

An Emerging Supplier of **Heavy Rare** 

**Earths & Niobium** 







# DY6 Project Update

121 Mining Investment | Cape Town | 5-6 February 2024

ASX:DY6

## Building a Portfolio of Critical Minerals Projects

Large suite of critical metals projects in Malawi - highly prospective for Rare Earths, Niobium and Lithium

## Machinga HREE-Nb

- Completion of maiden drilling program for 4,543m
- Project area recently increased to 197km<sup>2</sup>

#### Salambidwe REE-Nb

Comprehensive geochemical and geophysics program completed

## **Tundulu REE Carbonatite Ring Complex**

- Application for EPL covering 91.5 km<sup>2</sup>
- Historical drilling incl. 41m @ 3.7% TREO, from 8m

#### Mzimba Lithium

• Application for EPL covering 710km<sup>2</sup>

#### Karonga Lithium

- Application for EPL covering 36.5km<sup>2</sup>
- Option to acquire an 80% interest in an adjacent (granted) licence (39km²)

## Ngala Hill PGEs, Cu & Ni

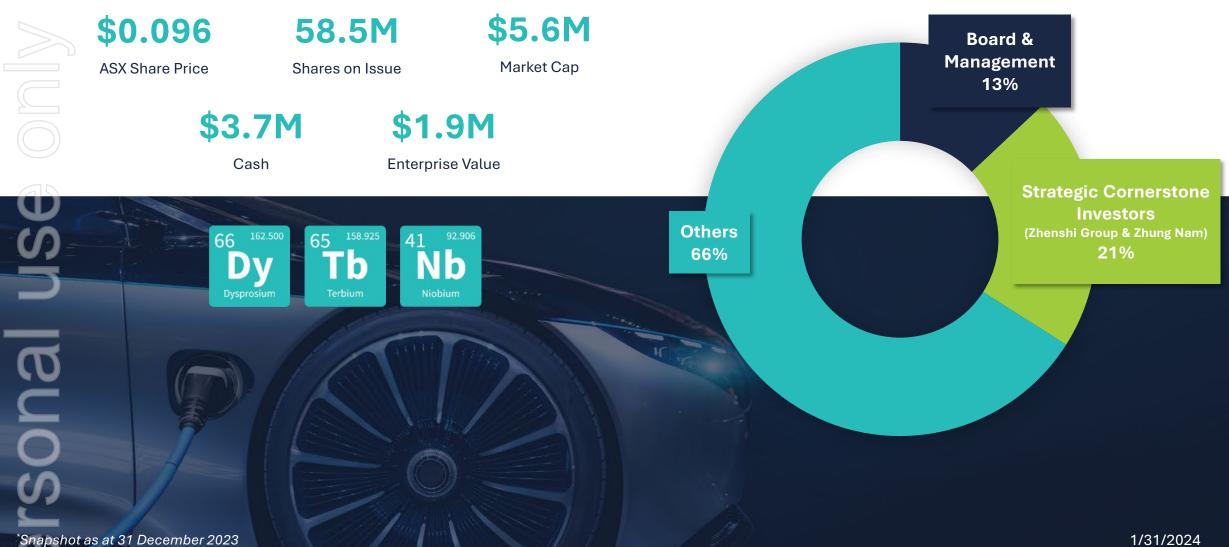


## Corporate Snapshot ASX:DY6

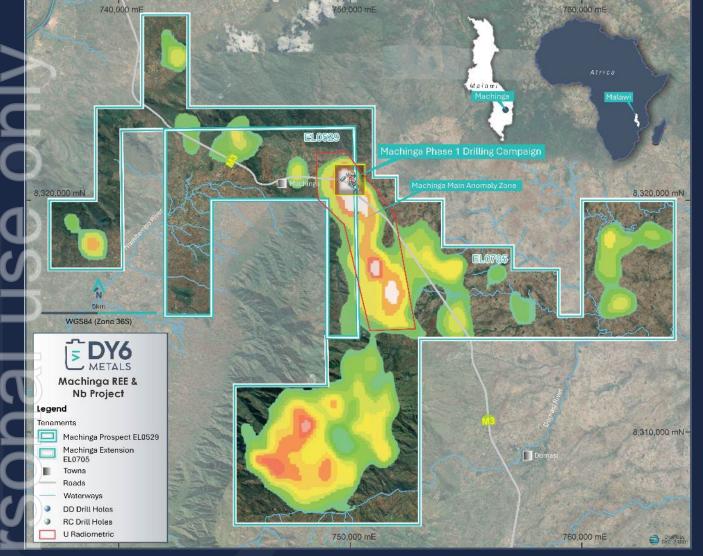


## **CAPITAL STRUCTURE\***

## **SHAREHOLDERS\***



## **Machinga Drilling**





- Drilling program targeted the Machinga main northern anomalous zone following 260 soil sampling program
- RC drill hole program within EL0529 followed historic drill results for 4,000m
