

# Advancing the Duketon Nickel Project

Australian Nickel Conference  
6 October 2022



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 9 September 2021;
- C2 Mineral Resources – ASX announcement dated 29 January 2015;
- 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;
- Multiple MLEM Anomalies Identified at Duketon North – ASX announcement dated 4 April 2022.

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

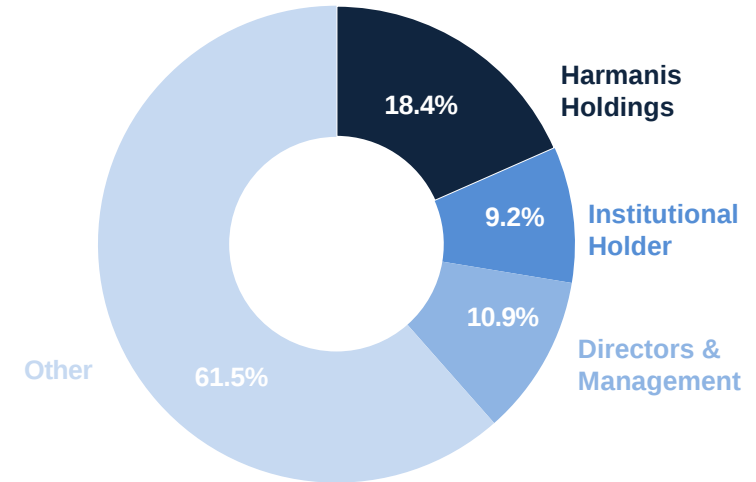


## About Duketon Mining

Duketon Mining Limited is a Western Australia 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 east of Kalgoorlie.



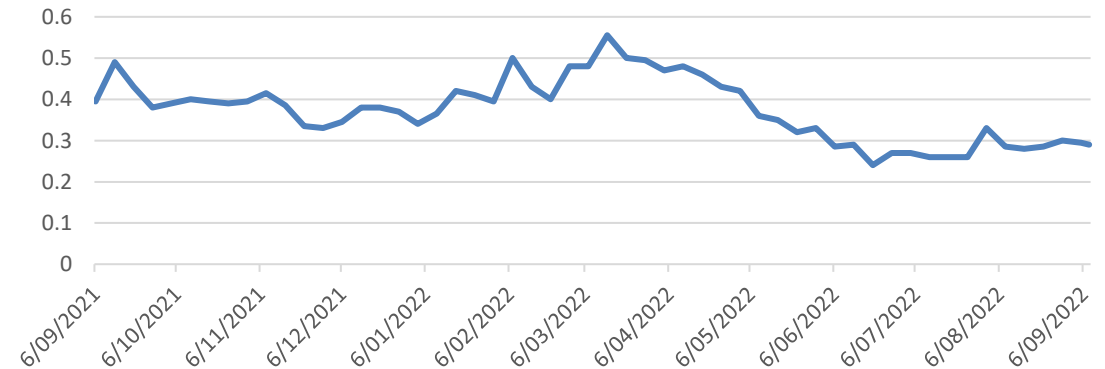
## Shareholder Information - as at 7 September 2022



## Capital Structure / Enterprise Value

|                                          |          |
|------------------------------------------|----------|
| ASX Code                                 | DKM      |
| Shares on issue                          | 121m     |
| Options on issue                         | 11.7m    |
| Market capitalisation (as at 12/09/2022) | \$36.0m  |
| Cash (as at 30/06/22)                    | ~\$18.5m |
| Enterprise value                         | \$17.5m  |

## DKM Share Price Performance



# 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 Discoverex 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 - drilling and gpx underway
- ☛ Rosie & C2 open along strike and at depth

