



# Advancing the Duketon Nickel Project

October 2023



ASX: DKM



[www.duketonmining.com.au](http://www.duketonmining.com.au)

# Cautionary Statement



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## Competent Person Statement:

This announcement includes information extracted from the Company's previous ASX announcements, which are available to view on the Company's website ([www.duketonmining.com.au](http://www.duketonmining.com.au)), as follows:

- Rosie Mineral Resources – ASX announcement dated 10 March 2022;
- Rosie Drill Core – ASX announcement 2 December 2014;
- Rosie Long Section – ASX announcement 6 March 2023;
- C2 Mineral Resources – ASX announcement dated 12 December 2022;
- Rosie metallurgical results – ASX announcements dated 8 July 2020 and 10 July 2020;
- Rosie Scoping Study production targets and forecast financial results derived from production targets – ASX announcement dated 28 April 2021;
- C2 metallurgical results – ASX announcement 5 September 2022;
- New Exploration Project Acquisition – ASX announcement dated 28 April 2022;
- High Grade Nickel and up to 30g/t Palladium intersected – ASX Announcement dated 6 February 2023;
- Sulphides Intersected West of Rosie – ASX Announcement dated 6 March 2023;
- Nickel Sulphate Solution Produced from Duketon Concentrate – ASX Announcement 11 May 2023;
- Nickel Results confirm Rosie Continues – ASX Announcement 22 May 2023;
- Final PGE Assays for Bulge Drillholes – ASX Announcement 6 June 2023;
- Aircore Drilling Completed at Tate – ASX Announcement 15 September 2023 & ASX Announcement 29 September 2023
- Pegmatites and REE Identified at Barlee – ASX Announcement 19 September 2023 & ASX Announcement 29 September 2023

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements. In the case of the Rosie Scoping Study, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions underpinning the production target, or the financial information derived from the production target in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

# Company Snapshot

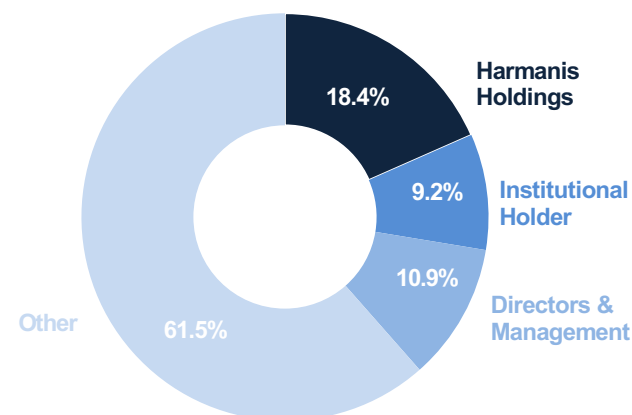


## About Duketon Mining

Duketon Mining Limited is a Western Australian focused mineral resources exploration and development company with flagship nickel projects at Rosie and C2 which are situated in the North Eastern Goldfields of Western Australia, approx. 350km to the north of Kalgoorlie.



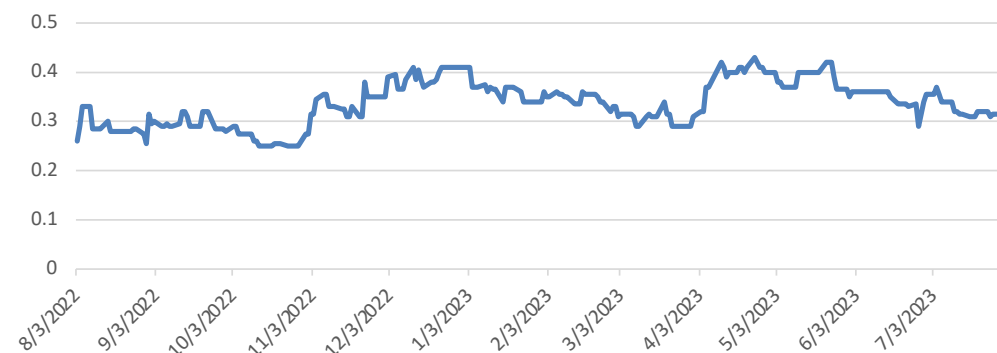
## Shareholder Information - as at 2 October 2023



## Capital Structure / Enterprise Value

ASX Code	DKM
Shares on issue	122m
Options on issue	11.6m
Market capitalisation (as at 02/10/2023)	\$37.2m
Cash (as at 30/06/23)	~\$16.0m
<b>Enterprise value</b>	<b>\$21.2m</b>

## DKM Share Price Performance



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# Experienced Board and Management



## **SEAMUS CORNELIUS – Non-Executive Chairman**

Mr Cornelius is an experienced international corporate lawyer and company director. He was a partner with a major international law firm from 2000 to 2010 and resided in China from 1993 until 2017. In 2010, Mr Cornelius commenced his public company career as company director and is currently a director and non-executive chairman of Buxton Resources Ltd since 29 November 2010 and Element 25 Ltd since 30 June 2011. Mr Cornelius has been a director of Danakali Ltd since 15 July 2014 and is currently the Executive Chairman. Mr Cornelius is also non-executive director of First Tin PLC since 7 April 2022.



## **STUART FOGARTY – Managing Director**

Mr Fogarty has over 20 years of exploration experience with BHP Billiton and Western Mining Corporation, and prior to leaving he was BHP's Senior Exploration Manager for North and South America. Mr Fogarty has a very strong background in nickel and gold exploration, having commenced his career at Kambalda Nickel Operations in 1994. He has held senior roles with BHP including Senior Geoscientist for nickel exploration in the Leinster and Mt Keith region, Project Manager WA Nickel Brownfields and Regional Manager Australia – Asia where he was responsible for a \$100 million per annum exploration budget. Mr Fogarty is currently a non-executive director of ASX listed Buxton Resources Ltd since 15 March 2017.



## **HEATH HELLEWELL – Non-Executive Director**

Mr Hellewell is an exploration geologist with over 20 years of experience in gold, base metals and diamond exploration predominantly in Australia and West Africa. Most recently, Mr Hellewell was the co-founding Executive Director of Doray Minerals Ltd (Doray), where he was responsible for the company's exploration and new business activities. Following the discovery of its Andy Well gold deposits in 2010, Doray was named "Gold Explorer of the Year" in 2011 by The Gold Mining Journal. In 2014 Mr Hellewell was the co-winner of the prestigious "Prospector of the Year" award, presented by the Association of Mining and Exploration Companies. Mr Hellewell was also part of the Independence Group NL team that identified and acquired the Tropicana project area, eventually leading to the discovery of the Tropicana and Havana gold deposits. Mr Hellewell is currently an independent Non-Executive Director of Core Lithium Ltd (formerly Core Exploration Ltd) since 15 September 2014 and Discovex Resources Ltd since 11 March 2021.

