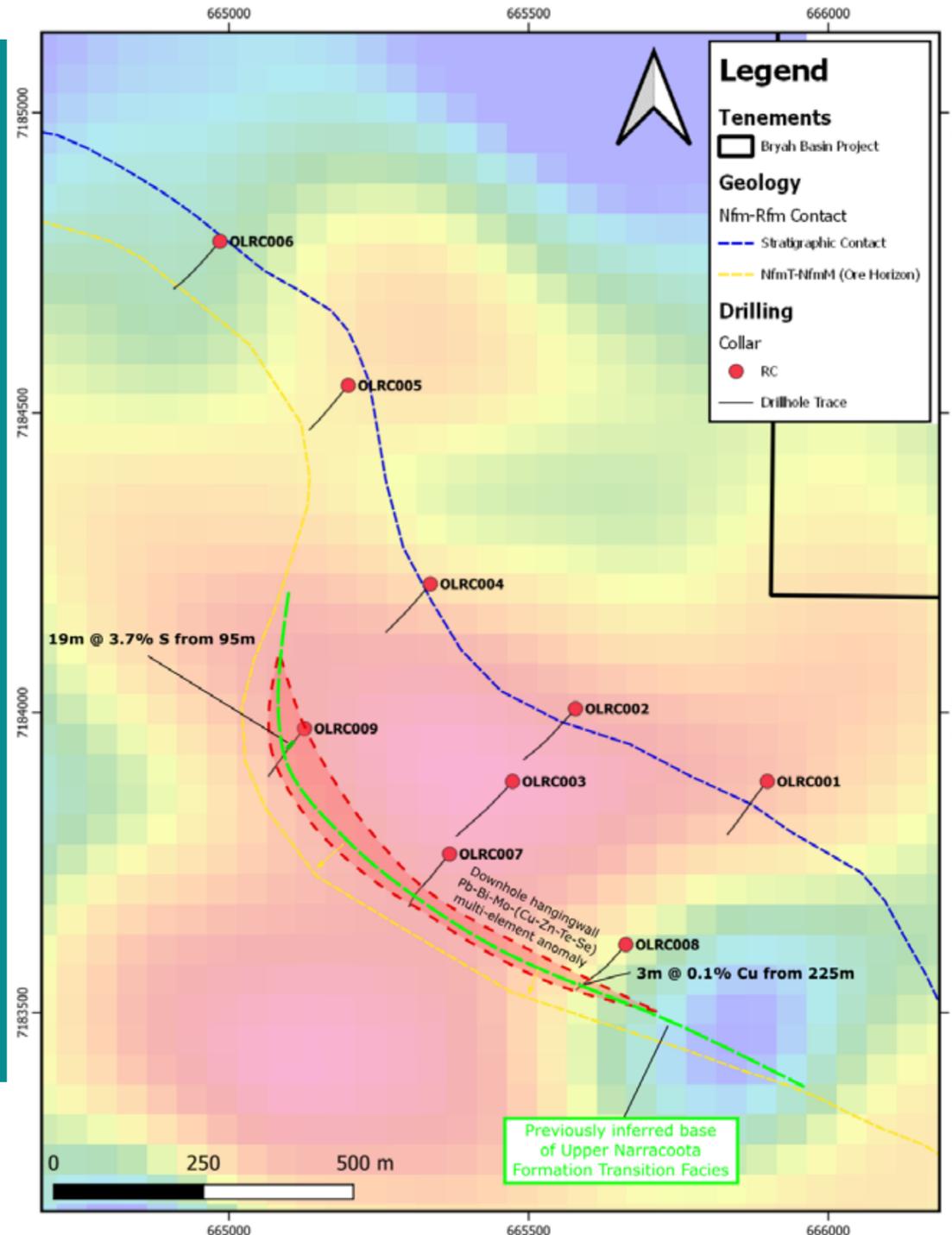
The next steps for the Windalah copper-gold project are:

- Geological interpretation
- Geochemical assays
- Downhole Electromagnetic Surveys (DHEM)

# OLYMPUS PROSPECT

## Cu targets

- 4km north of Winalah
- EIS funded to \$130K
- Completed 9 holes for 2148m
- Similar anomalous elements
- Higher Bi, Te and Se may indicate it's closer to hotter fluids
- Identification of a spatially coherent Pb-Bi-Mo-(Cu-Zn-Te-Se) anomaly approaching the hanging wall contact to mineralised stratigraphic horizon. RC Chips to Hyperspectral analysis
- Downhole EM Survey



