



ASX Announcement

28 April 2021

## Positive Scoping Study Provides Solid Platform for Future Growth

### CAUTIONARY STATEMENT

*The Scoping Study at Rosie, referred to in this announcement, has been undertaken to determine the potential to develop the Rosie Nickel-Copper-PGE project. The Scoping Study is a preliminary technical and economic study of the potential viability of this project based on low level technical and economic assessments (+/- 30% accuracy) that are not sufficient to support the estimation of Ore Reserves or to provide any assurance of an economic development case. A simple mining and trucking operation has been examined within this scoping study. Further evaluation work and appropriate studies are required before Duketon is able to estimate any Ore Reserves.*

*Approximately 73% of the life of mine production is in the Indicated Mineral Resource category and 27% is in the Inferred Mineral Resource category. The Company has concluded it has reasonable grounds for disclosing a Production Target, given that the Scoping Study assumes that in the first 3 years of operation, 98% of the production is from the Indicated Resource category. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of further Measured or Indicated Mineral Resources or that the Production Target or preliminary economic assessment will be realised.*

*The Scoping Study is based on the material assumptions outlined elsewhere in this announcement. While the Company considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.*

*To achieve the potential mine development outcomes indicated in the Scoping Study, funding in the order of A\$18 million will likely be required. Investors should note that there is no certainty that the Company will be able to raise funding when needed, however the Company has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement and believes that it has a "reasonable basis" to expect it will be able to fund the development of the Project.*

*It is also possible that such funding may only be available on terms that may be dilutive to, or otherwise affect the value of the Company's existing shares. It is also possible that the Company could pursue other "value realisation" strategies to provide alternative funding options or value realisation that may include project finance, sale, partial sale or other commercial paths.*

*Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.*



**Duketon Mining Ltd (ASX : DKM)** ("**Duketon**" or the "**Company**") is pleased to announce the results of a Scoping Study ("**Study**") for the Company's Rosie Nickel Project ("**Rosie**" or the "**Project**") in the Duketon Greenstone Belt north of the town of Laverton, Western Australia, with key outcomes highlighting the potential of the Project to support a viable mining, trucking and toll treating operation (see Figures 1-3). All currency referenced in the report is Australian dollars unless specified otherwise.

## **STUDY HIGHLIGHTS**

- A Scoping Study for Duketon's 100% owned Rosie Nickel Project confirms the viability of a mining, trucking and toll treating operation assuming an 8-year mine life.
- NPV<sub>5</sub> 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 approximately 315kt of ore at 2.1% NiEq
- Resource already situated on a granted mining tenement with ample room for all surface works and infrastructure.
- Metallurgy work shows a positive outcome with high recoveries of nickel, copper and PGE's (see ASX announcement 8 and 10 July,2020)
- The exploration strategy is being finalised and will consider three different items: lateral extensions to Rosie, identification of higher-grade areas within the proposed mined areas and additional exploration outside of the Rosie project area.
- Upside opportunities include:
  - considering oxide portion of Rosie for recovery of PGE's,
  - including C2 Nickel resource as part of an expanded operation that would incorporate an onsite concentrator and be focused on producing concentrates to be sold to a third party or parties.



Duketon's Managing Director Stuart Fogarty commented:

*"The Scoping Study has delivered an excellent set of robust numbers showing a project that has exceptionally low up-front capital, robust economics with very good cash flows. The best part of this project is that it is a simple mining and trucking operation with impressive upside to exploration success. The optionality around the C2 resource and the possibility of building a concentrator will be looked at as part of the next level of study."*

## EXECUTIVE SUMMARY

The Scoping Study has demonstrated potentially strong financial metrics for the Rosie Project based on a pre-production capital cost of approximately \$18M. The Study describes a decline accessing the resource that is subsequently mined underground via overhand longhole stoping using cemented rockfill. The mined rock is then trucked to surface, and then trucked on public roads to a third-party concentrator. The Company considers the Project to be technically low risk given the simple mine plan drawing from a largely indicated resource and the high processing recoveries. (see ASX announcement 8 and 10 July 2020). The Scoping Study was completed to an overall +/-30% accuracy using the key parameters and assumptions set out in Table 1 and 2 and as further outlined in the Material Assumptions section at the end of this document.

Item	Unit	Ni
Price	US\$/lb	\$8.00
Exchange Rate	US\$/AU\$	\$0.70
Met. Recovery	%	90%
Payability	%	75%
Royalty	%	2.5%

Table 1: Revenue Assumption

Parameter	Unit	Pentlandite	Violarite
Concentrator Recovery	%	97%	89%
Payability	%	75%	75%
Royalty	%	2.5%	2.5%
Mining Cost	\$/t ore	\$152.11	\$152.11
Surface Haulage Cost	\$/t ore	\$12.63	\$12.63
Processing Cost	\$/t ore	\$53.22	\$53.22
Administration Cost	\$/t ore	\$6.49	\$6.49
Sustaining Capital Cost	\$/t ore	\$3.50	\$3.50
Conc. Transport Cost	\$/t ore	\$17.31	\$17.31
Fully Costed Final COG	% Ni	1.4%	1.6%

Table 2: Key Input Parameters

## DETAILED SUMMARY

### Background

The Rosie nickel deposit is located within the Duketon Project (100% owned by DKM) approximately 120 km north of Laverton in Western Australia, which is in turn located approximately 730 km north east of Perth (see Figures 1-3).

Previous nickel exploration in the area was undertaken by Cominco from 1966 to 1971. Further drilling by Independence Group NL (IGO) intersected the nickel sulphide mineralisation at the Rosie deposit and in 2014 DKM assumed 100% control of the project and the associated exploration and mining leases.

### Geological Description

Massive sulphide mineralisation at the Rosie Deposit is of medium tenor (8-10% Ni in 100% sulphides), has a Ni/Cu ratio of approximately 10 and has significant PGE credits (approximately 2-3 g/t PGE's).

The mineralogy of the system appears to be similar to typical Kambalda-style magmatic Ni systems, with pyrrhotite, pentlandite and chalcopyrite as the dominant sulphides in the primary portion of the mineralised zone. Mineralisation strikes to the north-west over 1,200 m, extends to 650 m below topographic surface, and remains open along strike and down dip.