# Investment Highlights



## HIGH DEMAND FOR NICKEL

- ☛ Electric vehicle batteries
- ☛ Commodity for a clean future
- ☛ Class 1 nickel sources likely to demand a premium

## POTENTIAL UPSIDE

- ☛ Exploration upside within Duketon Belt
- ☛ Rosie & C2 open along strike and at depth

## DEVELOPMENT OPTIONS UNDER CONSIDERATION

- ☛ Potential to toll treat mineralisation at nearby concentrators
- ☛ Produce nickel concentrate on site from Rosie and/or C2
- ☛ Produce nickel sulphate for EV batteries

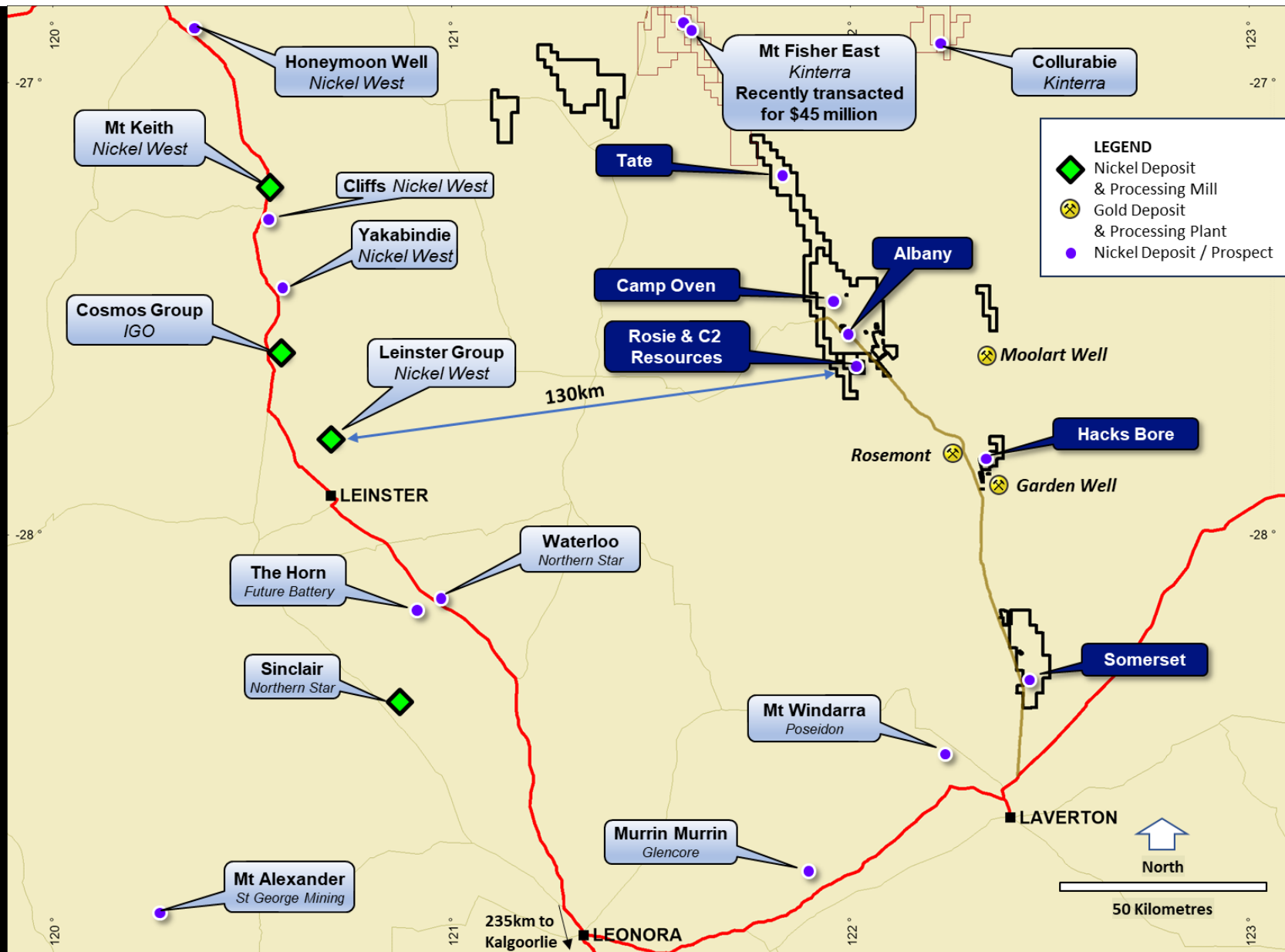
## KNOWN NICKEL SULPHIDE ENDOWMENT

- ☛ Two resources
- ☛ Rosie grade 3.27% NiEq
- ☛ Exploration potential for further discoveries

## ATTRACTIVE VALUATION

- ☛ 100% owned assets
- ☛ Large and high-quality resource
- ☛ Located on granted mining tenement
- ☛ Not encumbered by either offtake agreements or royalties