## MULTIPLE DEVELOPMENT OPTIONS CONSIDERED

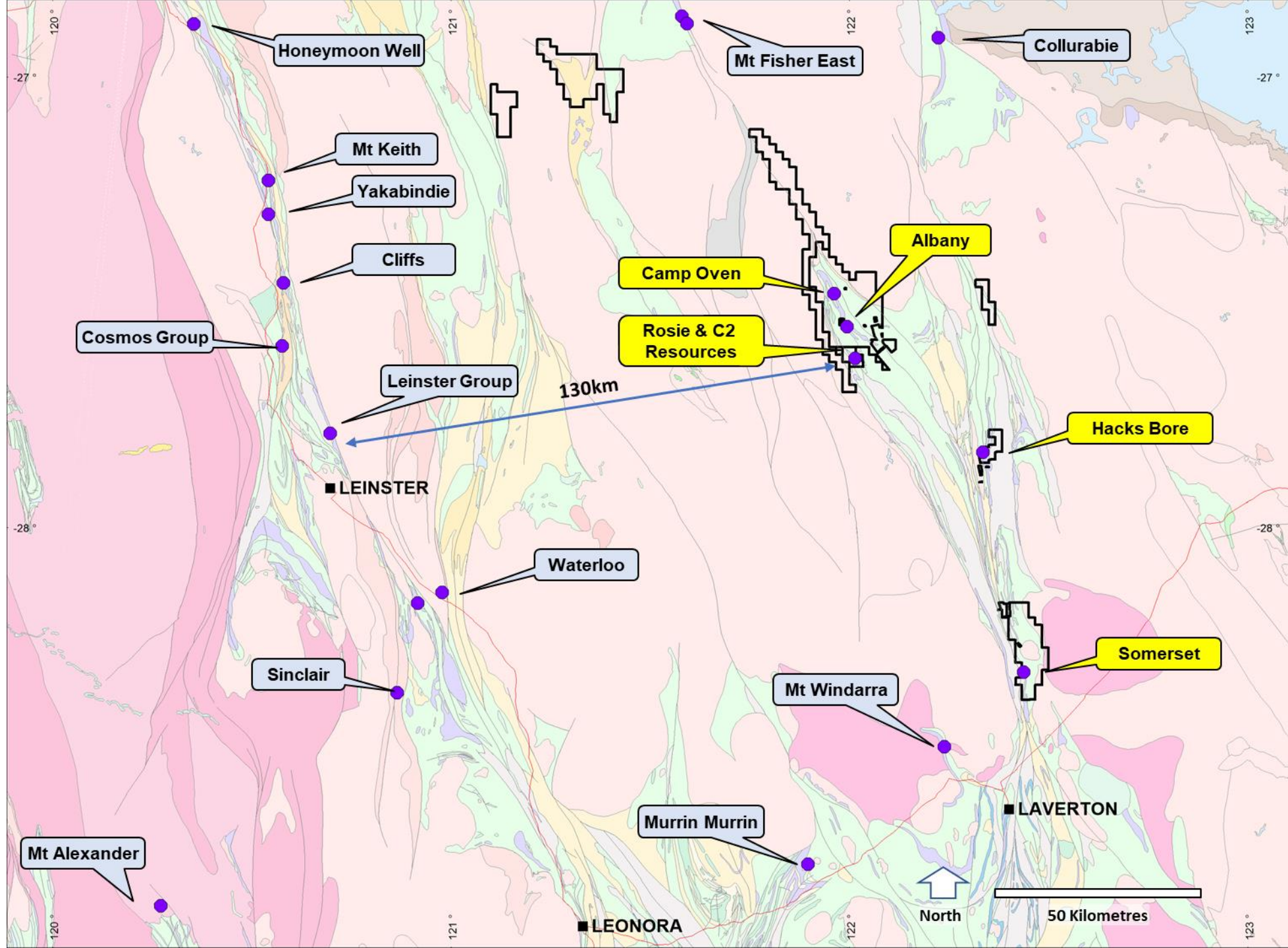
- ☛ Potential to toll treat mineralisation at nearby concentrators
- ☛ Produce nickel concentrate on site from a combined Rosie & C2

## KNOWN NICKEL SULPHIDE ENDOWMENT

- ☛ Two resources
- ☛ 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



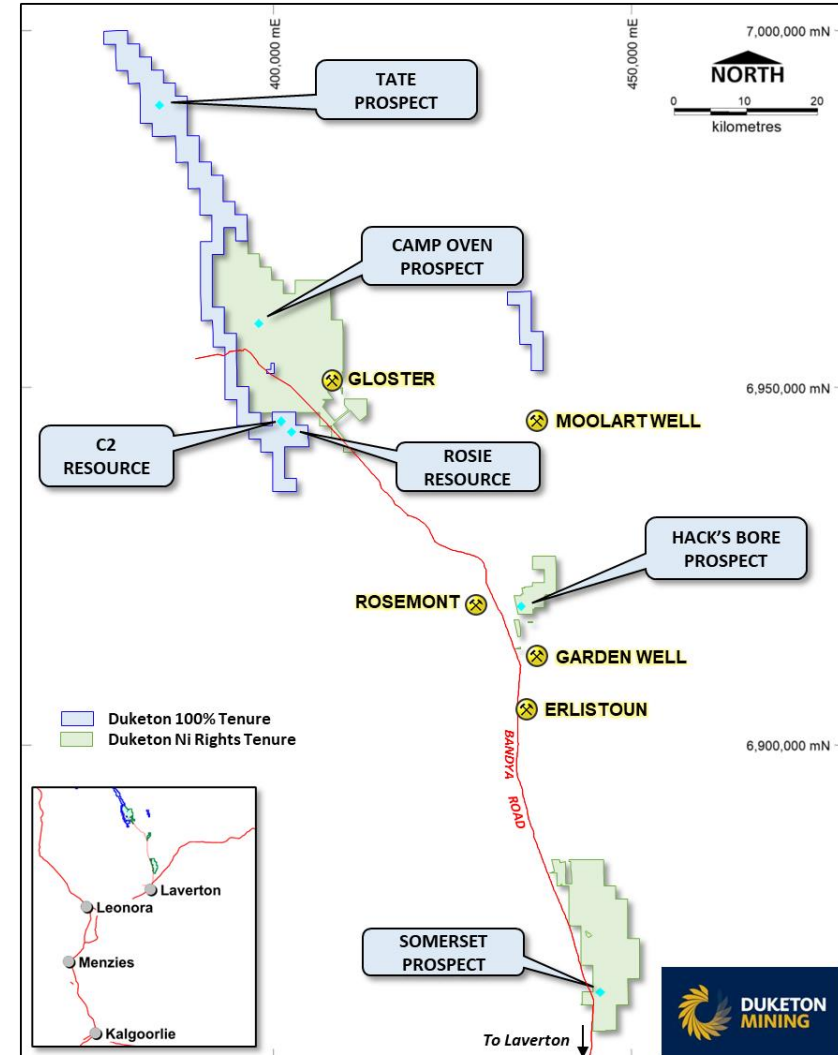
# Strategic Location/Value Proposition



## Large land position – multiple projects

- 94,300t of nickel metal in JORC resources\*
- 14,100t of copper metal in JORC resources
- 255koz PGE's in JORC resources
- Positive metallurgical results at Rosie and C2
- Positive scoping study at Rosie
- Access to most prospective tenure for nickel discovery
- Minimal holding cost
- Surety of mining tenure

## *A pipeline of opportunities*



# 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 – plus C2 with concentrator onsite, Ni and PGE in transition zone, exploration***