# BRYAH BASIN TENEMENT HOLDING ADDITIONAL TARGETS

## Copper - Gold VMS Targets

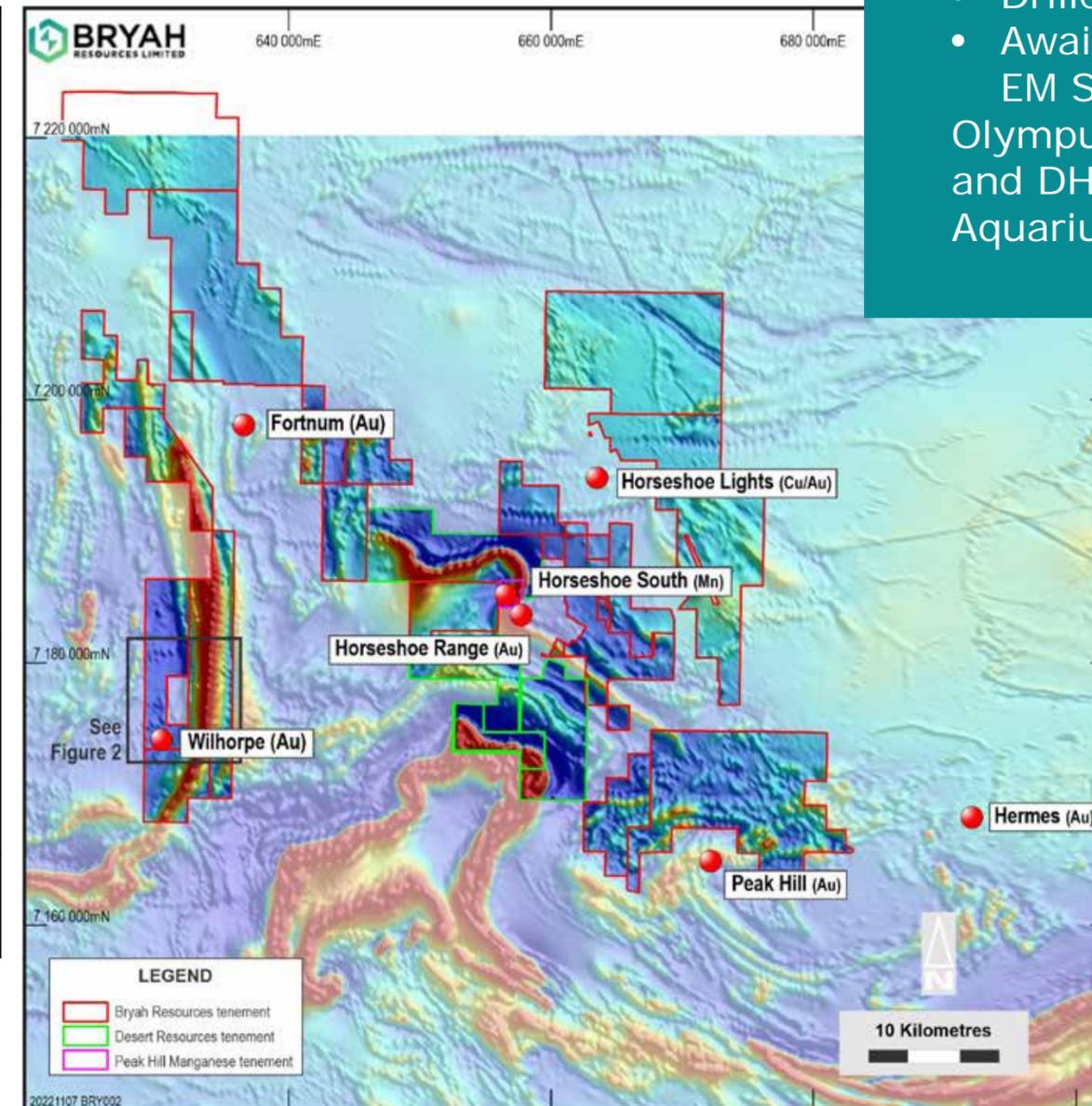
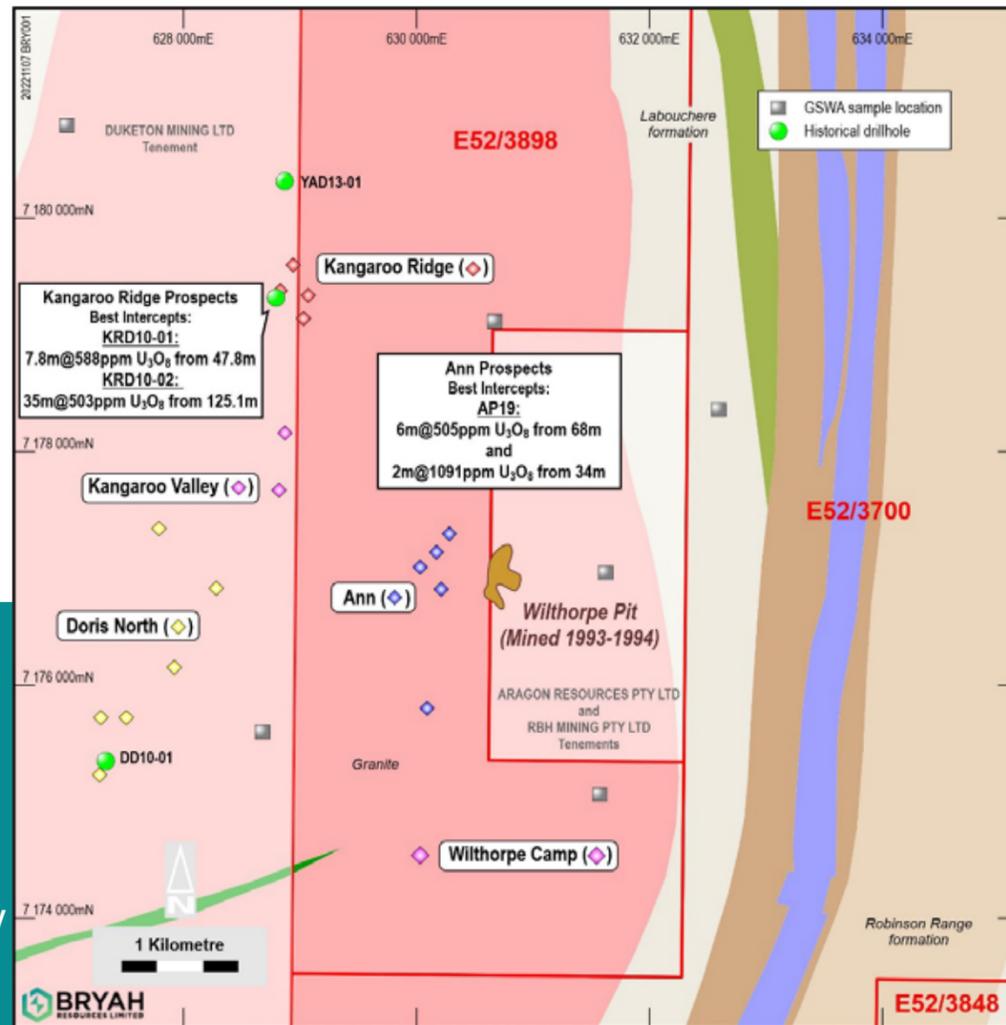
Windalah