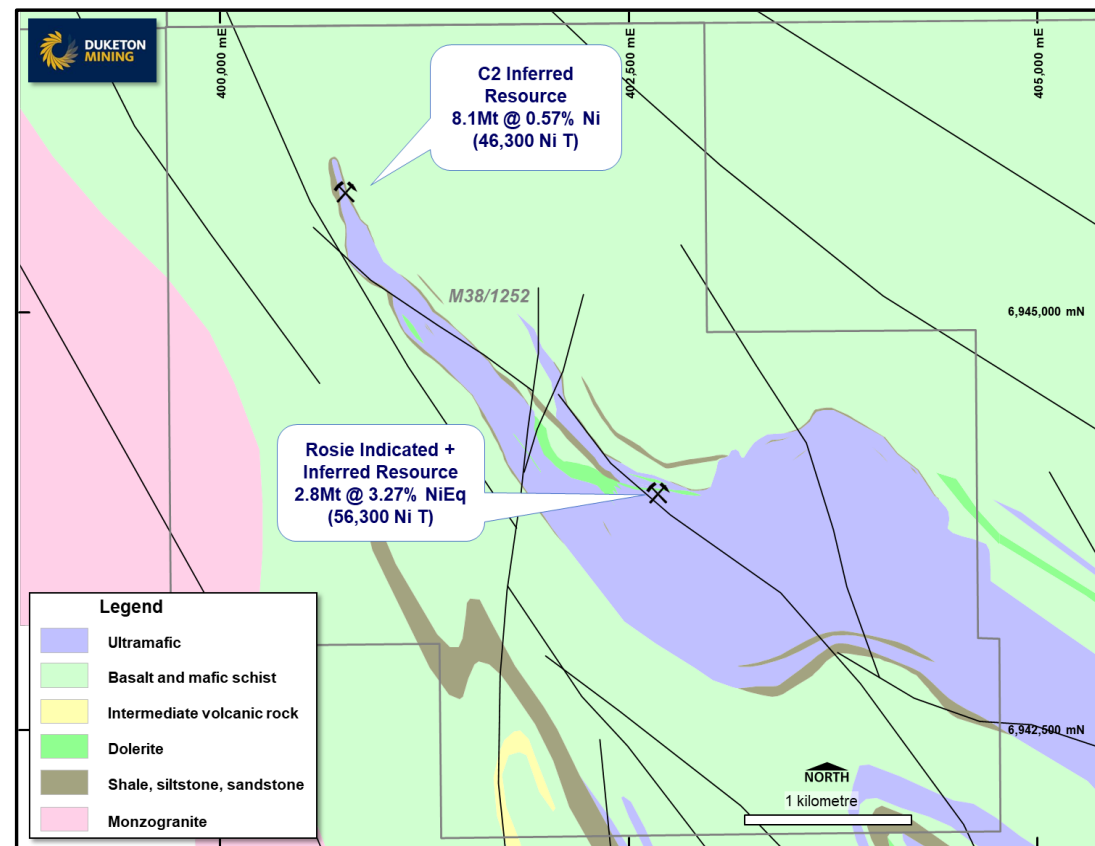
# Strategic Location/Value Proposition



## Large land position – multiple projects

- 102,500t of nickel metal in JORC resources
- 14,200t of copper metal in JORC resources
- 255koz PGE's in JORC resources
- Positive metallurgical results at Rosie and C2
- Positive scoping study at Rosie
- Prospective tenure for nickel sulphide secured
- Minimal holding cost
- Surety of mining tenure

## Significant Exploration Upside



See ASX announcements 12 December 2022 & 10 March 2022 for competent person statements for C2 and Rosie resources.

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# Positive Scoping – Platform for Growth

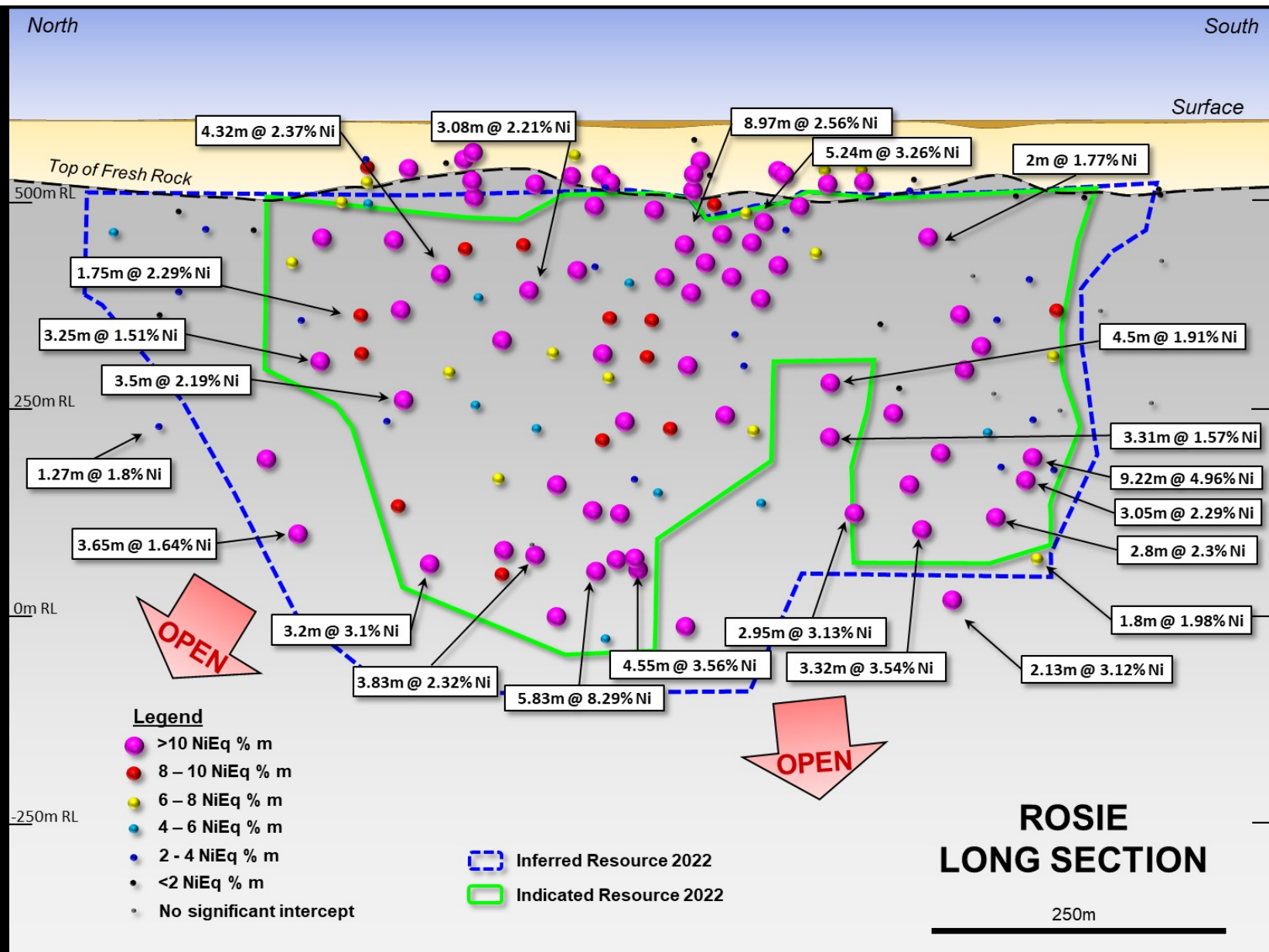


**Confirms the viability of a mining, trucking & toll treating operation assuming an 8-year mine life**

- Ni price of US\$8/lb (range US\$7.50/lb to US\$8.50/lb)
- NPV5 of ~\$161M (range \$56M to \$204M)
- IRR of ~54% (range 21% to 66%)
- Pre-tax cashflow of ~\$223M (range \$91M to \$278M)
- Pre-production capital cost of ~\$18M
- Simple decline and underground mine – minimal surface infrastructure
- Annual production of approx. 315kt of ore at 2.1% NiEq