# 94kt Ni, 14kt Cu, 255koz PGE's & growing



## Rosie Nickel Deposit

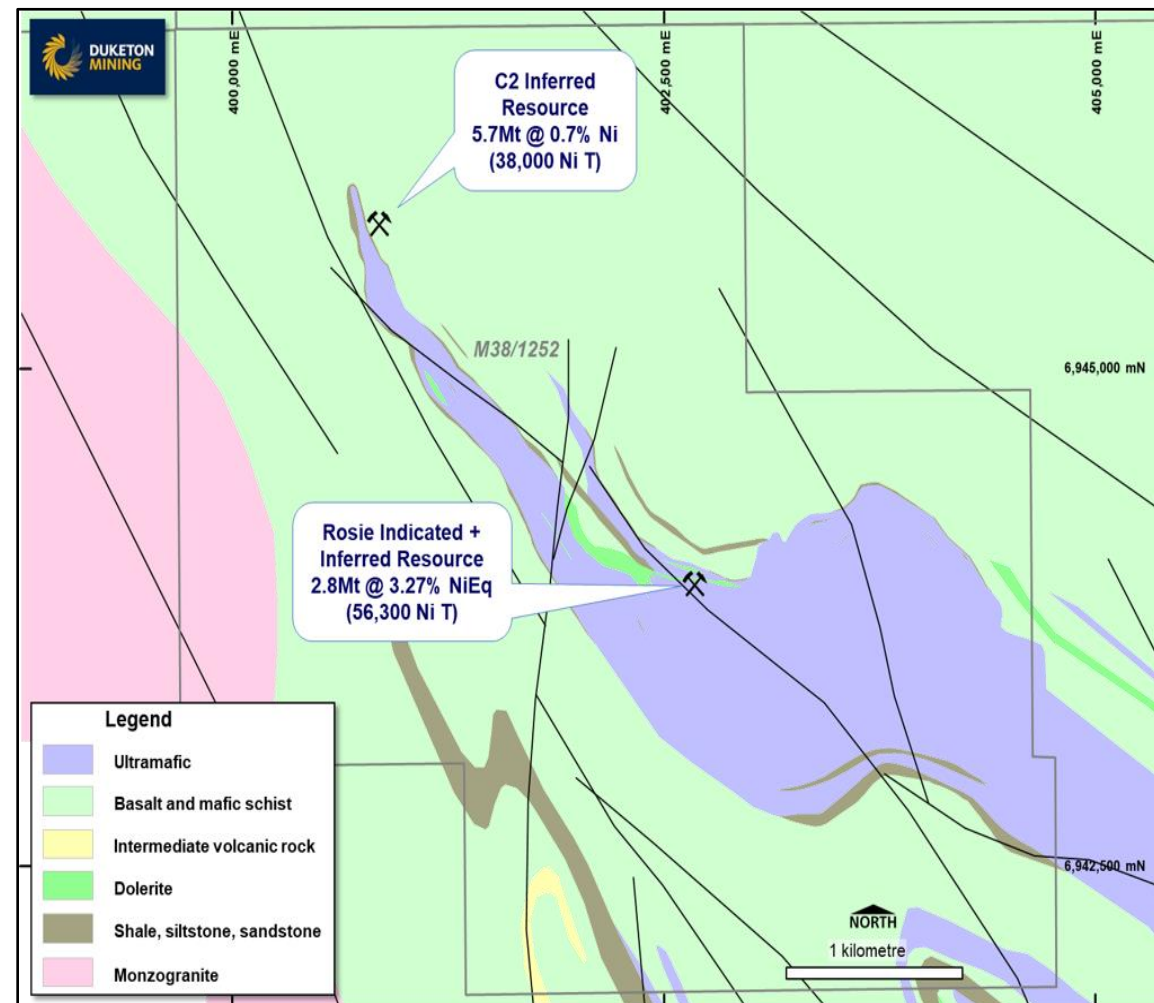
Mineral Resource Estimate 2022\*

- 56,300t nickel,
- 11,800t copper,
- 229,000oz PGE's