- Drilled 2 deep holes
- Awaiting Downhole EM Survey (DHEM)
- Olympus Hyperspectral and DHEM
- Aquarius 165k EIS Grant

## Uranium and REE Targets

Kangaroo Ridge

- 35m at 503ppm  $U_3O_8$
- Pegmatites historically reported
- Anomalous Lanthanum values





# **GABANINTHA COPPER NICKEL GOLD PROJECT**

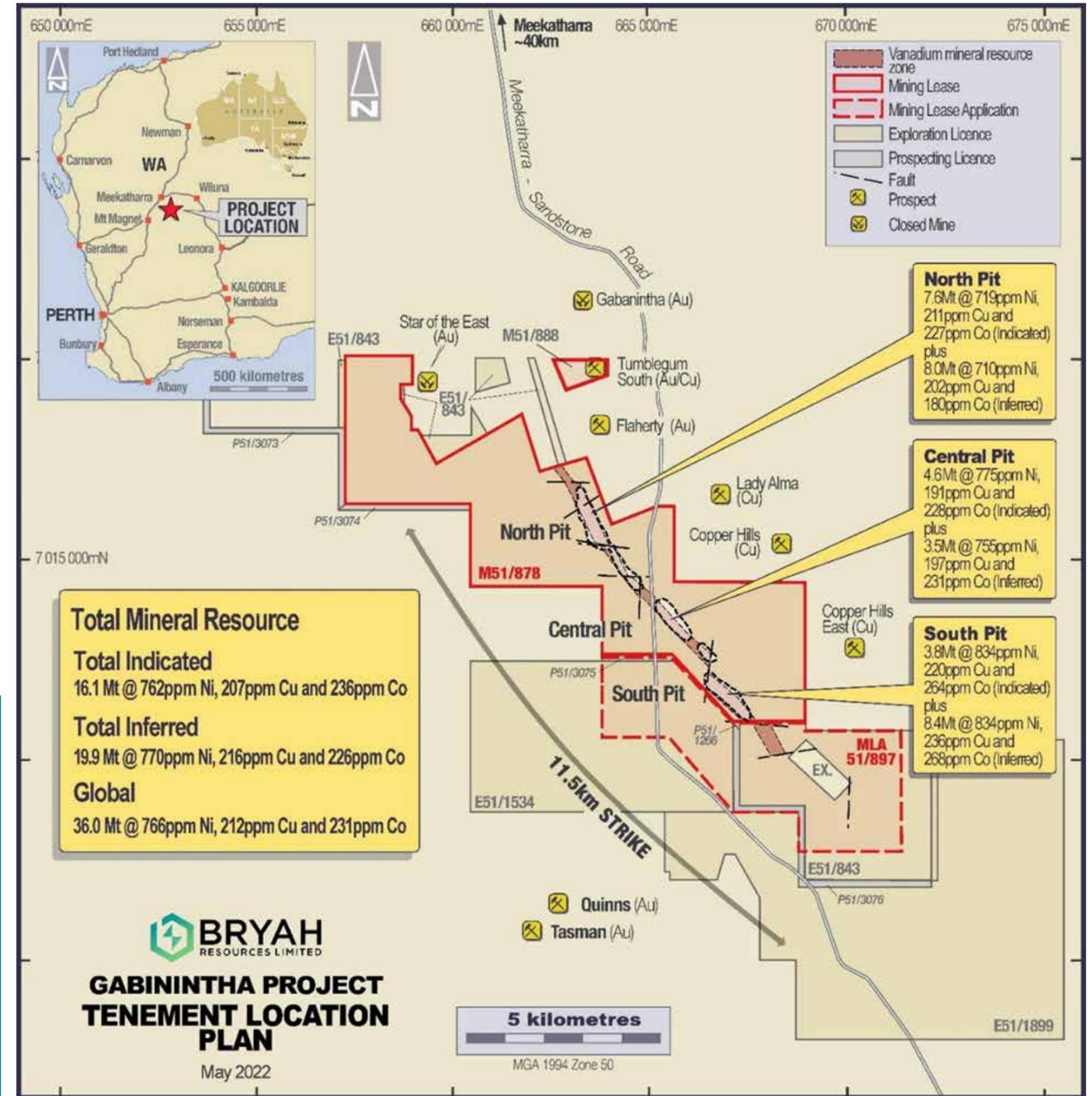
**BRYAH HOLDS 100% RIGHTS TO COPPER  
NICKEL AND GOLD**

*Australian Vanadium Limited retains 100% rights to  
Vanadium, Uranium, Cobalt, Chromium, Titanium,  
Manganese and Iron Ore*

# VANADIUM DEPOSIT - INCLUDES NICKEL, COPPER AND GOLD POTENTIAL

- AVL completed BFS
- Tailing (waste) of the vanadium process contains Cu, Ni and Co
- Sulphide concentrates from flotation contained up to 6.3% base metals including up to, 2.58% Nickel, 1.70% Copper and 2.02% cobalt plus gold

- Updated Base Metals Indicated and Inferred Mineral Resource, increased to 36.0 Mt @ 762 ppm (27,527 t) Nickel, 212 ppm (7,606t) Copper and 231 ppm (8,276 t) Cobalt
- Cobalt ~\$75,000 per tonne
- Nickel ~\$26,000 per tonne
- Copper ~\$9300 per tonne