***Upside – concentrator onsite, +/- C2, Ni and PGE in transition zone, exploration***





# Rosie Drill Core

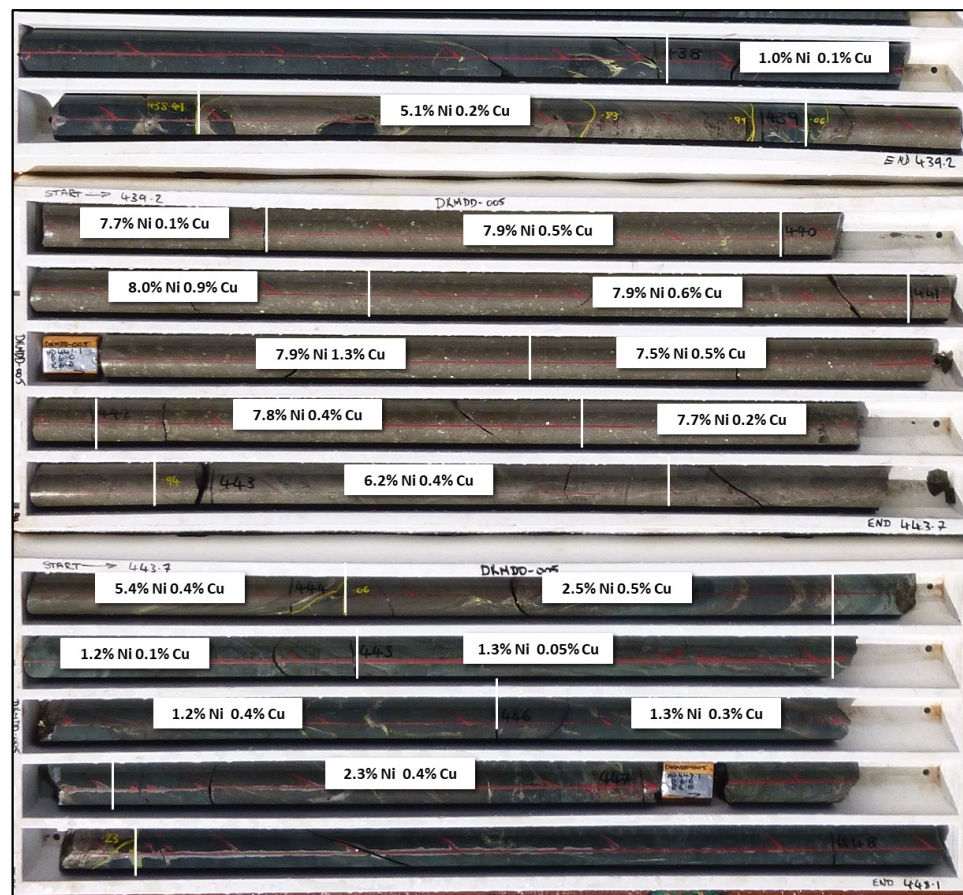


## High Tenor, Simple Mineralogy, High PGE's

- 9.22m @ 4.96% Ni, 0.41% Cu & 2.41 g/t Pt+Pd  
including 5.65m @ 7.1%Ni, 0.5%Cu & 3.8g/t Pt+Pd
- 2.95m @ 3.13% Ni 0.40% Cu & 3.74g/t PGEs\*



**Multiple thick high-grade zones.**



See ASX Announcement 2 December 2014

\*includes all 6 PGE's

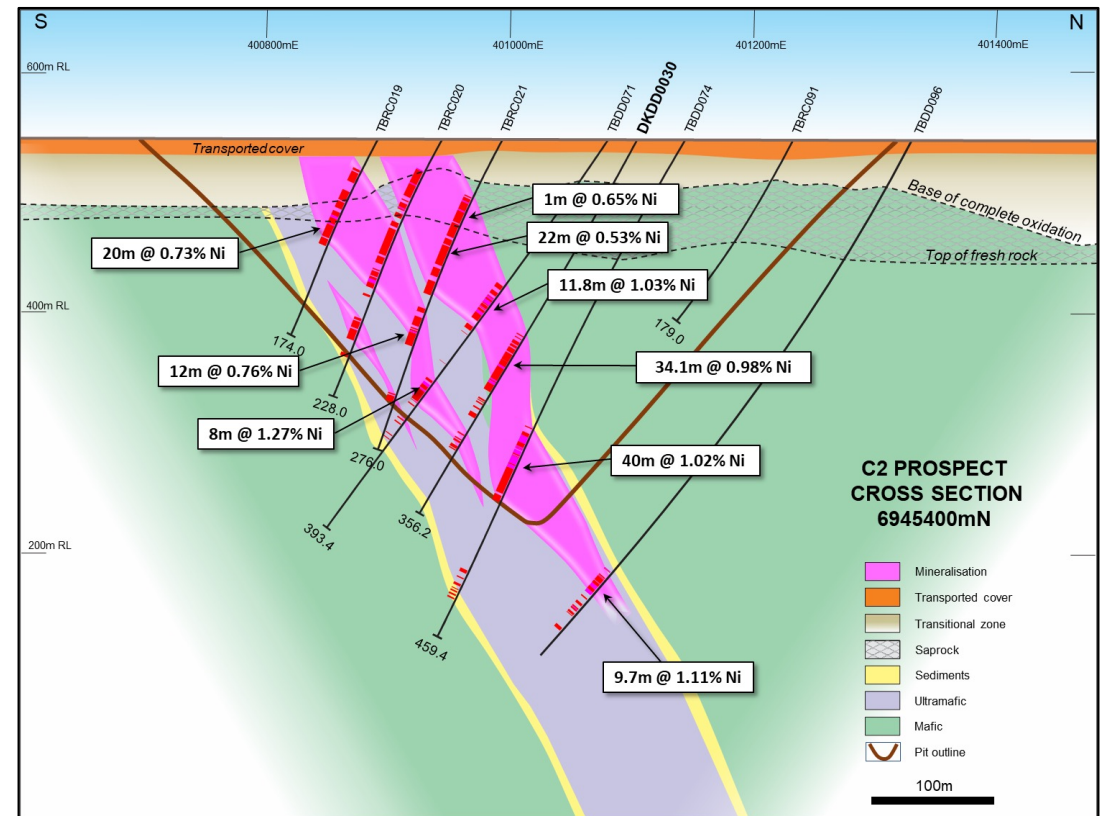
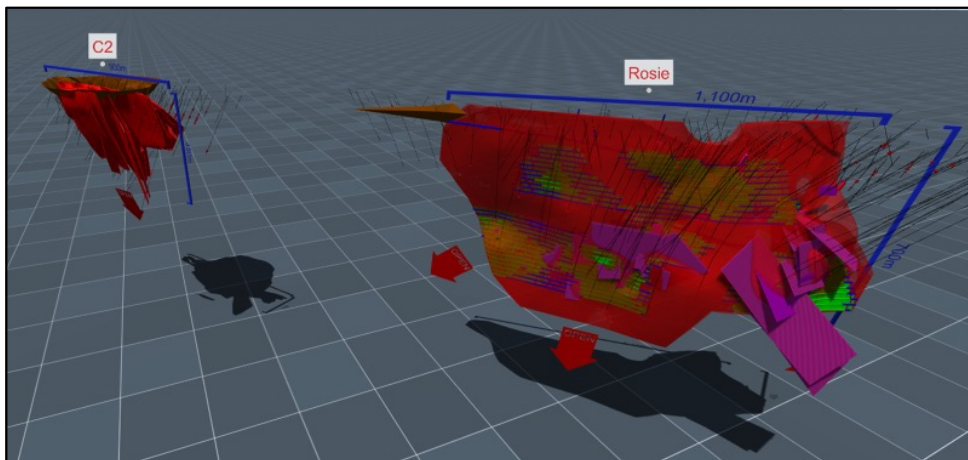
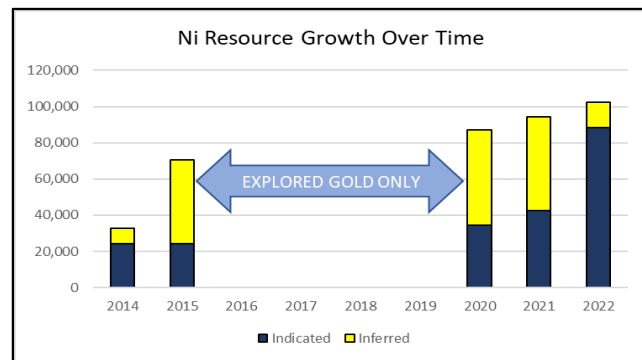
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# C2 Resource