## C2 Nickel Deposit

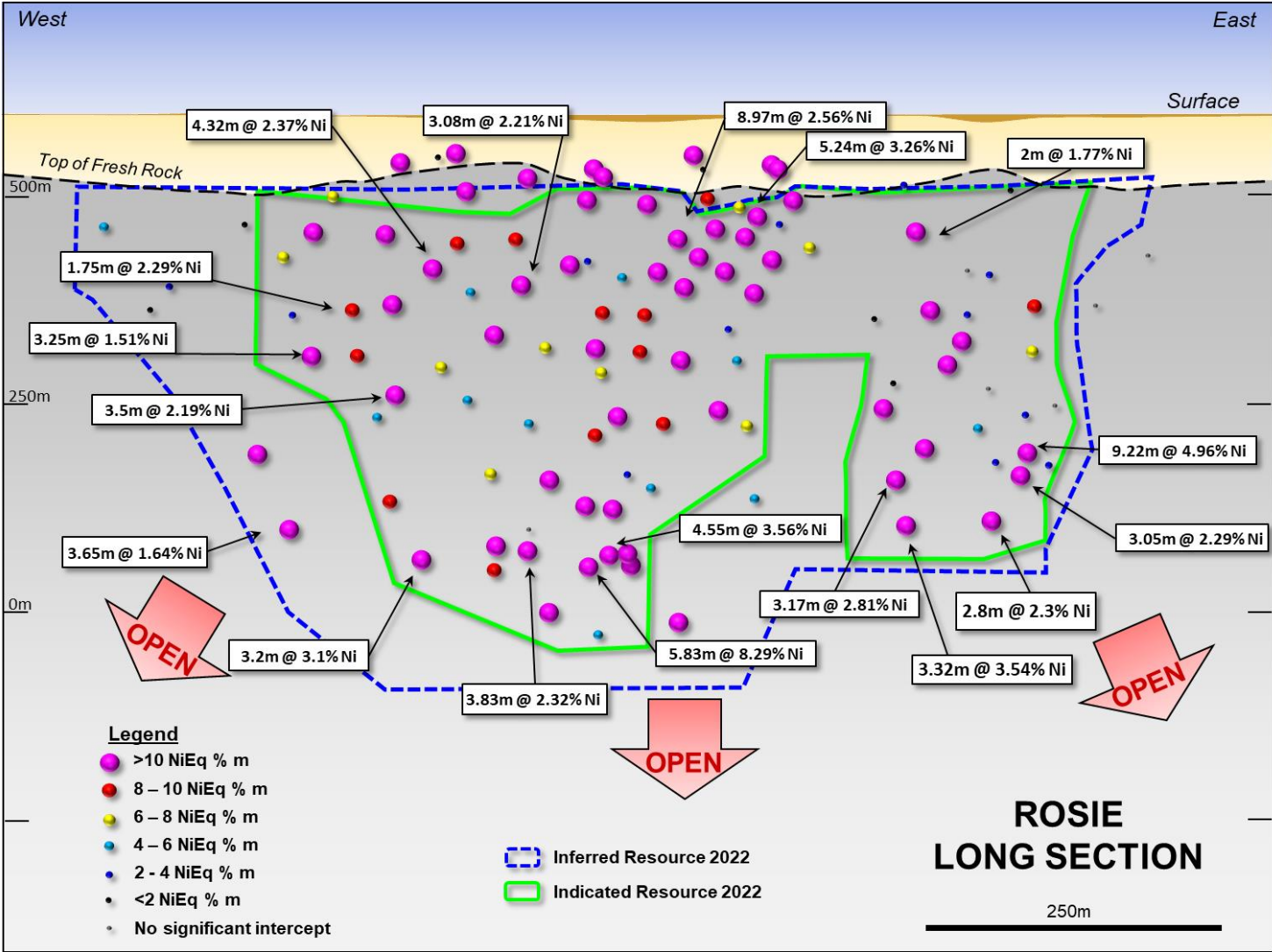
Mineral Resource Estimate 2015\*

- 38,000t nickel,
- 2,300t copper,
- 26,000oz PGE's



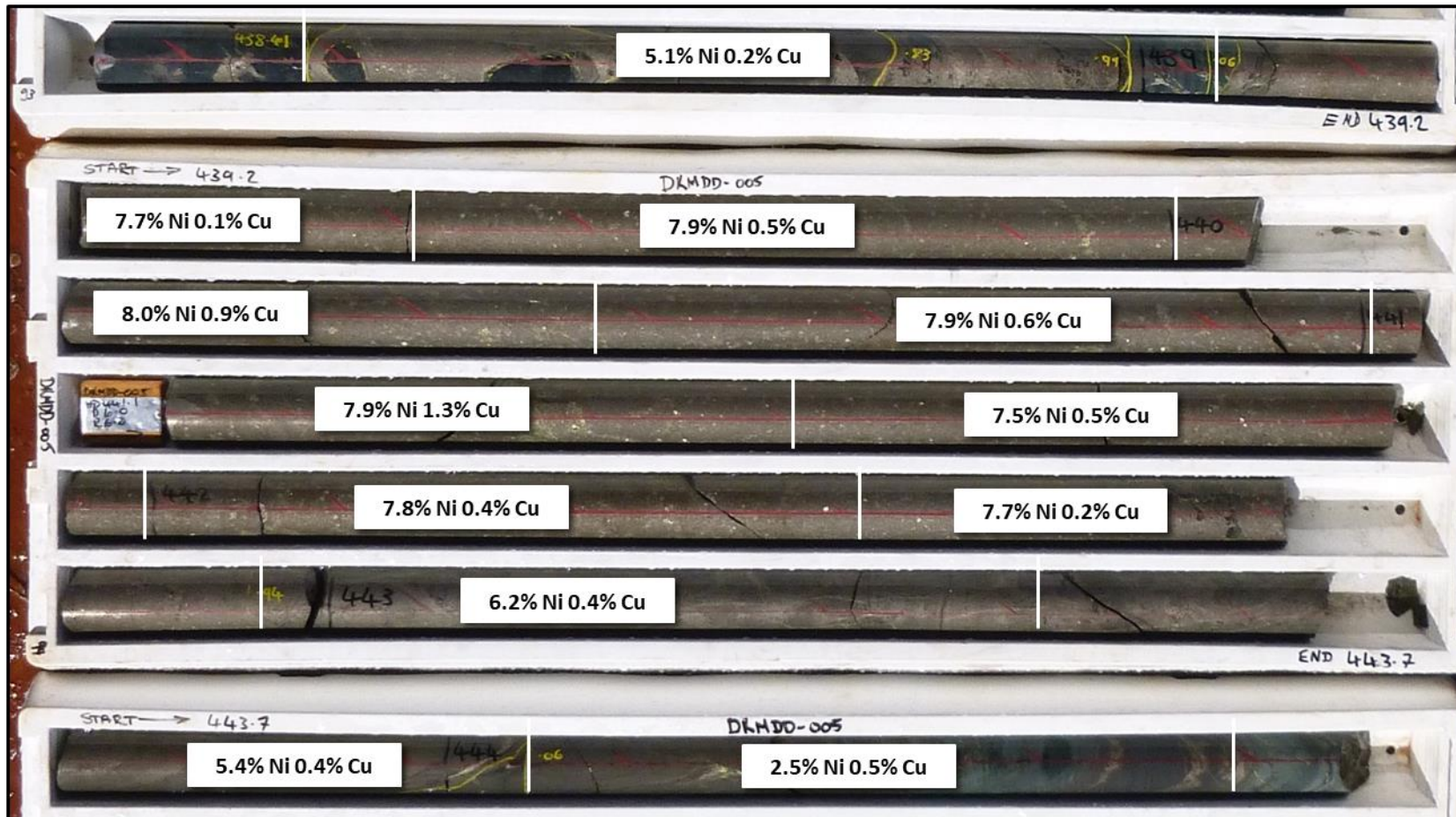
***Both deposits open at depth and along strike***