Figure 1: Duketon Project Location

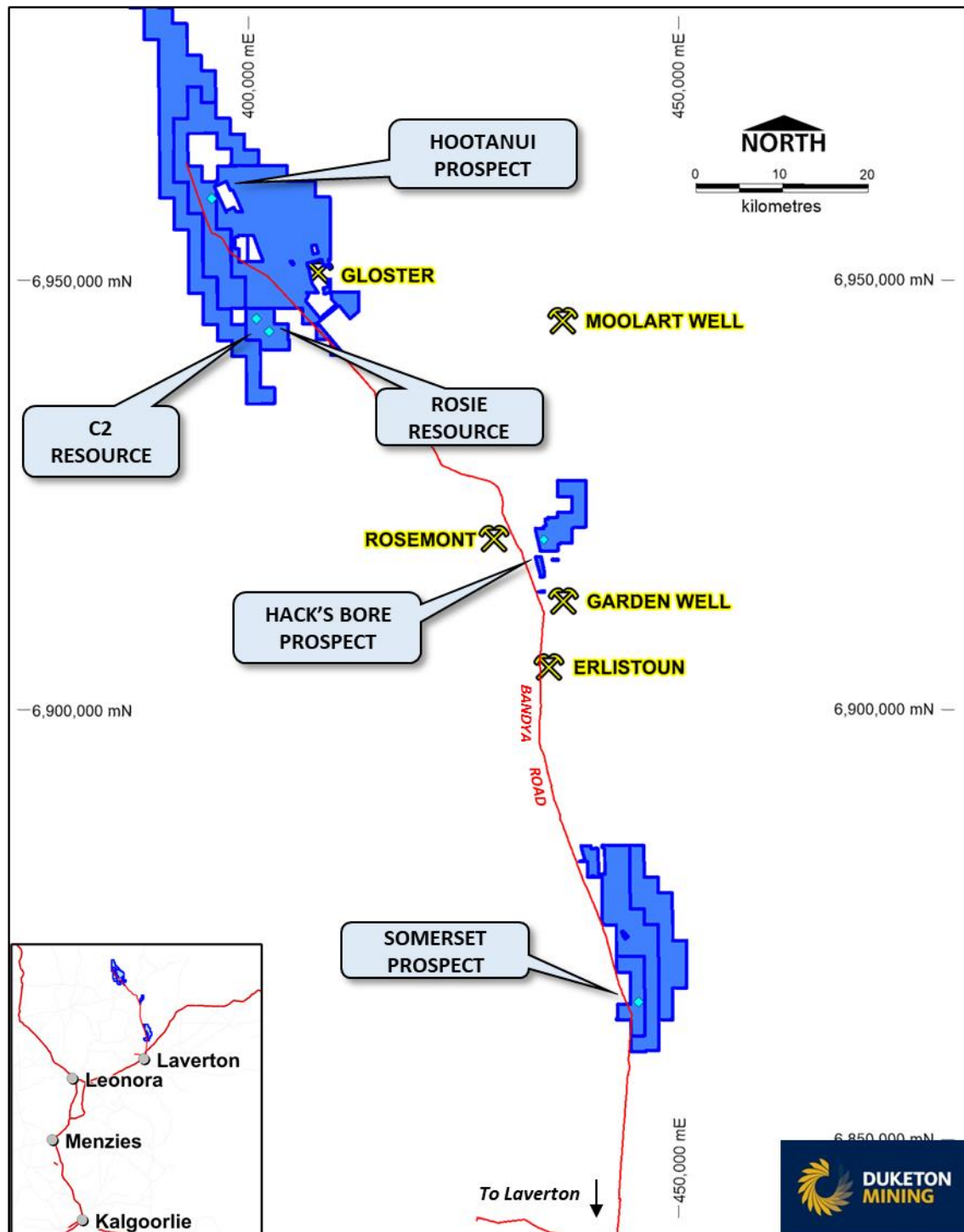


Figure 2: Plan of DKM Tenements showing Ultramafic, Nickel Resources and Prospects

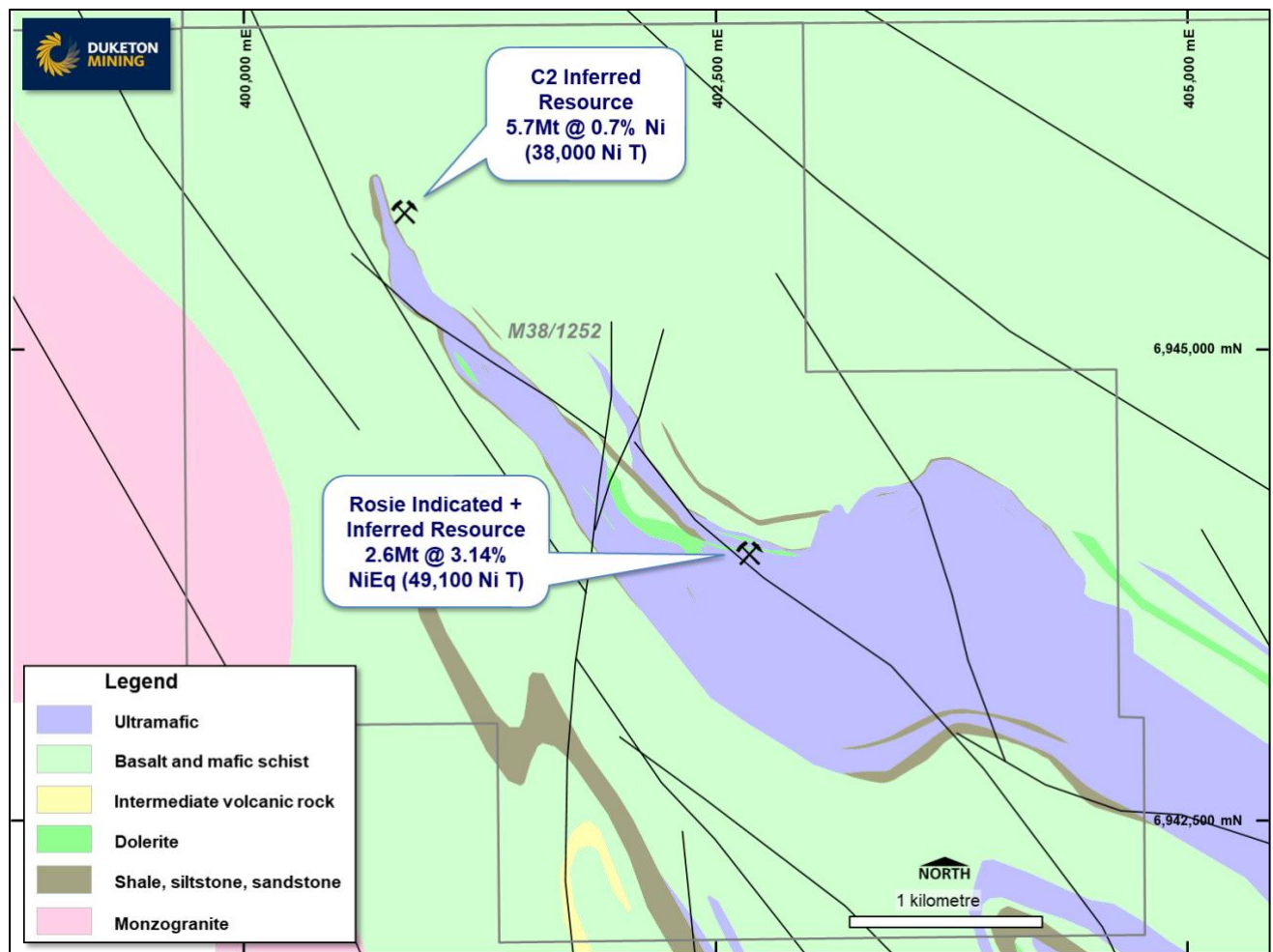


Figure 3: Plan of The Bulge Complex

## Mineral Resource

The Mineral Resource underpinning this Study was announced to the ASX on 4 March 2021 and totals 2.56 Mt @ 3.14% NiEq which equates to 49,100 tonnes contained nickel, 10,600 tonnes contained copper and 205,000 ounces of contained PGEs. The Mineral Resources have been prepared by a Competent Person as named in that release.