## Large Tonnage & Continual Growth



# Positive Metallurgical Testwork



## Rosie Nickel Deposit

- Ni recovery up to **97%**
- Nickel conc. grade 16% Ni and 7g/t total PGE's from massive ore (conc. Grade up to 22%)
- Bulk conc. grade 15% (Ni+Cu) and 12g/t total PGE's from upper zone
- High Fe:MgO 8-64:1
- PGE's recoverable by gravity >8g/t total PGE's – optionality

## C2 Nickel Deposit

- C2 responds well to conventional flotation – saleable concentrate
- Nickel recovery as high as 77.3% to a saleable grade concentrate
- Fe:MgO 12-20:1
- Concentrate grades range from 11-18% Ni



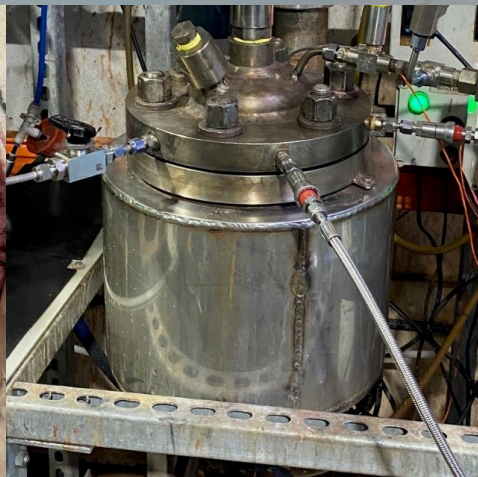
***Latent value unlocked***

See ASX Announcement 8 July 2020, 10 July 2020, 5 September 2022

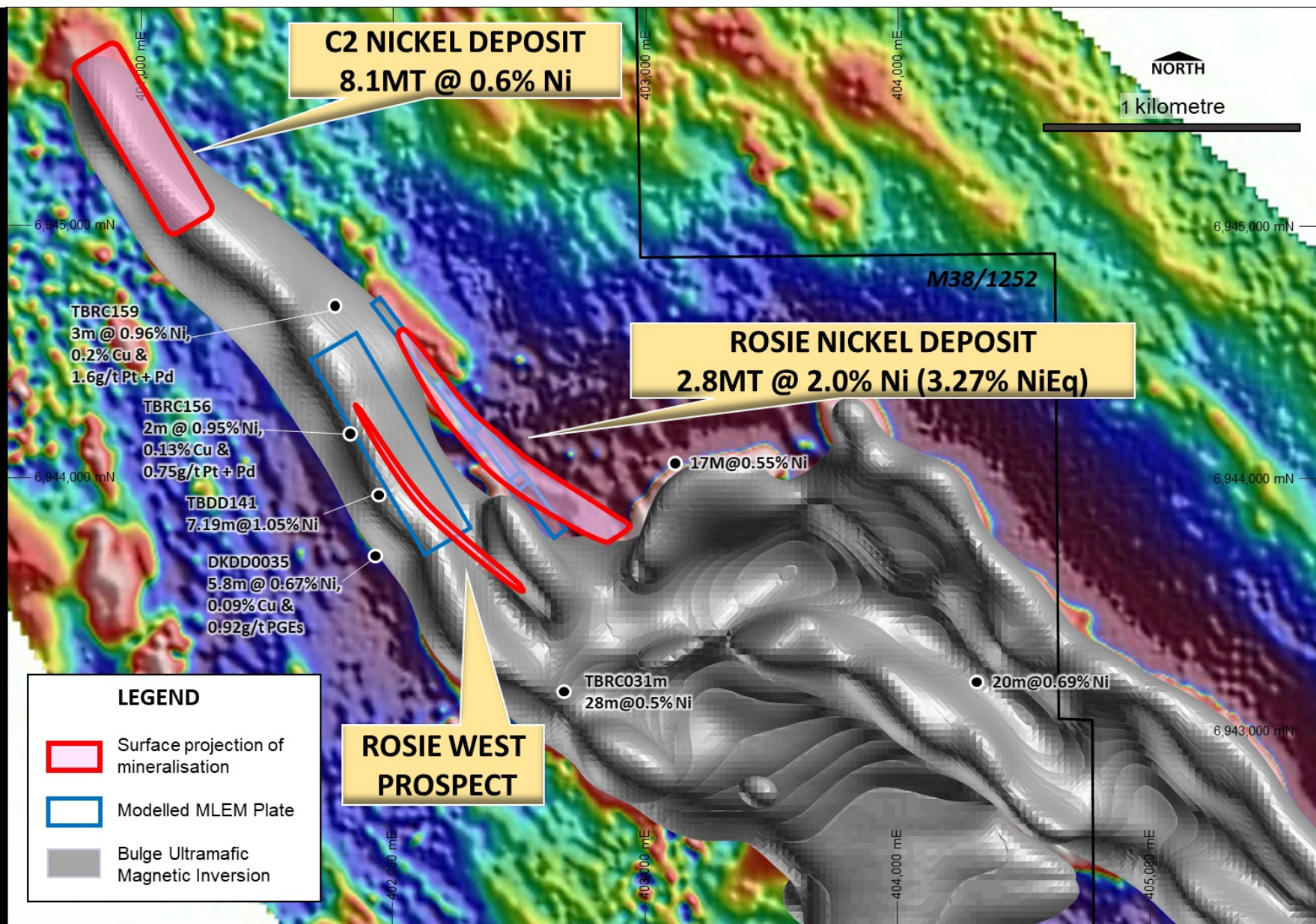
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# Producing Nickel Sulphate