# Rosie Long Section



# Rosie Drill Core

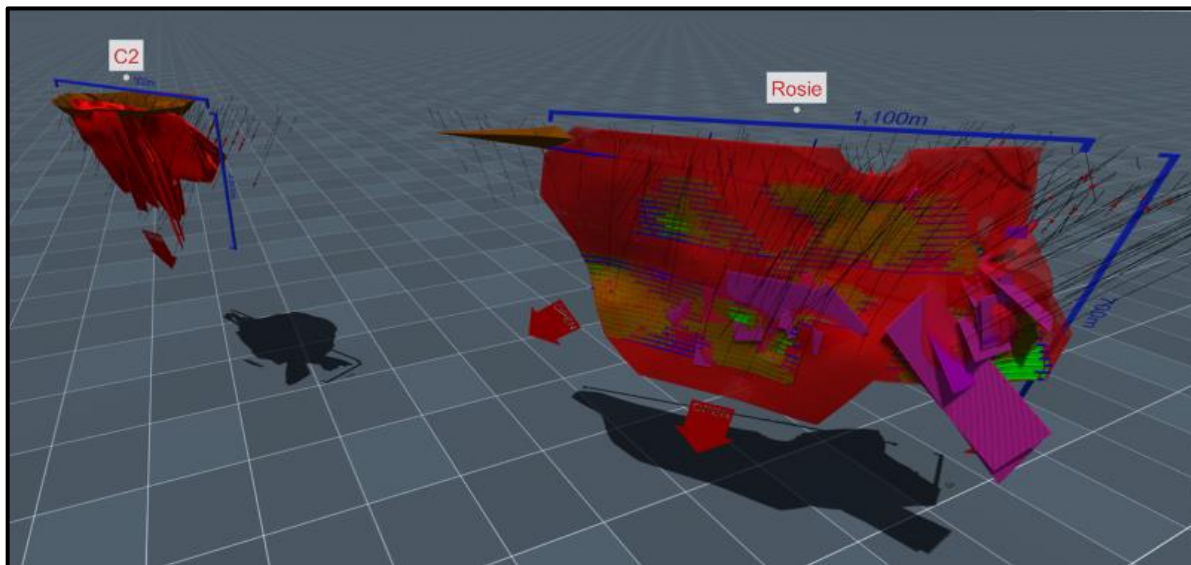
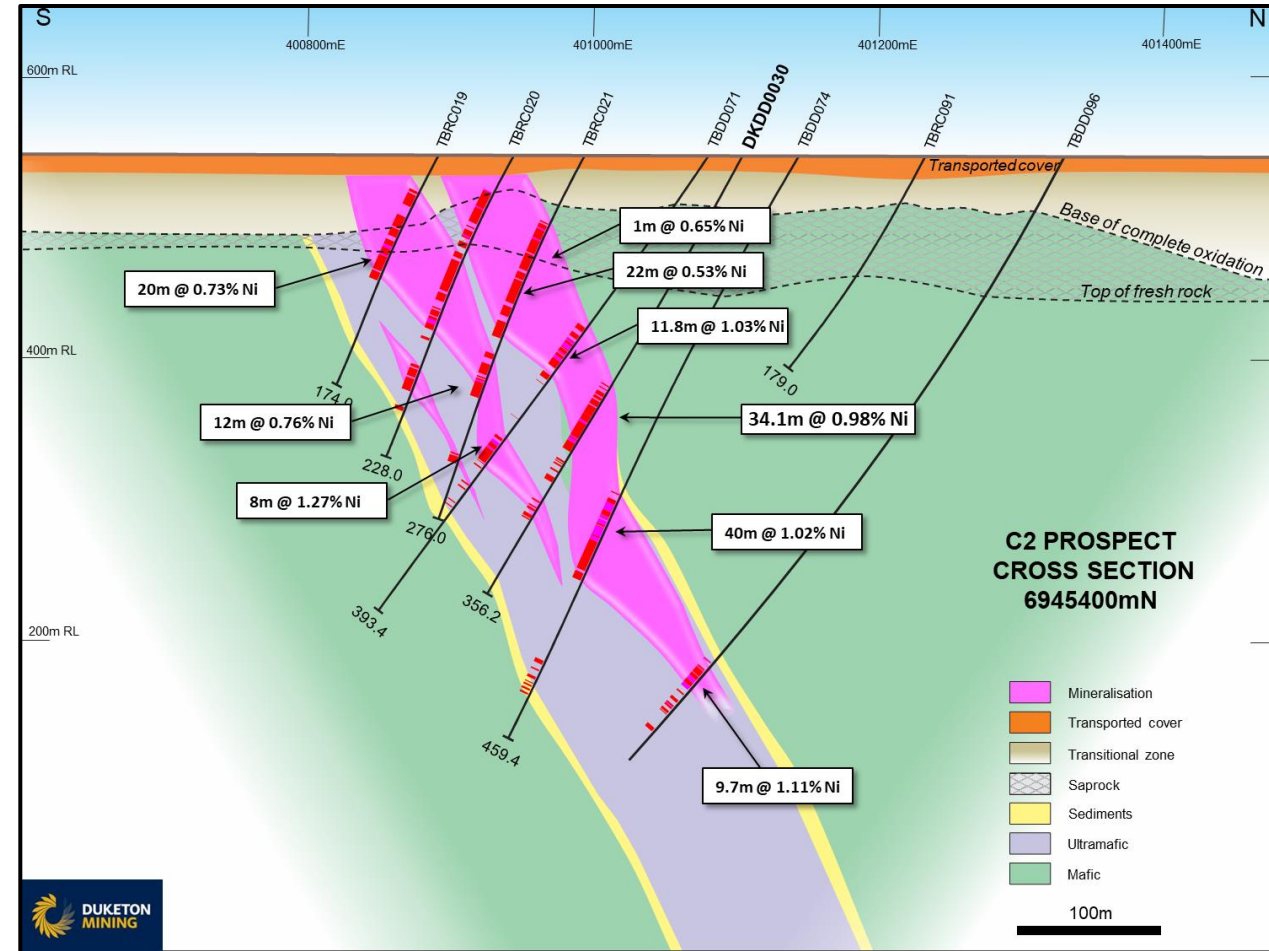
**9.22M @ 4.96% Ni, 0.41% Cu and 2.41 g/t Pt+Pd\***