## Mining Method

The underground mining method selected for the Rosie scoping study is overhand longhole stoping using cemented rockfill (CRF). It should be noted that this study is based on very limited geotechnical data, and the mining method and modifying factors applied have simply been extrapolated from mines with a similar geology. Sill pillars were modelled every 6 levels apart (~90 m vertically) to permit concurrent production in independent mining areas prior to development reaching the lower extent of the orebody (see Figure 4). Where no CRF could



be placed (usually at the top-level blind stopes with no top-level access) rib pillars have been positioned to provide stope wall stability (see Figure 2).

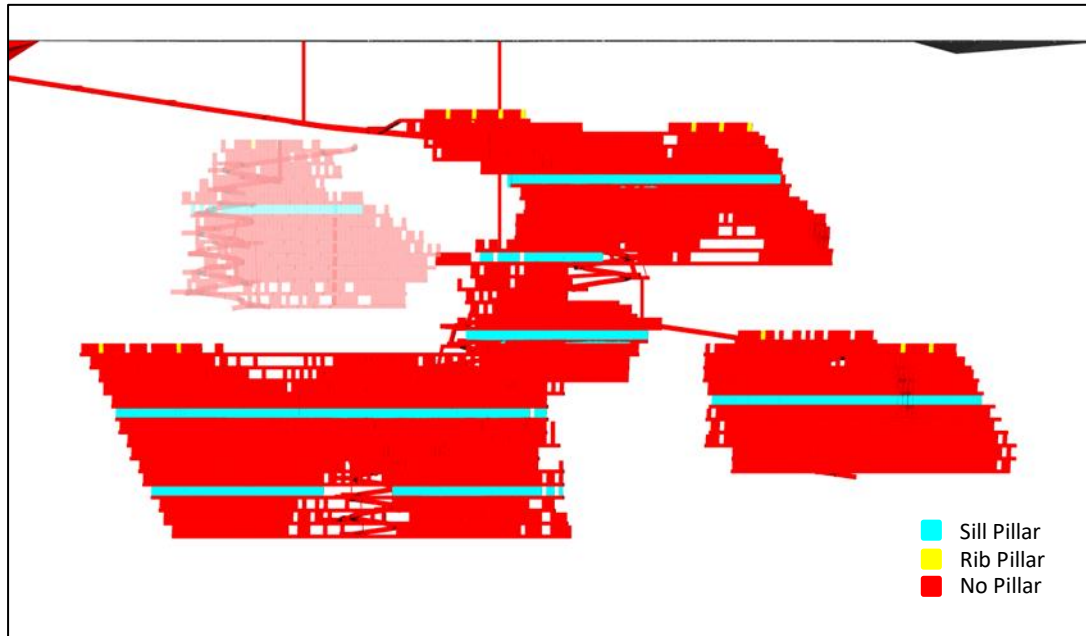


Figure 4: Longsection with Pillar Locations

No mining method comparison studies were completed at this stage of study, however this should be reviewed in more detailed analysis.

### Capital Development and Access

A boxcut was designed to the northwest of the deposit to provide access to the underground workings. Its position provides the shallowest point at which fresh rock can be exposed thus minimising the volume of material required to be mined before tunnel access can be gained. This area was identified from the information provided by holes drilled in the area west of the Rosie deposit. They indicated that fresh rock exists at 30m below the surface at this point. Current lithological data indicates that in most other areas surrounding the Rosie deposit the depth of fresh rock below the surface can range from 50 – 80 m.

It should be noted that the slope angles of the boxcut were not determined from any geotechnical analysis but rather used conservative angles obtained from Entech's database of similar projects. The main purpose of the boxcut design is as an indicator for position and to provide a volume estimate used in the cost calculation in financial model.



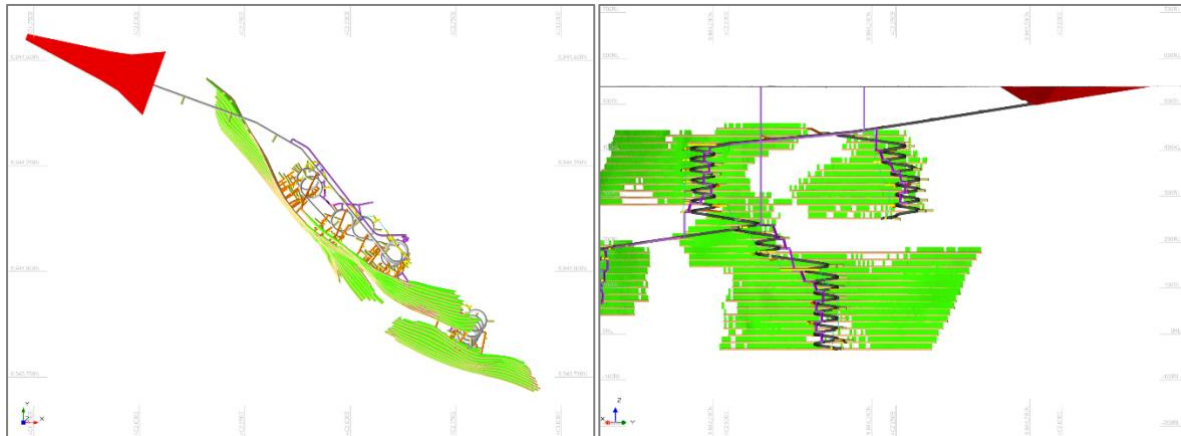


Figure 5: Boxcut Location

From the boxcut a decline provides access to all levels of the deposit at a gradient of -1:7. It has been designed with a nominal 5.5 m wide x 5.8 m high arched profile which is typical for mines in Australia to provide enough room for a loaded 50 t truck and surrounding services (see Figure 5).

Two primary ventilation shafts were added for the purpose of drawing return air to the surface. Return air raise 1 (see Figure 6) provides the initial primary airflow once the decline descends to that point from boxcut. When the decline splits into two at the 225 mRL return air raise 2 will provide additional primary airflow to the lower northern mining district.