- Successful completion of maiden drilling program for total 4,543m at Machinga HREE and Nb project
- Machinga REE mineralised system contains elevated Dy & Tb (~3.7% of TREO)\*, essential minerals for the EV traction motor

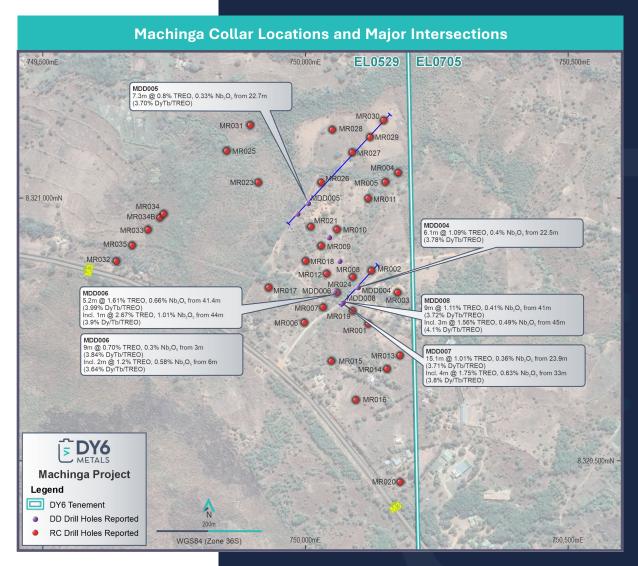
TREO = Total Rare Earth Oxides – La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Y Oxide HREO = Heavy Rare Earth Oxides –Tb, Dy, Ho, Er, Tm, Yb, Lu, Y Oxide DyTb:TREO = (Dy+Tb)/TREO \* 100 MREO:TREO = (Nd+Pr+Dy+Tb)/TREO \*100

\*Average basket of rare earths of all DY6 RC drill assays @ > 0.5% TREO

# Machinga HREE-Nb: Phase 1 Drilling Completed

- High grade HREE-Nb results confirmed from 3,643m RC and 900m DD drill holes within EL0529 and consistent with Globe (ASX: GBE) historic drill results for 4,000m
- Significant assay results include:
  - 13m @ 0.65% TREO, 0.25% Nb from surface; incl. 1m @ 1.06% TREO, 0.37% Nb from 7m, and 1m @ 1.28% TREO, 0.42% Nb from 9m (MR019)
  - 7m @ 1.42% TREO with 0.49% Nb from 65m (MR011)
  - 15.1m @ 1.01% TREO, 0.36% Nb from 23.9m incl. 4m @ 1.75% TREO, 0.63% Nb from 33m drilled downdip (MDD007)
- HREE enrichment, exhibiting high grade Nb
- Widespread HREE mineralisation showing continuity into newly granted licence area (EL0705)