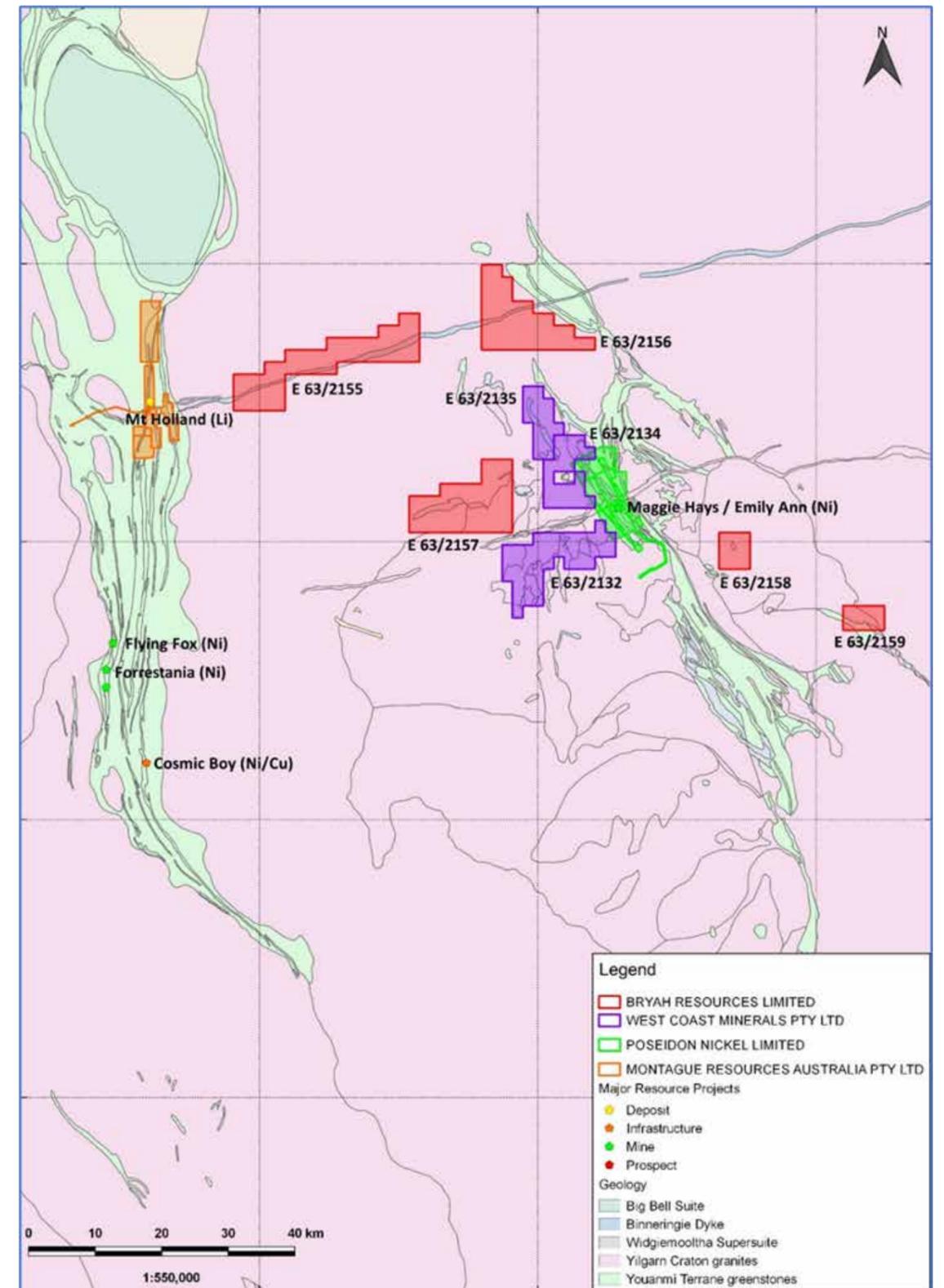


# LAKE JOHNSTON LITHIUM – NICKEL PROJECT

- 690km<sup>2</sup> Lake Johnston Lithium-Nickel project with 8 granted Exploration Licences.
- Tenure close to Mount Holland Lithium Mine (ASX:WES/SQM JV) and historic Maggie Hays/Emily Ann Nickel deposits held by Poseidon Nickel Limited.