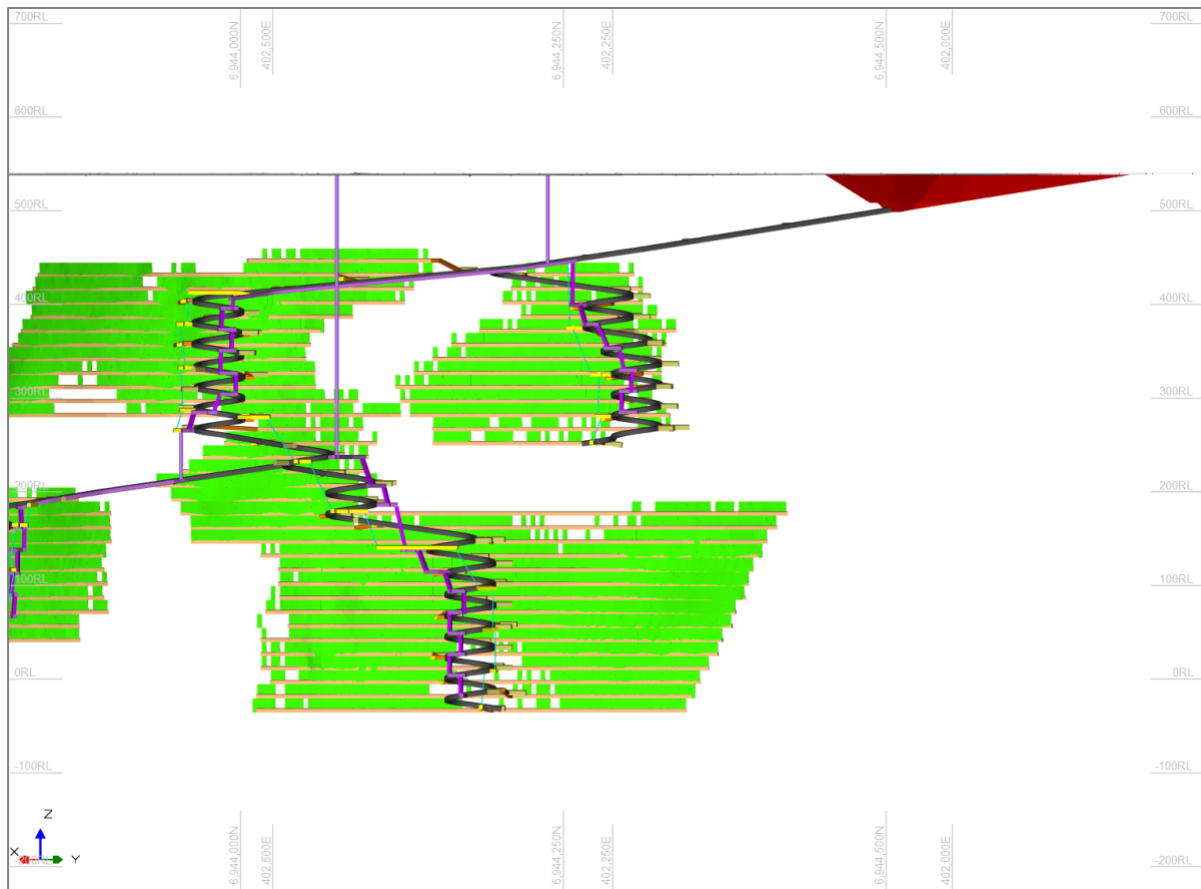


Figure 6: Ventilation Raise Locations

It should be noted that the surface shaft designs generated by Entech are indicative only, to be used for the purposes of scoping study scheduling and costing. No geotechnical analysis or ventilation modelling was undertaken on the designs.

Each level consists of a single access drive from the decline to the ore drives at a minimum length of 40 m to allow for adequate stand-off distance between declines and stoping for geotechnical purposes (see Figure 7).

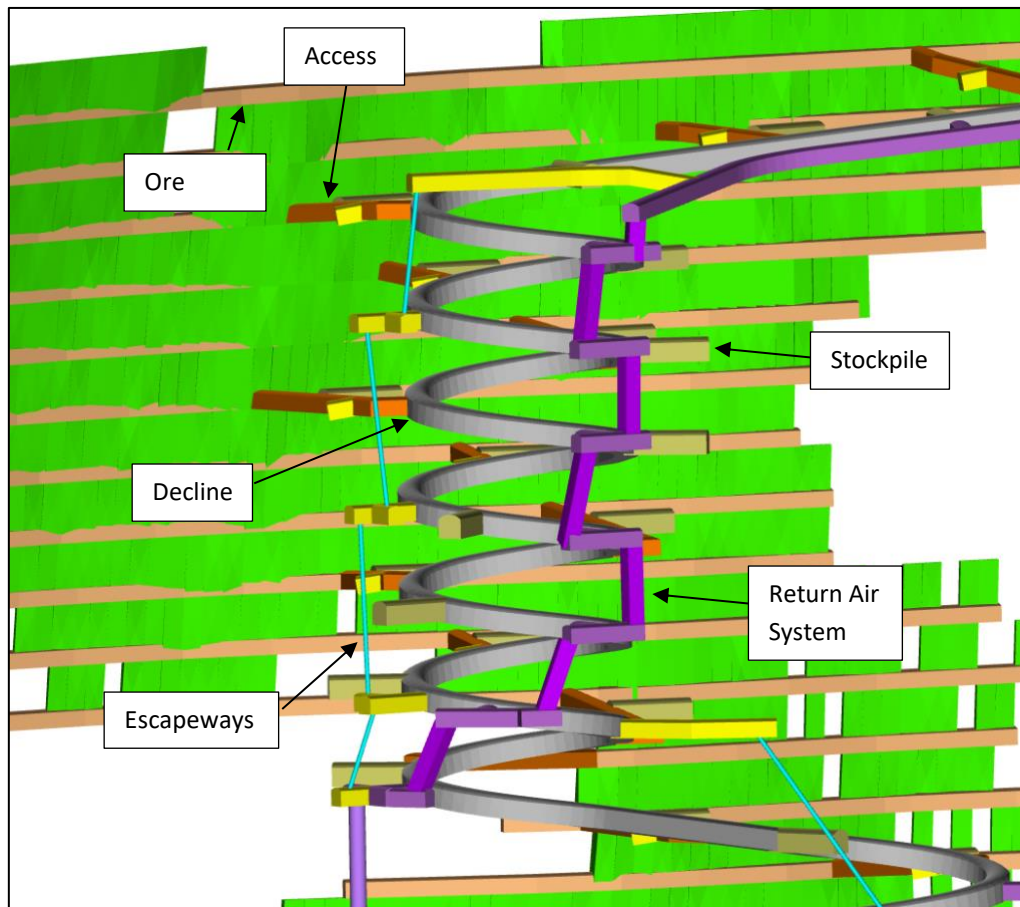


Figure 7: Isometric View of Level Design

### Underground Mine Schedule

The top priority for the mine schedule was to explore the maximum achievable steady state ore production. For development, this meant advancing the declines as quickly as practicable while still constrained to resource limits. To establish as many mining fronts as possible to provide multiple ore sources (and therefore a steady ore stream) priority was given to those levels which lead to the commencement of stoping activities on the lowest parts of each mining block. Figure 8 demonstrates this concept.