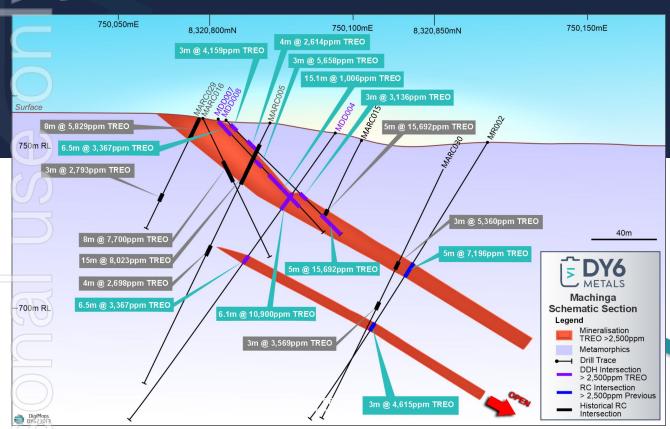
## Machinga Intersections

Results of DD confirm elevated high value:

~3.7% DyTb of TREO

~29% HREO:TREO

Cross section demonstrates excellent continuity with radiometrics predicting the mineralised higher-grade zones with accuracy during drilling



MDD007 30.81 -35.22m



**Open to the NE** into licence **EL0705** 

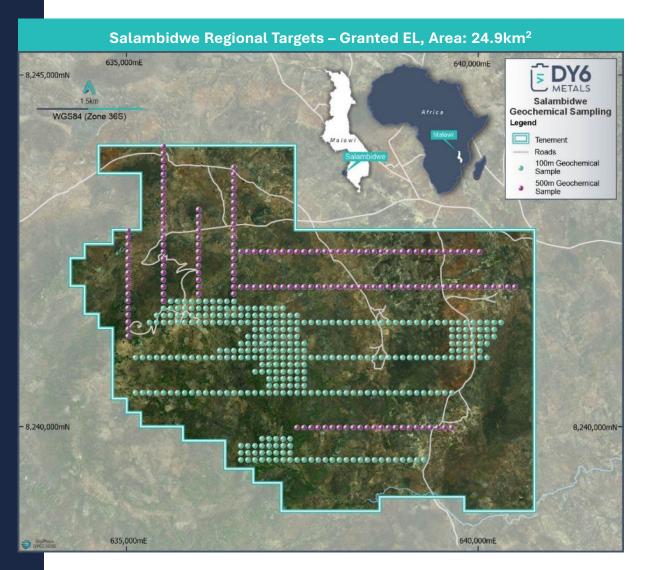


ASX:DY6

# Salambidwe REE & Nb Project

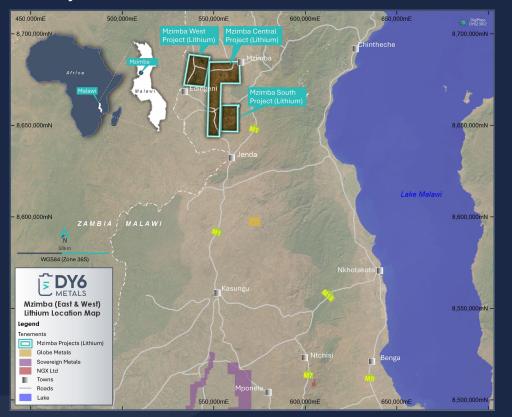
- The Salambidwe project presents extremely prospective target with historic rock chips results including 2.05% TREO
- Virgin REE prospect never been drill tested!
- Comprehensive geochemical sampling program completed within the 24.9km<sup>2</sup> boundary tenement
- Ground radiometric survey and geological mapping completed
- High resolution AEM (Airborne Electro-Magnetic) survey completed
- Results expected in Q1, 2024





## **Mzimba Lithium Project**

- Application pending for exclusive prospecting licence covering 710km<sup>2</sup>
- Multiple pegmatites observed up to 500m in length with varying widths with potential to host lithium mineralisation
- 7 reconnaissance rock chip samples submitted for assay