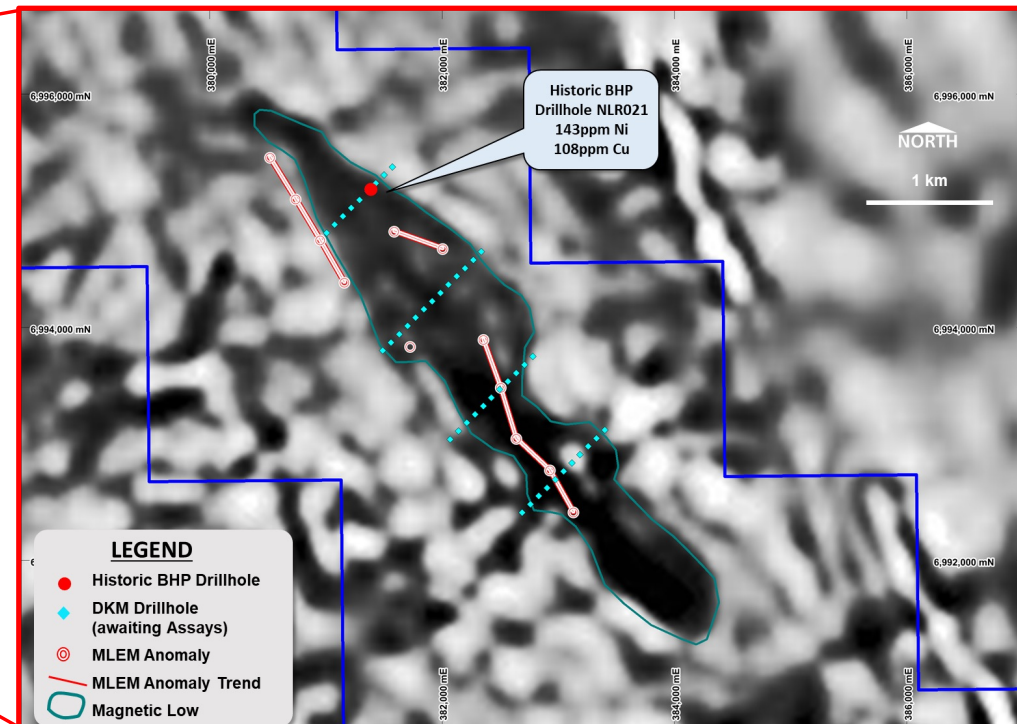
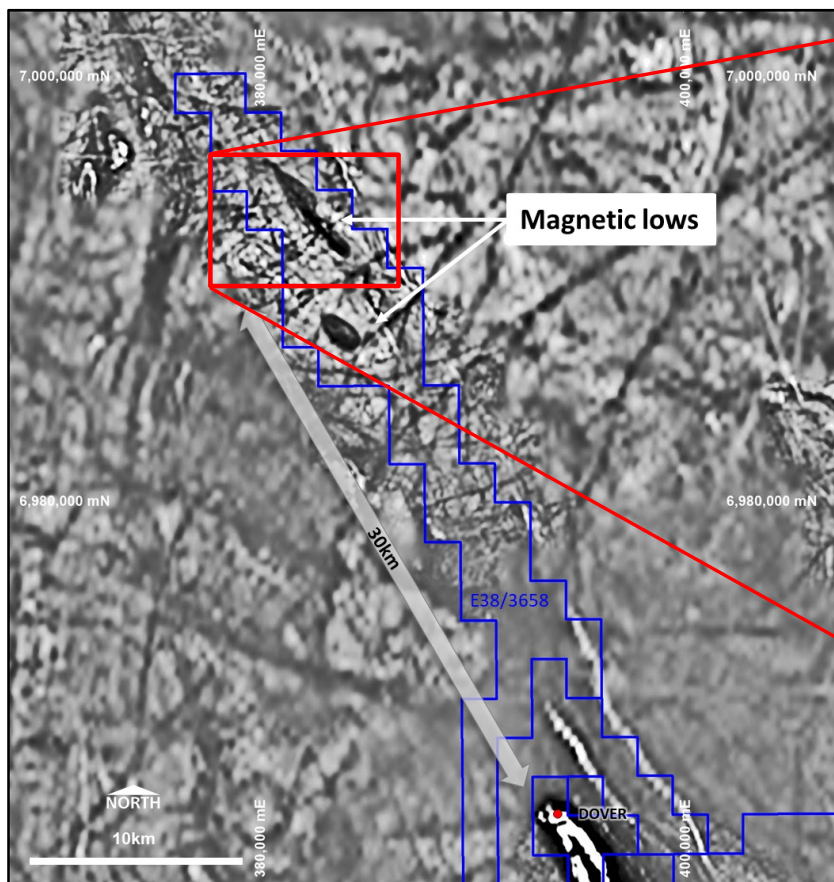








# Tate – Mafic Intrusive Model



- Drilling completed over the two interpreted late mafic intrusions
- Combination of fresh mafic and granite rocks intersected from 1m down hole (beneath transported cover)
- Assays expected in 3 weeks

**Aircore drilling completed**

See ASX Announcement 28 April 2022, 2 November 2022, 15 September 2023 & 29 September 2023