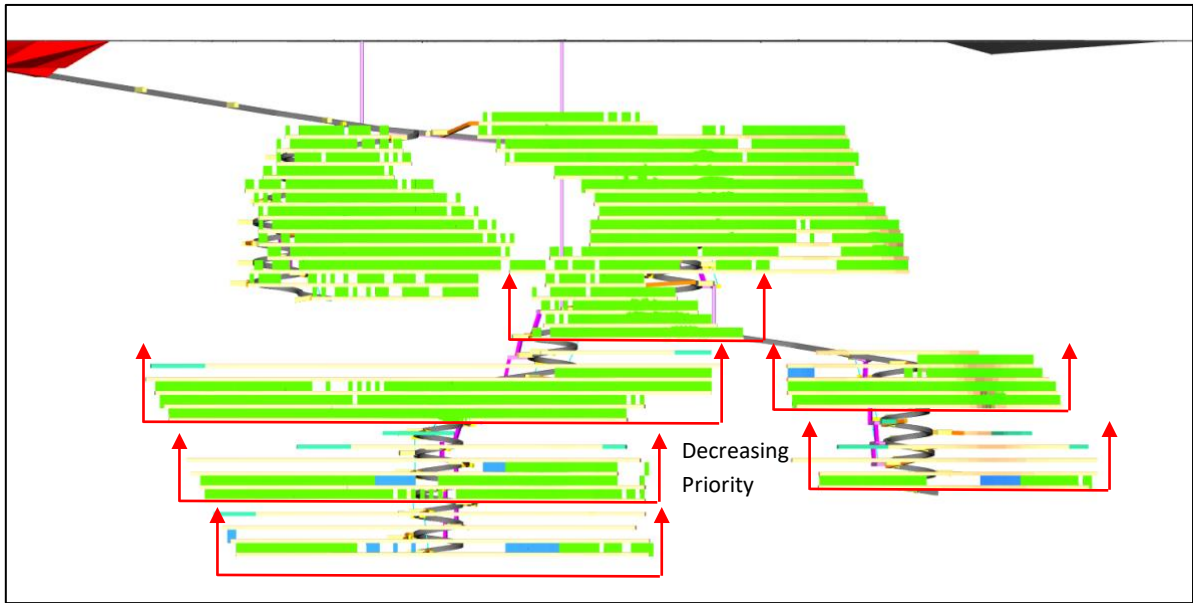


Figure 8: Schedule Snapshot Showing Stopping Fronts

Individual activity rates are based on typical rates achieved in similar mines in Australia with similar equipment. Table 3 outlines the rate for each activity.

Activity	Rate
Decline	120m / mth
Other Lateral Development	60m / mth
Vertical Development	6m / d
Stope Drilling	250m / d
Stope Boggie	1,000t / d
Stope Backfilling	700m <sup>3</sup> / d

Table 3: Schedule Activity Rates

Total rate limits for each type of activity are a function of the equipment pools assigned to them. Flexing of the number of resources assigned permitted an investigation into which factors of the schedule are inhibiting ore production. Fleet quantity and productivity estimates are provided in Table 4.

Activity	Rate	Number Of (Max.)
Jumbo	250m / mth	2
Production	1,000t / d	2
Longhole Drilling	250m / d	2
CRF Backfilling	700m <sup>3</sup> / d	2

Table 4: Schedule Resource Rates

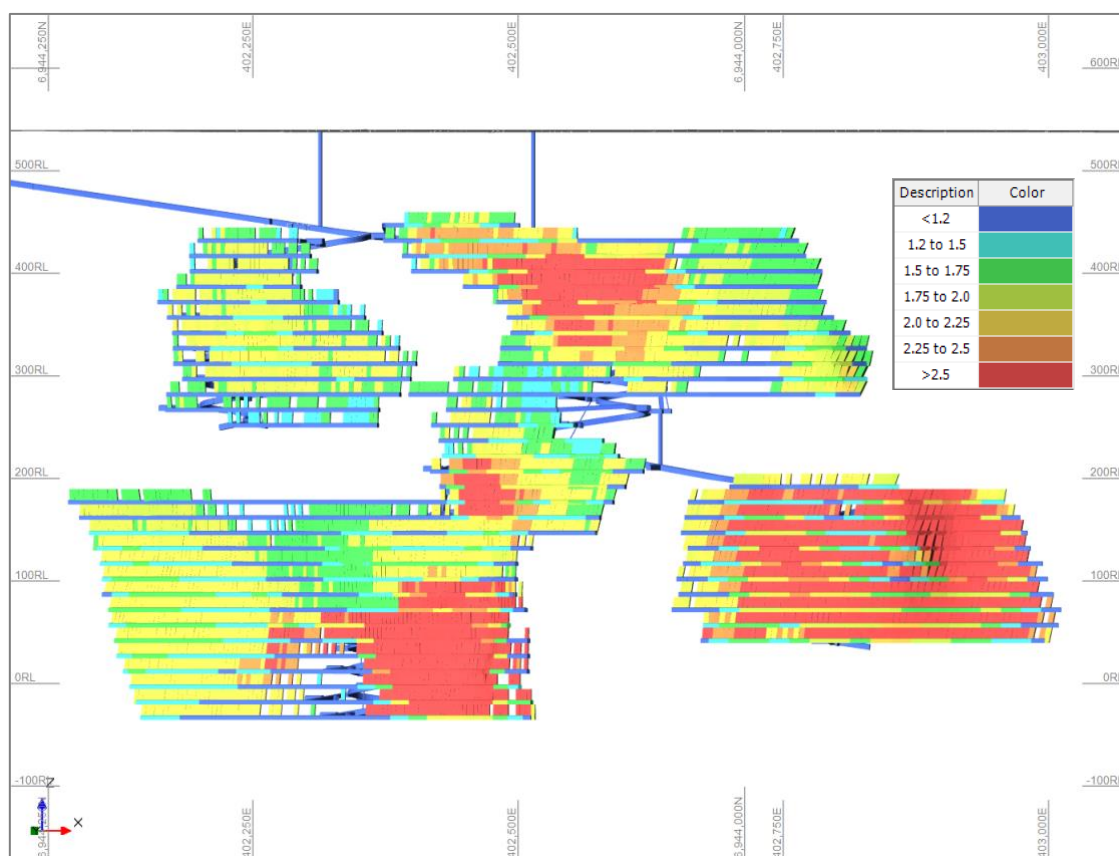


Figure 9: Stope Grade Heat Map

Figure 9 shows a long sectional view of the planned mining areas overlain by the stope grade heat map. Figure 10 and Table 5 show the mine ore production rate and ore grade over time and Figure 11 shows it by resource category. Over the life of mine 73% of ore is sourced from the indicated category and 27% is sourced from the inferred category. As shown, the production rate does not exceed ~30 kt/month until about month 40 once the lower zones are reached. There is also a general trend of increasing overall grade as the stopes on the lower levels are mined.