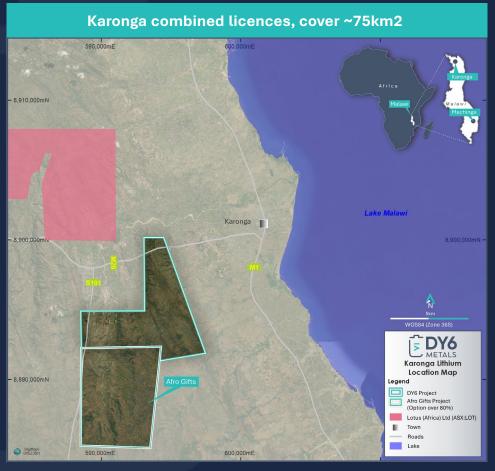
#### Observation of Lepidolite Micas and pegmatite matrix



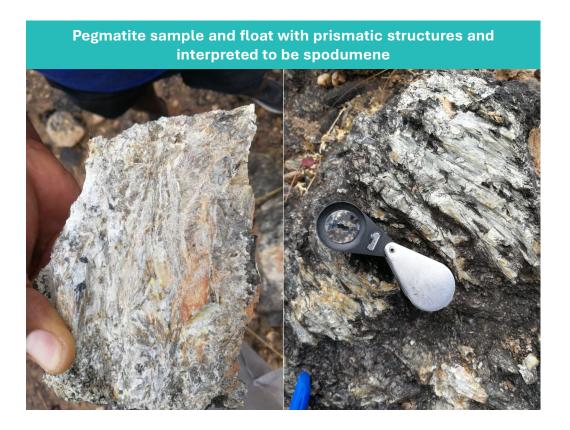
\*Disclaimer: The Company notes that pegmatites contain varying abundances of typical LCT pegmatite non-Li-bearing minerals, predominantly feldspar, quartz, muscovite mica (as a group also referred to as Aplite) and accessory tourmaline. Investors should note that while LCT pegmatites are a known host for accessory lithium bearing minerals such as spodumene, it is also known that this is not a universal association. Visual observations of the presence of rock or mineral types and abundance should never be considered a proxy or substitute for petrography and laboratory analyses where mineral types, concentrations or grades are the factor of principal economic interest. Visual observations and estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations. At this stage it is too early for the Company to make a determinative view on the abundances of any of these minerals. These abundances will be determined more accurately through petrography, assay, and XRF analysis. The observed presence of pegmatite does not necessarily equate to lithium mineralisation. It is not possible to estimate the concentration of mineralisation by visual estimation and this will be determined by chemical analysis.

## Karonga Lithium Project

- Application pending for exclusive prospecting licence covering 36.2km<sup>2</sup>
- DY6 also has a 6-month option to acquire an 80% interest in the Afro Gifts Li Project (adjacent)

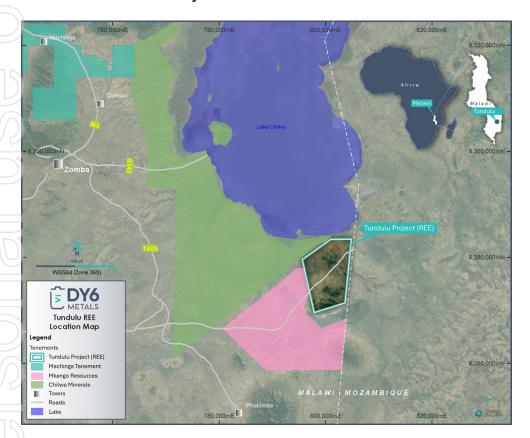


- Afro Gifts Li Project located in Northern Malawi adjacent to DY6, a granted licence covering a total area of 39km<sup>2</sup>
- ASX:DY6
- The reconnaissance sampling focused on pegmatite intrusions which are traceable for up to a km within the Karonga Lithium Project
- 10 reconnaissance rock chip samples taken from pegmatite outcrops and submitted for assay