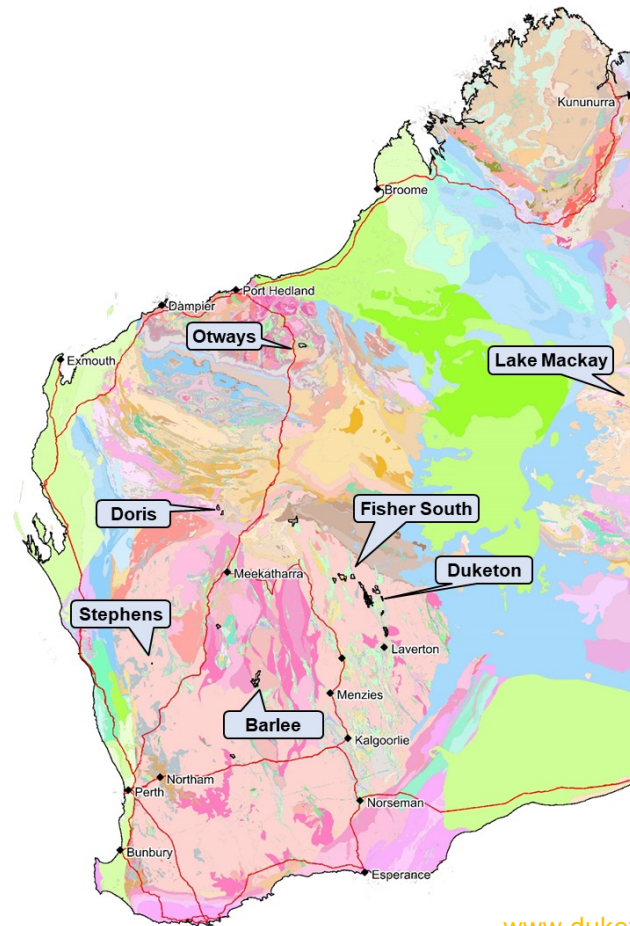
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# Regional Projects



## Multiple Commodities

- Barlee – 200km north of Southern Cross, near Halley's East Gold Mine
- Otways – copper and gold project located near Nullagine in the East Pilbara
- Doris - Located on northern edge of Yilgarn. Uranium and REE potential
- Stephens - base metals project near Deflector and Golden Grove
- Fisher South - gold and nickel project at southern end of Mt Fisher Greenstone Belt
- Lake Mackay – niobium-REE prospect in West Arunta