Item	Unit	Year								Total
		1	2	3	4	5	6	7	8	
Capital Lateral Development	m	1,501	2,255	1,524	2,350	1,810	1,159	140	-	<b>10,739</b>
Operating Lateral Development	m	511	3,500	4,232	2,838	3,938	4,572	2,899	-	<b>22,490</b>
<i>Total Lateral Development</i>	m	2,012	5,755	5,756	5,188	5,748	5,731	3,039	-	<b>33,229</b>
Mined Ore Tonnes	kt	8.6	220.4	356.8	328.5	431.6	444.8	475.4	261.1	<b>2,527.4</b>
- Indicated	Kt	3.4	218.8	348.8	322.0	335.7	262.2	190.7	160.3	<b>1,841.9</b>
- Inferred	kt	5.2	1.6	8.1	6.5	95.9	182.6	284.7	100.8	<b>685.4</b>
Mined Ore NiEq Grade	% NiEq	1.3	1.7	1.6	1.8	2.1	2.4	2.4	2.6	<b>2.1</b>
Production Drilling	km	-	25.2	56.2	68.8	77.8	76.6	106.5	56.8	<b>497.8</b>
CRF Backfilling	km <sup>3</sup>	-	68.5	165.5	185.6	213.0	209.2	287.4	240.5	<b>1,369.8</b>

Table 5: final Schedule Physicals

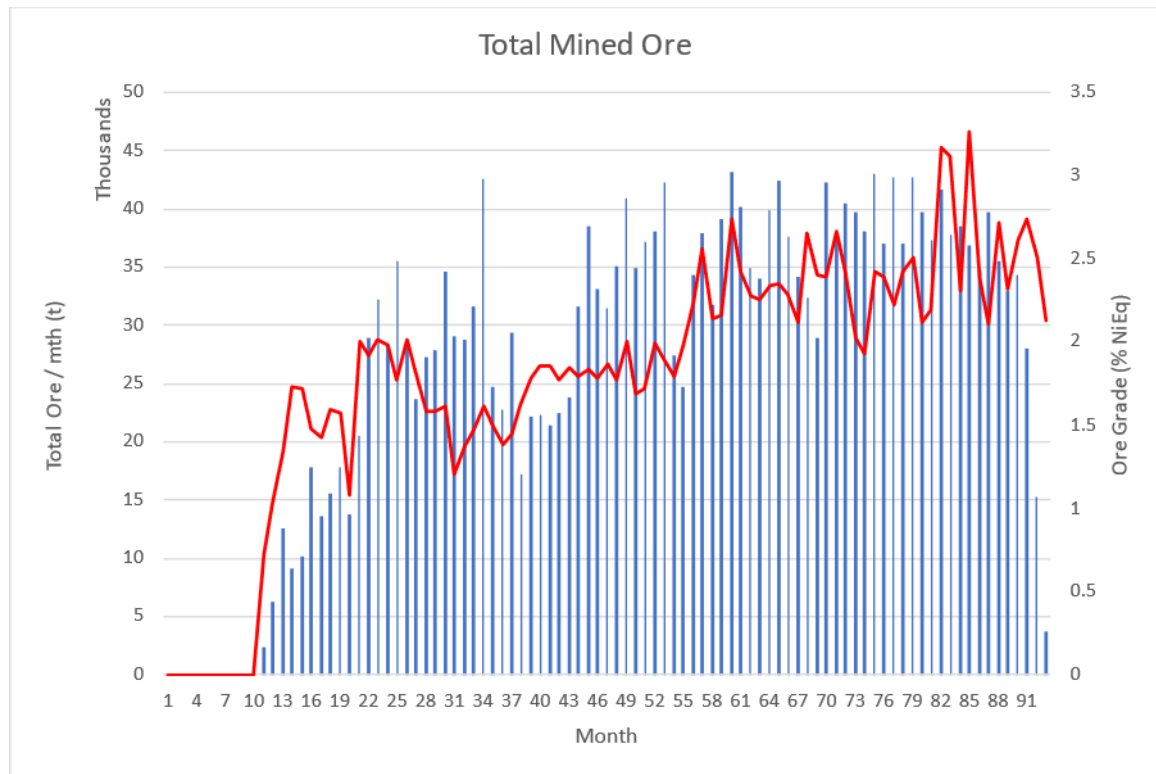


Figure 10: Ore Production by Month

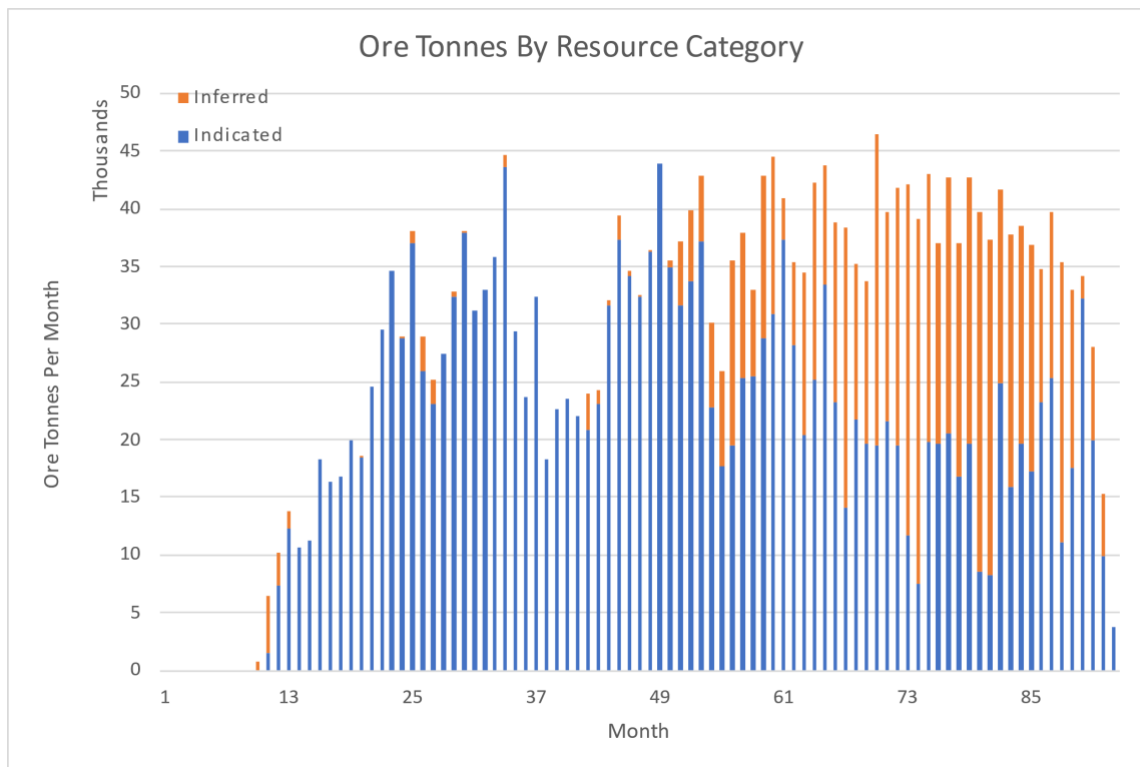


Figure 11: Ore production by Month and Resource Category

## Pre-Production Capital

Pre-production capital is expenditure prior to processing of first ore scheduled early in year 2 of the project. Capital items were included from applicable projects in the Entech database and the assumed existing level of infrastructure. Table 6 outlines included costs.