# Tundulu REE Carbonatite Complex

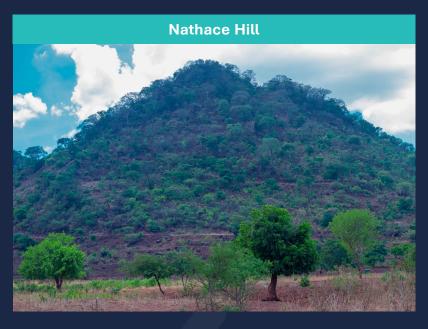
- Application pending for exclusive prospecting licence covering 91.5 km<sup>2</sup>
- 50km ESE of Zomba and complements DY6 Machinga
   HREE and Nb Project



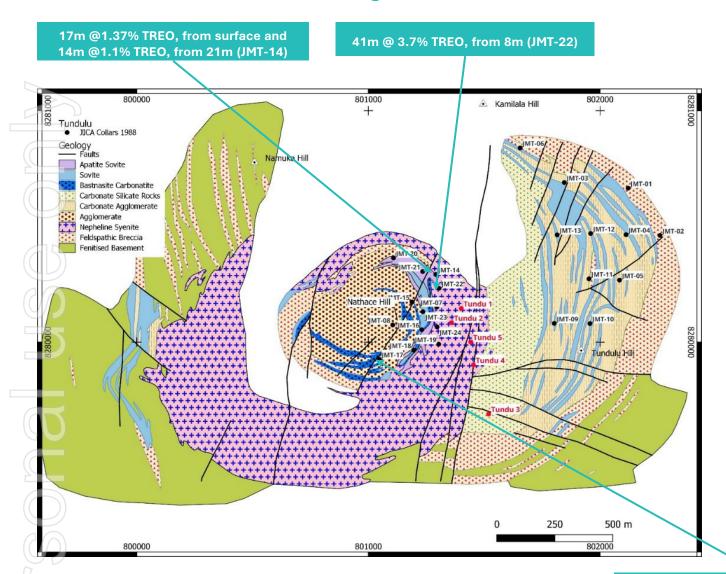








## **Tundulu REE Project**





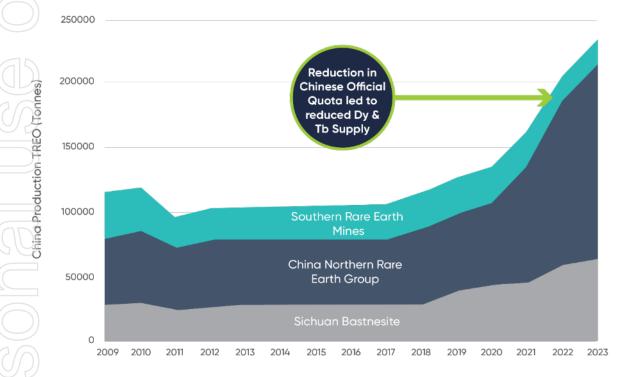
- Tundulu geological structure is an Apatite rich REE Carbonatite occurrence, mainly Bastnaesite
- 24 shallow 50m drill holes for 1200m at Nathace and Tundulu by JICA\* in 1988
- REE mineralized zones defined with best intersection at JMT-22 for 41m @ 3.7% TREO, from 8m
- Strong anomalous values of Nd & Pr concentrated at Nathace Hill
- Mota-Engil and Optichem undertook 55 holes drilled for 7002 m in 2014/15
- Assays from reconnaissance samples are pending and a comprehensive soil program begins after granting of licence to DY6

## **Market Opportunity**



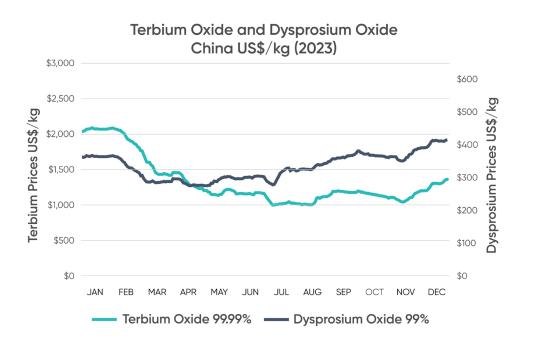
## ADDITIONAL STABLE HREE SUPPLY REQUIRED TO REDUCE DEPENDENCY

 China and Myanmar currently responsible for >90% of global Dy and Tb mine production and >99% is refined in China