# C2 Cross Section

## Large Tonnage

| Cut-Off (Ni %) | Tonnes     | Grade (Ni %) | Ni (t) |
|----------------|------------|--------------|--------|
| 0.3            | 18,775,665 | 0.5          | 88,902 |
| 0.4            | 10,776,805 | 0.6          | 60,356 |
| 0.5            | 5,721,787  | 0.7          | 37,967 |
| 0.6            | 3,008,201  | 0.8          | 23,249 |
| 0.7            | 2,019,653  | 0.8          | 16,940 |
| 0.8            | 1,018,985  | 0.9          | 9,503  |
| 0.9            | 641,066    | 1.0          | 6,265  |
| 1              | 148,053    | 1.1          | 1,577  |
| 1.1            | 62,461     | 1.1          | 694    |



# Positive Metallurgical Testwork – Rosie



## High Quality Concentrate

- ☀ Ni recovery up to **97%**
- ☀ Intermediate concentrate up to 22% Ni
- ☀ Nickel concentrate grading 16% Ni and 7g/t total PGE's from massive ore
- ☀ Bulk concentrate grading 15% (Ni+Cu) and 12g/t total PGE's from violarite ore
- ☀ High Fe:MgO
- ☀ PGE's recoverable by gravity >8g/t total PGE's – provides an alternate process option

***Latent value unlocked***



(NB: >13% Ni or >12% Ni+Cu are considered saleable concentrates)

See ASX Announcement 8 July 2020 and 10 July 2020 [www.duketonmining.com.au](http://www.duketonmining.com.au)

# Positive Metallurgical Testwork – C2

## High Quality Concentrate

- C2 Responds well to conventional flotation
- Produces a 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***