Capital Item	Cost
Site Establishment	\$3.5M
Boxcut Excavation and Works	\$4.2M
Service Infrastructure	\$1.4M
Underground Development	\$8.6M
<b>Total</b>	<b>\$17.7M</b>

Table 6: Pre-Production Capital Costs

Site establishment includes costs for setup of roads and drainage, surface infrastructure (including offices and workshops) and rock dumps. The boxcut cost was calculated from the designed volume and a unit cost of \$12 /bcm. Underground development includes decline, level development and vertical development required to establish access to the first ore drives.

## Break Even Analysis

A break-even analysis, as show in Figure 12, states that at a nickel price of US\$ 6.1 /lb the project begins to return a positive NPV.

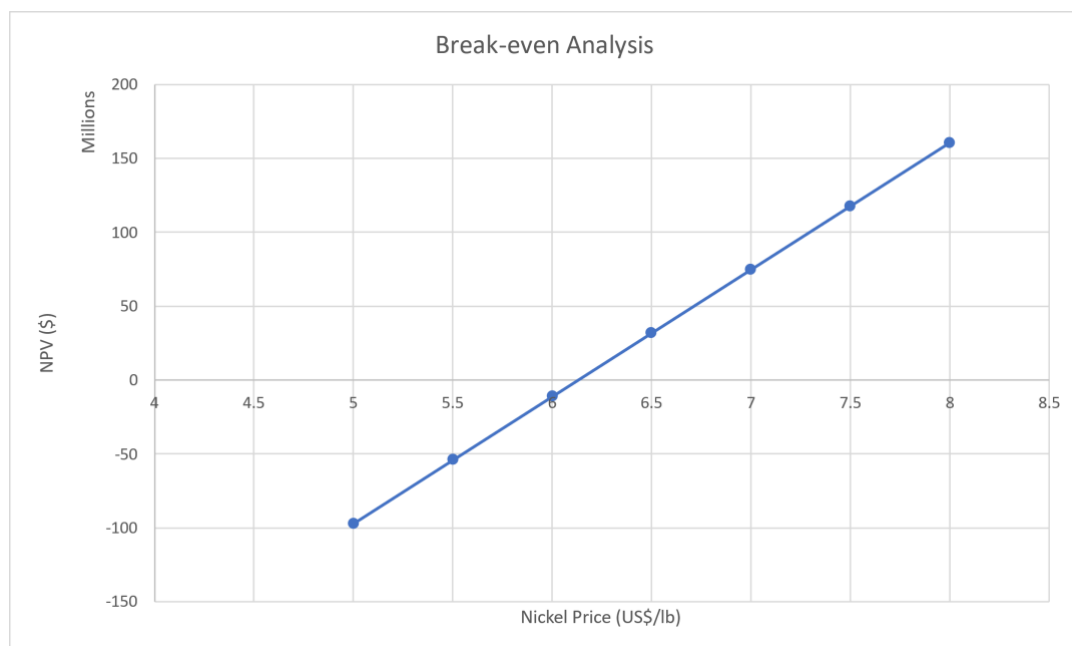


Figure 12: Break-even Analysis Graph



## Sensitivity Analysis

A number of key cost model parameters were flexed to determine and rate their impact on the Net Present Value (NPV) of the project. As Figure 13 shows, nickel price is rated as having the greatest possible impact on profitability, followed by nickel grades as driven by the resource model.

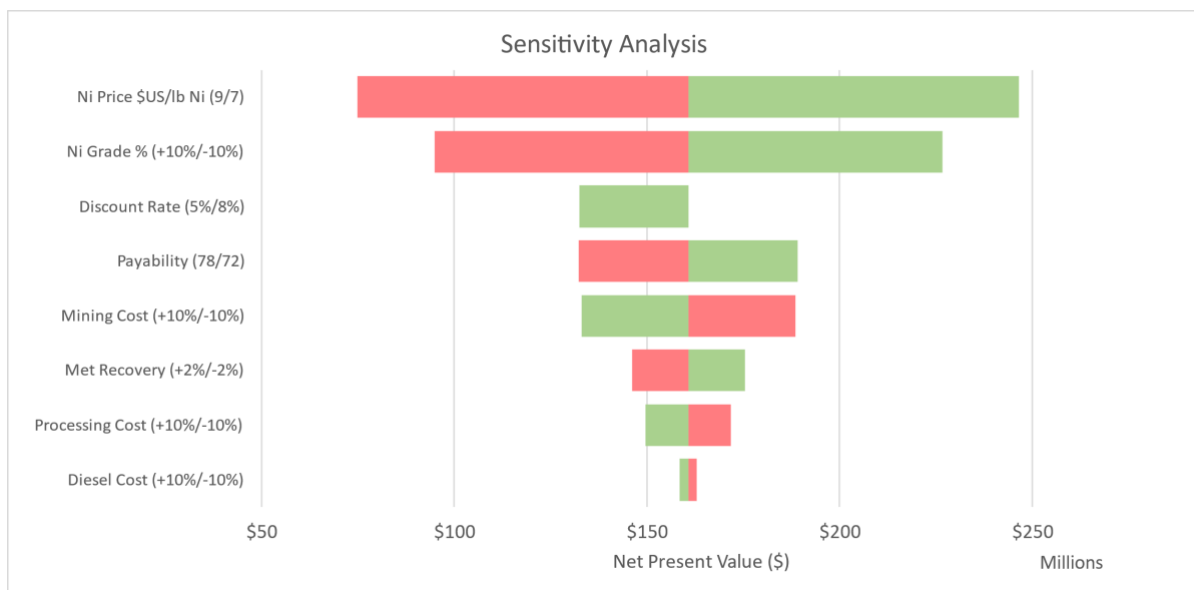


Figure 13: Sensitivity Analysis Graph

## Scenario Analysis

Two additional cost model scenarios were generated where the following parameters were flexed in the range of  $\pm 10\%$  of the originally determined values (Base Case):

- Nickel price;
- Metallurgical recovery;
- Mining cost; and
- Capital expenditure.

The resulting financial outcomes for each case are outlined in Table 7.

Parameter	Low Case	Base Case	High Case
Ore Mined (Mt)	2.5	2.5	2.5
Mined Grade (% NiEq)	2.1	2.1	2.1
Mined NiEq Metal (kt)	53	53	53
Project Life (yrs)	8	8	8
Ni Price \$US/lb	7.50	8.00	8.50
Met Recovery (%)	88	90	90
Capital Expenditure (\$/t ore)	49.60	45.09	45.09
Mining Cost (\$/t ore)	151.22	137.47	137.47
Processing Cost (\$/t ore)	60.50	55.00	55.00
Revenue (Net Payability) (\$M)	828.9	904.2	960.8
Total Project Costs (\$M)	738	681.2	683.1
Pre-tax Cashflow (\$M)	90.9	223	277.6
Pre-tax NPV (\$M)	55.5	160.7	203.7
IRR (%)	21.3	54.1	66.5
Payback Period (yrs)	~6	~4.5	~4

Table 7: Scenario Analysis

## Financial Results

Based on the revenue assumptions in Table 1, key input parameters in Table 2 (assuming a generic toll treatment arrangement) and a pre-production capital of \$18M, the project has a cashflow of \$223M (excluding corporate costs and tax) and a Net Present Value (NPV) of \$161M at a discount rate of 5% over a mine life of 8 years with project payback achieved after 4.5 years (see Table 8). These results have been ranged based on varying nickel prices as displayed in Table 7.