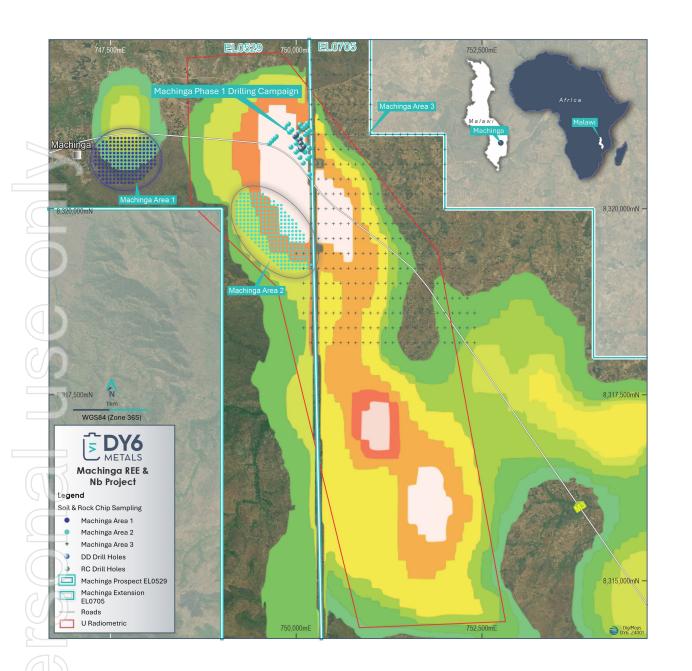


#### DYSPROSIUM AND TERBIUM PRICES

- Government-led crackdown on unsustainable mining operation is shrinking domestic production
- Dy and Tb supply will not keep up with forecast demand and new sources of supply will be needed!



Source: Adamas Intelligence: Rare Earth Magnet Market Outlook to 2035 at Q2 202
The Ministry of Industry and Information Technology of the People's Republic of China (MIIT), www.miit.gov.cn.
https://projectblue.com/blue/news-analysis/616/china%E2%80%99s-ministry-orb-industry-and-information-technology-releases-rare-earth-quota-for-h2-2023
https://www.reuters.com/article/china-economy-trade-rareearths-idUSKBN2200PS



## **Next Steps**



## **MACHINGA**

- Soil sampling plan in extended EL0705 targeting the NE and southern anomaly zone
- Identification of future drill targets for implementation of Phase 2
- Mineralogy investigation and preliminary Metallurgy testwork begins Q1

# 2

## **SALAMBIDWE**

 Report assay results of geochemical sampling program and airborne radiometric survey



## **KARONGA & TUNDULU**

 Comprehensive soil geochemical sampling programs (subject to grant of licence applications)



## **DY6 Future Work Program**

Additional drill testing is planned pending results of soil and rock chip sampling

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		Q4   2023			Q1   2024			Q2   2024			Q3   2024	
		ост	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
D				RC & DD Drilling Results Complete								
U	MACHINGA				Soil Sampling & Assays							
E	Mineralogy, Composite Sample & Testwork Preparation											
	SALAMBIDWE	Soil & Rock C	Mapping, Radiometrics, Soil & Rock Chip Sampling Complete		Assay Results							
	NGALA HILL									Geophysics, Mapping, Soil & Rock Chip Sampling		
7	LITHIUM PROJECTS					Geological, Mapping, Soil & Rock Chip Sampling						
U	TUNDULU					Geological, Mapping, Soil & Rock Chip Sampling						