## • OPTION AGREEMENT SIGNED WITH MINING GREEN METALS

- \$25,000 Cash
- 5 Million shares at 20c on IPO for 51%
- 5 Million shares for remaining 49%
- Transaction value at 20c is \$2 million



# INVESTMENT IN STAR MINERALS

## ASX: SMS 20.75% SHAREHOLDER

- Current ASX: SMS share price 7.3c
- 9M Shares in Star Minerals
- 7M Performance Rights which will convert to 7M Shares in Star Minerals upon Measured Mineral Resource and gold production milestones
- Located along strike from historic Gabanintha Gold mine on a granted Mining Lease (71 ha size)
- January 2020 - Inferred Mineral Resource announced:
  - 600,000t @ 2.6g/t Au for 41,700 oz Au (1.0 g/t cut)
- Further resource drilling complete
- New 'Star of the East' prospect drilled with shallow high-grade results



# VALUE

## LOCATION

- Tenements have prospective geology
- Bryah Basin well endowed with minerals; Cu, Au, U, Ree, Mn, Fe
- JORC Resource – Ni, Cu with AVL
- JORC Resource – Mn with OMH

**TENEMENT  
LOCATIONS AND  
PROSPECTIVITY**

**GEOLOGICAL  
TEAM**

## TEAM

- Advanced targeting techniques
- Successful EIS grants
- Implementation – bigger group
- Leverage through AVL and SMS associations

## BOARD

- Geologically focused board
- Deals completed to 'Lock in Value'
- Deals maintain upside for shareholders
- Discovery upside risk/reward balance

**BOARD AND  
MANAGEMENT**

**COMPANY  
VALUE ADD**

## VALUE

- JV with OM Holdings on Manganese
- Star Minerals 20.75% with Performance rights on resource update and start of mining
- Mining Green Metals Option Agreement– Lake Johnston



# SUMMARY

**Manganese** JV interest – early pathway to significant cashflow with guaranteed offtake partner

**Gold** resource at Tumblegum South – exposure through 20% equity in Star Minerals



Quality exploration targets – potential for the next high-grade VMS **copper-gold** discovery in the Bryah Basin

Gabanintha Project – evolving **Nickel, Copper** and **Gold** potential

Lake Johnston **Lithium** and **Nickel** potential **Option Agreement** signed \$2 million transaction value at IPO of MG1



## Contact Us

+61 (08) 9321 0001 [info@bryah.com.au](mailto:info@bryah.com.au)

Level 2, 50 Kings Park Road, West Perth, Western Australia 6005

[bryah.com.au](http://bryah.com.au)



# MANGANESE MINERAL RESOURCE

**TOTAL MINERAL RESOURCE 1.836  
MILLION TONNES (MT) AT 21.0% MN**

2012 JORC Manganese Mineral Resources  
at 15% Mn Cut-off

Prospect	Category	Kt*	Mn %	Fe %
Area 74	Indicated	239	23.6	21.4
Brumby Creek		525	21.2	19.1
Horseshoe		295	20.5	23.6
Black Hill		24	29.7	20.2
Total Indicated		1,083	21.7	20.9
Brumby Creek	Inferred	403	20.3	21.8
Horseshoe		351	19.5	29.9
Total Inferred		753	19.9	25.6
Total Mineral Resource		1,836	21.0	22.8

\* Totals may not add up due to  
rounding

# VANADIUM DEPOSIT - INCLUDES NICKEL, COPPER AND GOLD POTENTIAL

2022 Base Metals Resource Area	Classification	Million Tonnes (Mt)	Ni ppm	Cu ppm	Co ppm	S %
In Pit North	Indicated	7.6	719	211	227	0.20
In Pit Central	Indicated	4.6	775	191	228	0.23
In Pit South	Indicated	3.8	834	220	264	0.11
<b>Total In Pits</b>	<b>INDICATED</b>	<b>16.1</b>	<b>762</b>	<b>207</b>	<b>236</b>	<b>0.19</b>
Under North Pit	Inferred	8.0	710	202	180	0.20
Under Central Pit	Inferred	3.5	755	197	231	0.25
Under and within South Pit	Inferred	8.4	834	236	268	0.15
<b>Total Under Pits</b>	<b>INFERRED</b>	<b>19.9</b>	<b>770</b>	<b>216</b>	<b>226</b>	<b>0.19</b>
<b>Total Base Metals Resource</b>	<b>GLOBAL</b>	<b>36.0</b>	<b>766</b>	<b>212</b>	<b>231</b>	<b>0.19</b>