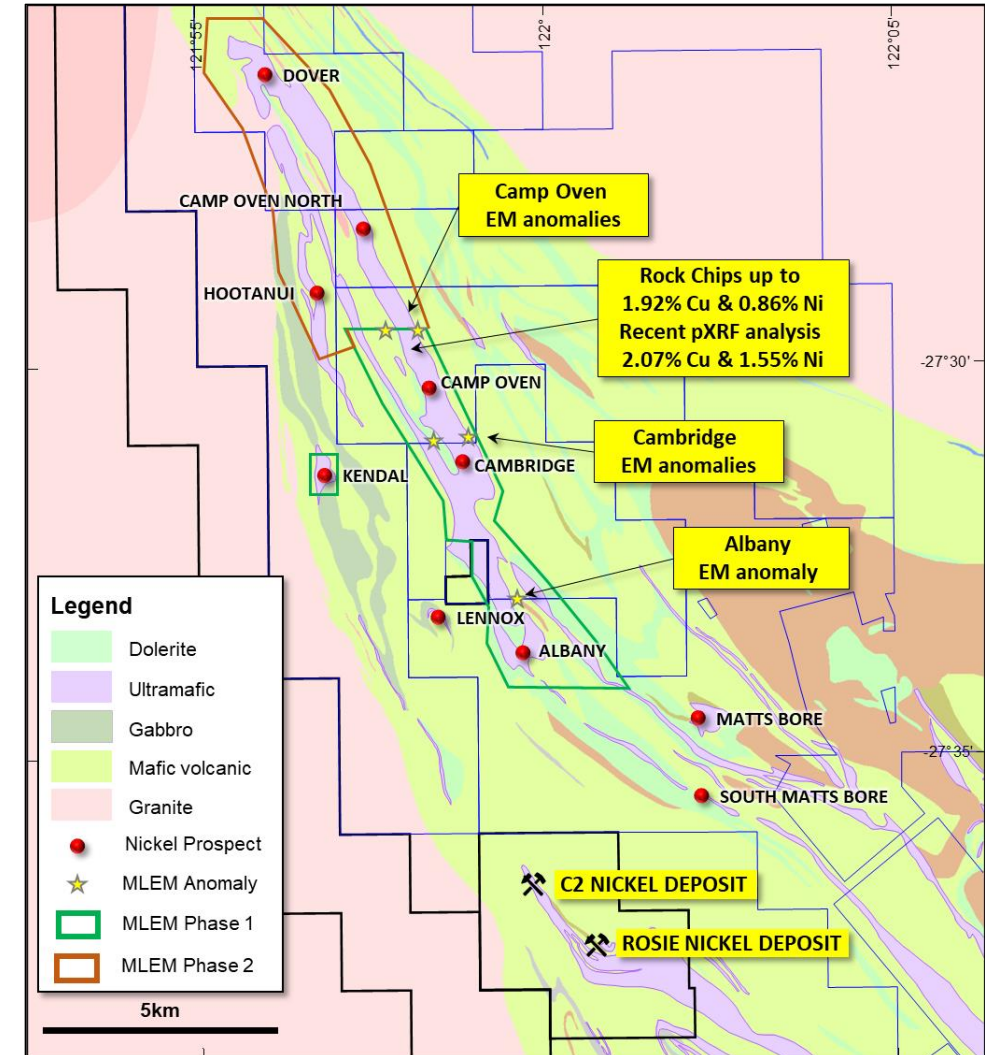
# Duketon North



## Multiple EM Responses and Ni Sulphides

- ✶ Ultramafics of Duketon North highly prospective for Ni Sulphides
- ✶ Extensive surface geochemistry, U/M contacts outlined by elevated Cu and Ni
- ✶ Historic drilling has intersected sulphides within serpentinised peridotites
- ✶ Ultramafic contacts not specifically targeted
- ✶ Large portions of the ultramafics remain untested by drilling
- ✶ Field work including ground EM and RC drilling commenced February - ongoing

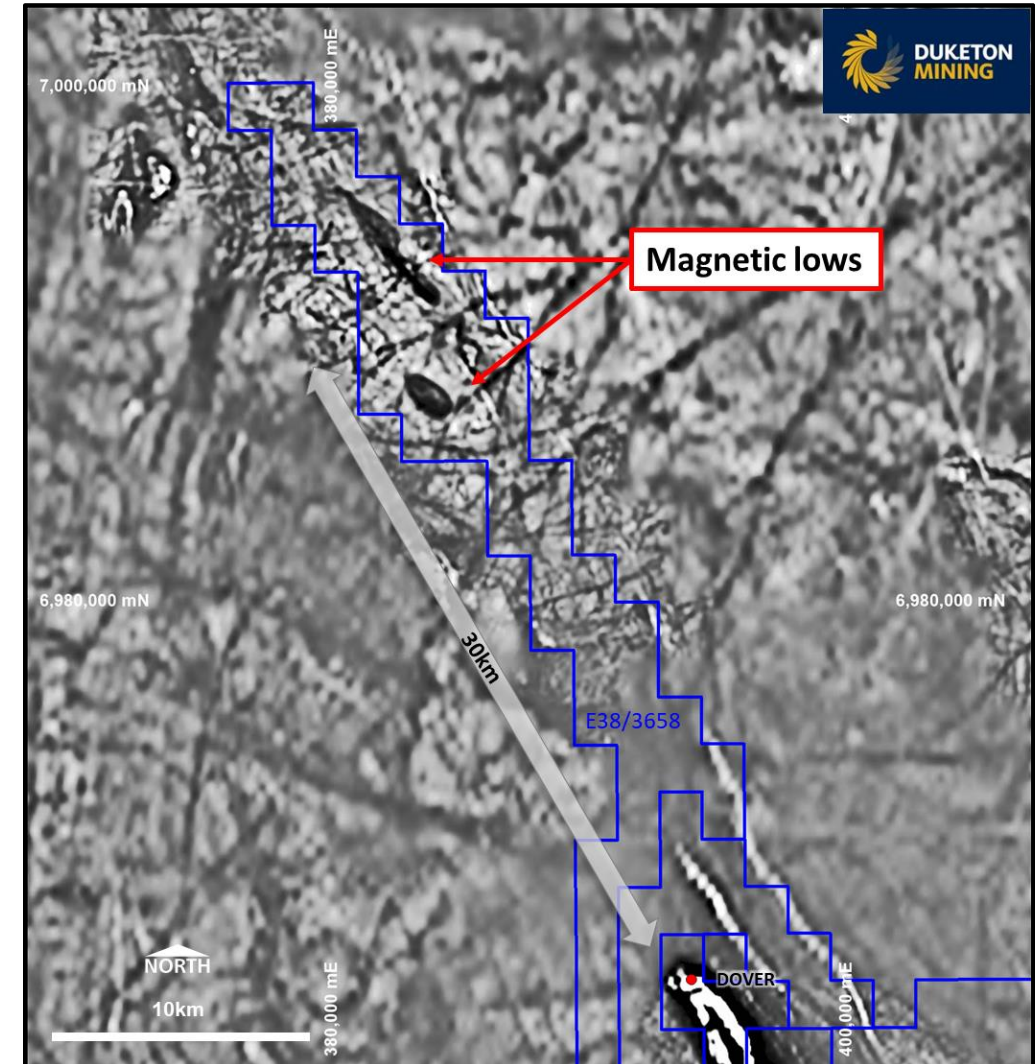
***Significant exploration potential***



## Mafic Intrusive Model

- ☀️ Magnetics reveal the presence of two features – likely intrusives with remnant magnetism
- ☀️ Interpreted to be late mafic intrusives
- ☀️ Beneath 8m of transported cover
- ☀️ 6km x 1.2km & 2.2km x 1.2km
- ☀️ BOH geochemistry 143ppm Ni, 86ppm Cu, 86ppm Zn, 2710ppm Mn and 9.9% Fe
- ☀️ Historic wide spaced AC drilling (BHP) - intersected mafic rocks

## Ground EM underway



# Concluding Remarks



## MINING STUDY

- Study being refined based on updated resource model.
- Assessing standalone concentrator, Rosie + C2

## EXPLORATION

- Ground EM underway
- Drilling underway

## CORPORATE

- Cash (+ liquids) balance of ~\$18.5M
- Market Capitalisation \$36.0M
- Enterprise Value \$17.5M