## **Board & Management**













Mr Lloyd Kaiser



Geologist



**Mr Dan Smith** 

Mr Myles Campion Mr John Kay

**Non-Executive Director** 

**Dr Nannan He** 

**Non-Executive Director Chief Executive Officer** 

Mr Troth Saindi

Mr Allan Younger **Senior Exploration Technical Consultant** 

Non-Executive Chairman Non-Executive Director

Mr Smith is currently nonexecutive director for several companies on AIM/ASX operating in the resources sector, with a focus on critical minerals, and has been heavily in involved project origination and Smith evaluation. Mr holds a Bachelor of Arts, Fellow of the Governance Institute of Australia, and has over 15 vears' primary and capital secondary markets expertise.

years' experience in the natural resources sector, including exploration geology, resource analysis, fund management, equities research and project and debt financing. He is currently Executive Chairman and Interim CEO of Europa Metals Ltd (AIM:EUZ).

Mr Campion has over 30 Mr Kay has more than 15 experience vears' equity capital markets, M&A and resources gained through both private practice and inhouse roles in Australia and the UK. He has previously held a number of non-executive and company secretarial roles for ASX listed mining and energy companies and has advised on over a dozen IPOs/RTOs on the ASX.

Dr He has over 10 years' experience geosciences, chemical material trading, exploration and resources investment. Dr He holds a PhD in Geochemistry from Curtin University, a MS in Geochemistry Hokkaido University, and a BS in Mineral Resource Exploration University.

Mr Kaiser has cumulated 30 years' experience in the resources industry and has a long track record in senior executive marketing roles with extensive international trade of a range of mineral commodities. Lloyd has spent the last 10 years with Arafura Rare Earths from Jilin where he held multiple GM roles process technology, project engineering & Sales and Marketing.

Mr Saindi holds a Master of Science degree in Economic Geology and a of Science Bachelor honours degree Geology. He has 17 years' experience in the mineral resource sector. From 2013 to August 2023, Mr Saindi worked as Group Geologist with AIM listed Bushveld Minerals Ltd managing several exploration and mining projects.

Geologist with 40+ years' experience in all facets of the resources industry and most commodities. Specialist explorer highly experienced in target generation and project Advanced generation. expertise in multi-element geochemistry application and Interpretation.

# DY6 METALS Contact Details

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#### **Cautionary Statement - Observance of Pegmatites**

The Company notes that pegmatites contain varying abundances of typical LCT pegmatite non-Li-bearing minerals, predominantly feldspar, quartz, muscovite mica (as a group also referred to as Aplite) and accessory tourmaline. Investors should note that while LCT pegmatites are a known host for accessory lithium bearing minerals such as spodumene, it is also known that this is not a universal association. Visual observations of the presence of rock or mineral types and abundance should never be considered a proxy or substitute for petrography and laboratory analyses where mineral types, concentrations or grades are the factor of principal economic interest. Visual observations and estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations. At this stage it is too early for the Company to make a determinative view on the abundances of any of these minerals. These abundances will be determined more accurately through petrography, assay, and XRF analysis. The observed presence of pegmatite does not necessarily equate to lithium mineralisation. It is not possible to estimate the concentration of mineralisation by visual estimation and this will be determined by chemical analysis.

#### **Competent Persons' Statement**

The information in this presentation that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr Allan Younger, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Younger is a consultant of the Company. Mr Younger has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the `Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Younger consents to the inclusion of this information in the form and context in which it appears in this report. Mr Younger holds shares in the Company.

The exploration results contained in this presentation were first reported by the Company in its prospectus dated 3 April 2023 and announced to ASX on 27 June 2023, 6 July 2023, 12 September 2023, 3 October 2023, 10 October 2023, 26 October 2023, 4 December 2023, 15 December 2023, 29 December 2023 and 3 January 2024. The results were reported in accordance with the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". The Company confirms that it is not aware of any new information or data that materially affects the information included in the Prospectus or these subsequent announcements.

1/31/2024