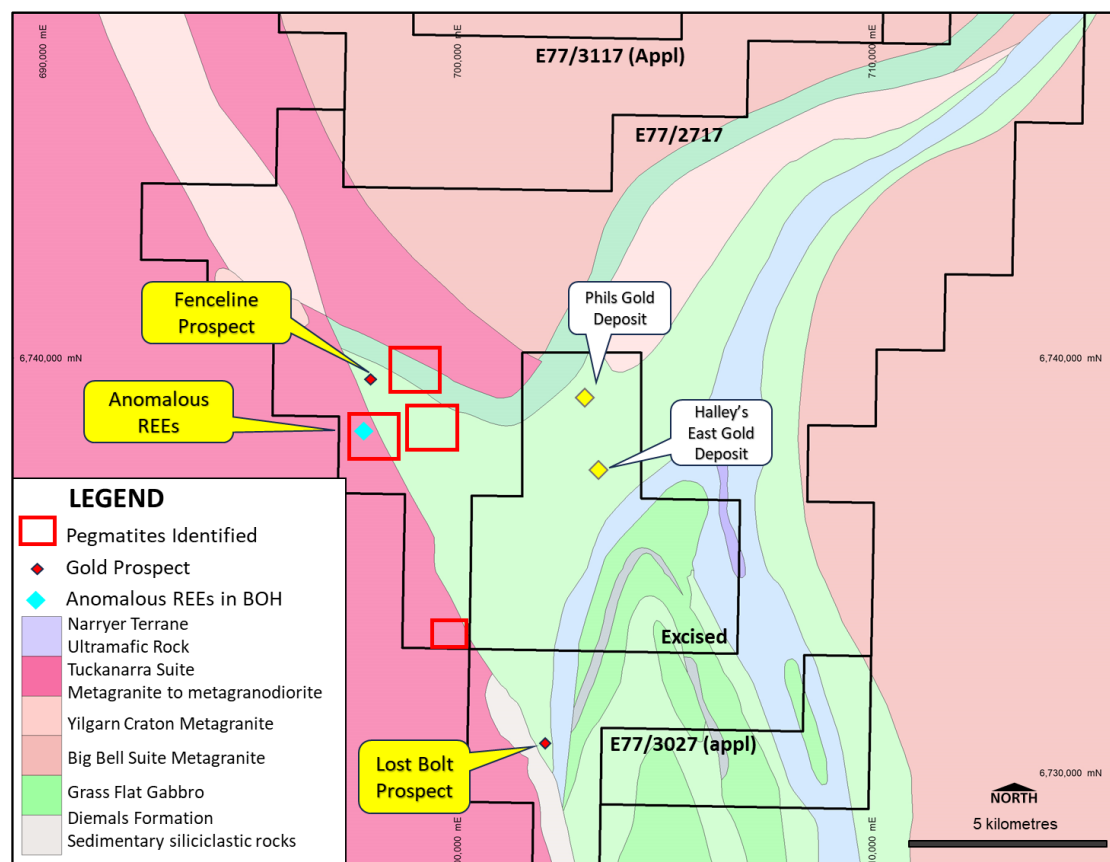


# Barlee



## Multi-commodity Opportunity

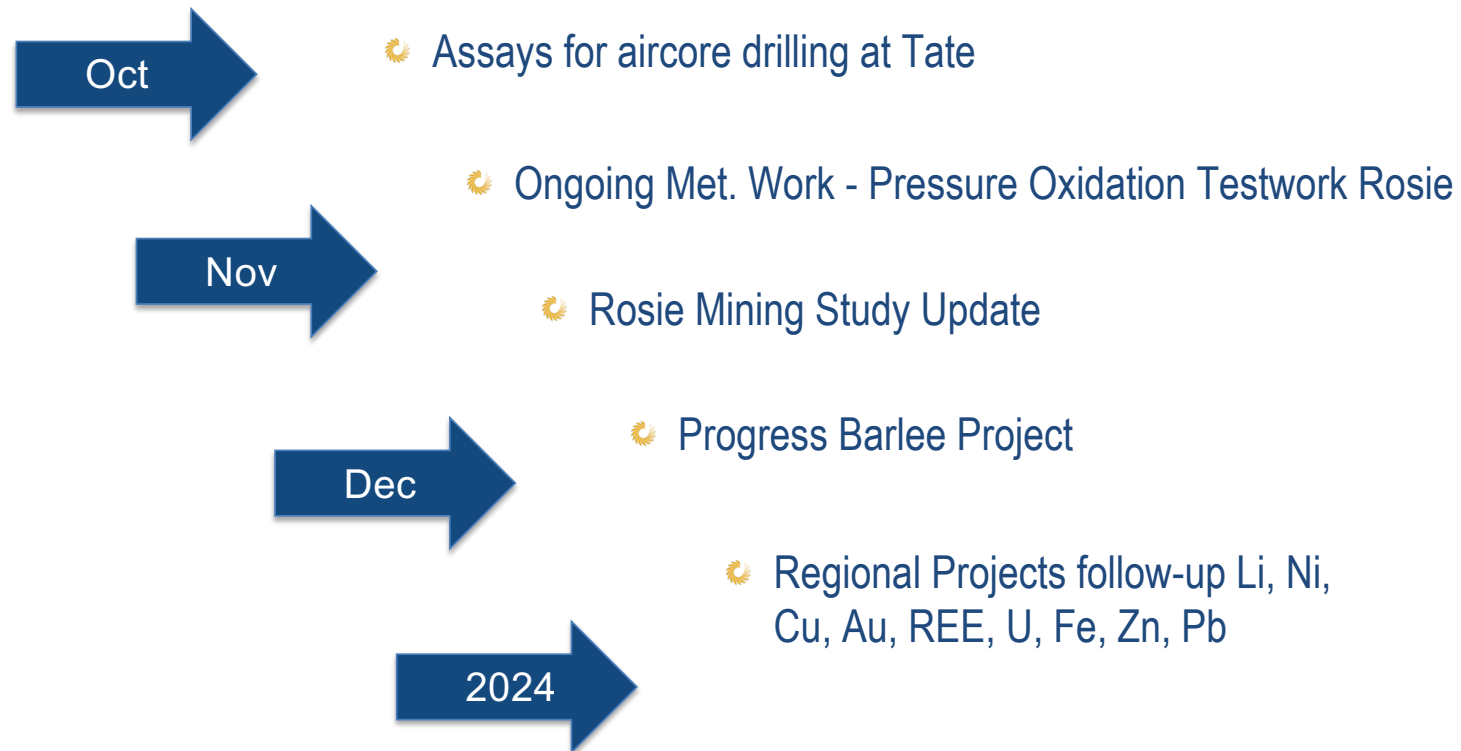
- 200km north of Southern Cross in the Marda Diemals Greenstone Belt. Surrounds the Halley's East Gold Mine (516kt @ 3.91g/t Au for 65koz)
- Lost Bolt Prospect – **4m @ 1.84g/t Au** and **2m @ 1.34g/t Au**
- Fenceline Prospect – **8m @ 1.3g/t Au** and **4m @ 1.1 g/t Au**
- Pegmatites identified** at the Barlee Project
- Field investigation has confirmed the presence of pegmatites, rock chip assays show **elevated indicator elements**
- Mount Holland Lithium Mine to the south, Youanmi Lithium Project to north (ASX:VMC)
- Rare Earth Elements (REEs) identified** in historic drilling in western granite



See ASX Announcement 15 September 2023 & 29 September 2023

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# Timeline – Upcoming Activity



# Concluding Remarks



## PROJECT WORK

- ☪ Impact of POX and Nickel sulphate
- ☪ Assessing standalone concentrator, Rosie +/- C2

## EXPLORATION

- ☪ Tate results pending
- ☪ Further assessment of all projects

## CORPORATE

- ☪ Cash (+ liquids) balance of ~\$16.0M
- ☪ Market Capitalisation               \$37.2M
- ☪ Enterprise Value                     \$21.2M

***LEVERAGED TO DEVELOPMENT & DISCOVERY***



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# Appendix 1 : Duketon Nickel Resources



Rosie Nickel Resource >1% NiEq							
Classification	Sulphide	Tonnes	Ni (%)	Cu (%)	Co (ppm)	Total PGEs (g/t)	NiEq (%)
Indicated	Pentlandite	1,191,555	2.4	0.42	642	2.7	3.76
	Violarite	820,999	1.7	0.39	504	2.5	2.75
	Sub-Total	2,012,553	2.1	0.41	585	2.6	3.35
Inferred	Pentlandite	694,751	1.8	0.48	580	2.5	3.13
	Violarite	66,179	1.5	0.42	442	1.7	2.36
	Sub-Total	760,930	1.8	0.48	568	2.4	3.06
Total	All	2,773,483	2.0	0.43	580	2.6	3.27

Table 1. Rosie Mineral Resource Grade

Classification	Ore Type	Contained Metal			
		Ni (t)	Cu (t)	Co (t)	Total PGEs (oz)
Indicated	Pentlandite	28,524	4,978	764	104,868
	Violarite	13,966	3,230	414	64,869
	Sub-Total	42,490	8,208	1,178	169,737
Inferred	Pentlandite	12,786	3,337	403	55,740
	Violarite	987	279	29	3,551
	Sub-Total	13,774	3,616	432	59,291
	Total	56,264	11,824	1,610	229,028

Table 2. Rosie Mineral Resource Contained Metal

See ASX Announcement 10 March 2022

# Appendix 1 : Duketon Nickel Resources



C2 Nickel Resource >0.4%Ni						
Classification	Tonnes	Ni (%)	Cu (%)	Pd (ppb)	Pt (ppb)	S (%)
Indicated	7,955,751	0.57	0.03	56.7	42.8	1.7
Inferred	107,790	0.44	0.01	34.7	31.4	0.5
<b>Total</b>	<b>8,063,541</b>	<b>0.57</b>	<b>0.03</b>	<b>56.5</b>	<b>42.7</b>	<b>1.7</b>

**Table 3. C2 Mineral Resource Grade**

Resource Category	Tonnes (kt)	Ni%	Ni tonnes
Indicated	7,955	0.58	45,790
Inferred	108	0.44	474
<b>TOTAL</b>	<b>8,063</b>	<b>0.57</b>	<b>46,263</b>

**Table 4. C2 Mineral Resource Contained Metal**

Combined Metal Inventory, The Bulge Area			
Deposit	Ni tonnes	Cu tonnes	PGE oz
<b>Rosie</b>	56,264	11,824	229,028
<b>C2</b>	46,263	2,339	25,684
<b>TOTAL</b>	<b>102,527</b>	<b>14,163</b>	<b>254,712</b>

**Table 5. Combined Metal Inventory**

See ASX Announcement 10 March 2022 & 12 December 2022