***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   | <b>2,012,553</b> | <b>2.1</b> | <b>0.41</b> | <b>585</b> | <b>2.6</b>       | <b>3.35</b> |
| 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   | <b>760,930</b>   | <b>1.8</b> | <b>0.48</b> | <b>568</b> | <b>2.4</b>       | <b>3.06</b> |
| Total                          | All         | <b>2,773,483</b> | <b>2.0</b> | <b>0.43</b> | <b>580</b> | <b>2.6</b>       | <b>3.27</b> |

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   | <b>42,490</b>   | <b>8,208</b>  | <b>1,178</b> | <b>169,737</b>  |
| Inferred       | Pentlandite | 12,786          | 3,337         | 403          | 55,740          |
|                | Violarite   | 987             | 279           | 29           | 3,551           |
|                | Sub-Total   | <b>13,774</b>   | <b>3,616</b>  | <b>432</b>   | <b>59,291</b>   |
|                | Total       | <b>56,264</b>   | <b>11,824</b> | <b>1,610</b> | <b>229,028</b>  |

Table 2. Rosie Mineral Resource Contained Metal

# Appendix 1 : Duketon Nickel Resources



| C2 Nickel Resource >0.5%Ni |              |           |        |        |          |          |       |
|----------------------------|--------------|-----------|--------|--------|----------|----------|-------|
| Classification             | Oxidation    | Tonnes    | Ni (%) | Cu (%) | Pt (ppb) | Pd (ppb) | S (%) |
| Inferred                   | Fresh        | 5,100,000 | 0.7    | 0.04   | 60       | 79       | 3.3   |
|                            | Transitional | 600,000   | 0.6    | 0.04   | 72       | 105      | 0.9   |
| Total                      |              | 5,700,000 | 0.7    | 0.04   | 61       | 82       | 3.1   |

**Table 3. C2 Mineral Resource Grade**

| C2 Nickel Resource >0.5%Ni |              |           |        |        |
|----------------------------|--------------|-----------|--------|--------|
| Classification             | Oxidation    | Tonnes    | Ni (%) | Ni (t) |
| Inferred                   | Fresh        | 5,100,000 | 0.7    | 34,200 |
|                            | Transitional | 600,000   | 0.6    | 3,800  |
| Total                      |              | 5,700,000 | 0.7    | 38,000 |

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

| Combined Metal Inventory, The Bulge Area |           |           |         |
|------------------------------------------|-----------|-----------|---------|
| Deposit                                  | Ni tonnes | Cu tonnes | PGE oz  |
| Rosie                                    | 56,264    | 11,824    | 229,028 |
| C2                                       | 38,000    | 2,280     | 26,206  |
| TOTAL                                    | 94,264    | 14,104    | 255,234 |

**Table 5. Combined Metal Inventory**

# Appendix 2 : C2 Grade Tonnage

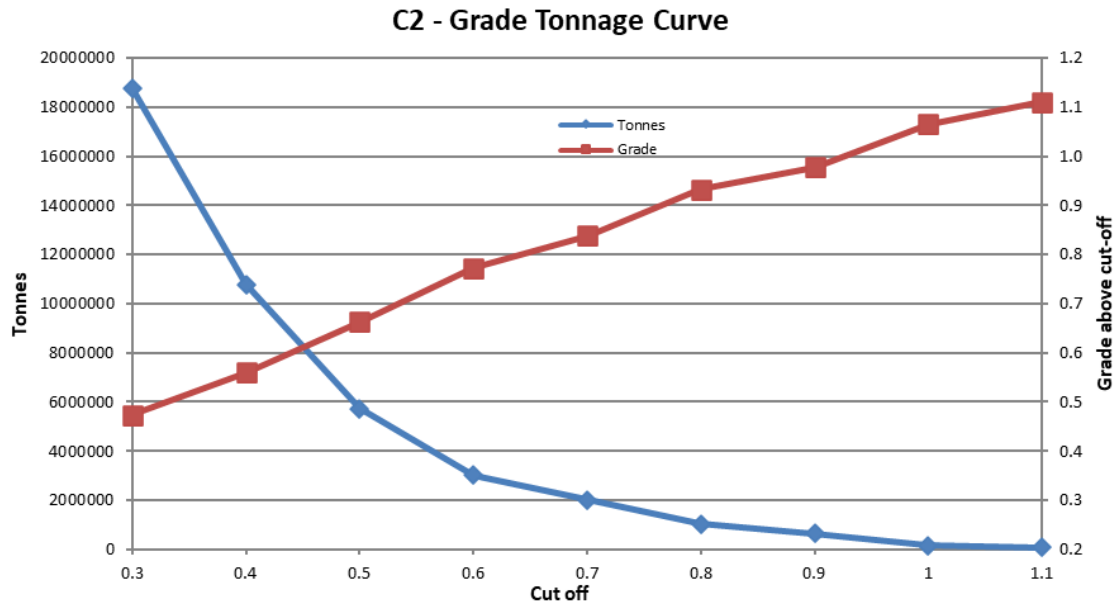


Figure 1: Grade Tonnage Curve at Ni cut-offs.

| Cut-Off (Ni %) | Tonnes     | Grade (Ni %) | Ni (t) |
|----------------|------------|--------------|--------|
| 0.3            | 18,775,665 | 0.5          | 88,902 |
| 0.4            | 10,776,805 | 0.6          | 60,356 |
| 0.5            | 5,721,787  | 0.7          | 37,967 |
| 0.6            | 3,008,201  | 0.8          | 23,249 |
| 0.7            | 2,019,653  | 0.8          | 16,940 |
| 0.8            | 1,018,985  | 0.9          | 9,503  |
| 0.9            | 641,066    | 1.0          | 6,265  |
| 1              | 148,053    | 1.1          | 1,577  |
| 1.1            | 62,461     | 1.1          | 694    |

Table 1: C2 Deposit Grade Tonnage Table for different Ni cut-offs