Item	Unit	Year								Total
		1	2	3	4	5	6	7	8	
Revenue	\$M	-	45.7	105	90.1	139.8	181	193.1	149.6	<b>904.2</b>
Royalty	\$M	-	1.5	3.5	3	4.7	6	6.4	5	<b>30.1</b>
Capital Costs	\$M	17.7	17.1	12.2	20.8	14.1	12	19.9	0.1	<b>114</b>
Operating Costs	\$M	1.9	38.5	79.7	70	91.2	105.8	103.1	77.1	<b>567.3</b>
<b>Cash Flow</b>	<b>\$M</b>	<b>(19.6)</b>	<b>(10)</b>	<b>13.1</b>	<b>(0.7)</b>	<b>34.5</b>	<b>63.2</b>	<b>70</b>	<b>72.4</b>	<b>223</b>

Table 8: Projected Cashflow Per Annum



## Funding

To achieve the potential mine development outcomes indicated in the Scoping Study, funding in the order of A\$18 million for pre-production capital will likely be required. There is no certainty that Duketon will be able to raise that amount of funding when required. It is also possible that such funding may only be available on terms that may be dilutive to, or otherwise affect the value of the Company's existing shares. It is also possible that the Duketon could pursue other value realisation strategies that may include project finance, sale, partial sale of the project or other commercial paths. These strategies may materially reduce Duketon's proportionate ownership of the Rosie Nickel Project.

It is anticipated that finance will be sourced through a combination of cash from existing balances, equity from existing shareholders, new equity investment and/or debt through appropriate providers.

The Company's cash and listed investments were approximately \$27.5M at 31 December 2020 (see ASX announcement 29 January 2021).

## Authorised for release by:

**Stuart Fogarty**

Duketon Mining Limited - Managing Director

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## COMPETENT PERSON STATEMENT

*The information in this report that relates to Mineral Resources for the Rosie Nickel Deposit is based on, and fairly represents, information and supporting documentation prepared by Mr Michael Job who is a Fellow of the Australasian Institute of Mining and Metallurgy. At the time that the Mineral Resources were compiled, Mr Job was a full-time employee of Cube Consulting Pty Ltd, an independent mining consultancy. Mr Job 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'. Mr Job has provided his written consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

## PREVIOUSLY REPORTED INFORMATION

*The information in the announcement that relates to Mineral Resources for the Rosie Mineral Resource is extracted from the Company's ASX announcement dated 4 March 2021 and is available to view on the Company's website ([www.duketonmining.com.au](http://www.duketonmining.com.au)). 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 and technical parameters underpinning the estimates 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.*

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*This report includes information that relates to metallurgical results which was information extracted from the Company's previous ASX announcements dated 10 July 2020 and 8 July 2020*

*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. The Company confirms that the form and context in which any Competent Person's findings are presented have not been materially modified from the original market announcements.*

## APPENDIX 1 MATERIAL ASSUMPTIONS

Material Assumptions	Commentary																		
Study Status	<p>The Study, including capital estimates, mining and off take prices, was completed to an accuracy of +/- 30% and was undertaken based only on underground mining from existing resources.</p> <p>The metallurgical testwork carried out to date indicates the nickel, copper cobalt and several PGE's can be satisfactorily recovered from the Rosie Mineral Resource using conventional crushing grinding and flotation to concentrate. The test work is considered sufficient to determine that the Rosie Mineral Resource represents a deposit with potential for economic extraction.</p>																		
Mineral Resources used in the Study	<p>The Study uses the Rosie Mineral Resource announced to the ASX on 4 March 2021. The total resource was estimated at <b>2.56 Mt @ 3.14% NiEq</b>. 66% of the Rosie Mineral Resource is in the Indicated category.</p> <p style="text-align: center;"><b>Rosie Mineral Resource Statement &gt;1.0% NiEq</b></p> <table><tr><th>Resource Category</th><th>Tonnes (kt)</th><th>Ni%</th><th>NiEq_% <sup>(1)</sup></th></tr><tr><td>Indicated</td><td>1,707</td><td>2.01</td><td>3.21</td></tr><tr><td>Inferred</td><td>850</td><td>1.74</td><td>3.01</td></tr><tr><td><b>TOTAL</b></td><td><b>2,557</b></td><td><b>1.92</b></td><td><b>3.14</b></td></tr></table> <p>(1) Assumptions for the nickel equivalent are: Prices (in USD) \$8.00/lb Ni, \$3.65/lb Cu, \$15.30/lb Co, \$1,100/oz Pt, \$2,300/oz Pd and \$15,500/oz Rh. Recovery assumptions from metallurgical test work are: Pentlandite domain 96.9% Ni, 99.5% Cu, 95.1% Co, 78.2% Pt, 97.6% Pd and 83.4% Rh. Violarite domain 88.7% Ni, 94.5% Cu, 88.5% Co, 57.6% Pt, 87.3% Pd and 64.8% Rh.</p>	Resource Category	Tonnes (kt)	Ni%	NiEq_% <sup>(1)</sup>	Indicated	1,707	2.01	3.21	Inferred	850	1.74	3.01	<b>TOTAL</b>	<b>2,557</b>	<b>1.92</b>	<b>3.14</b>		
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<b>TOTAL</b>	<b>2,557</b>	<b>1.92</b>	<b>3.14</b>																
Revenue Assumptions	<p>Revenue assumptions are:</p> <table><tr><th>Item</th><th>Unit</th><th>Ni</th></tr><tr><td>Price</td><td>US\$/lb</td><td>\$8.00</td></tr><tr><td>Exchange Rate</td><td>US\$/AU\$</td><td>\$0.70</td></tr><tr><td>Met. Recovery</td><td>%</td><td>90%</td></tr><tr><td>Payability</td><td>%</td><td>75%</td></tr><tr><td>Royalty</td><td>%</td><td>2.5%</td></tr></table>	Item	Unit	Ni	Price	US\$/lb	\$8.00	Exchange Rate	US\$/AU\$	\$0.70	Met. Recovery	%	90%	Payability	%	75%	Royalty	%	2.5%
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Mining Factors or Assumptions	<p>Scheduled activity rates are:</p> <table><tr><th>Activity</th><th>Rate</th></tr><tr><td>Decline</td><td>120m / mth</td></tr><tr><td>Other Lateral Development</td><td>60m / mth</td></tr><tr><td>Vertical Development</td><td>6m / d</td></tr></table>	Activity	Rate	Decline	120m / mth	Other Lateral Development	60m / mth	Vertical Development	6m / d										
Activity	Rate																		
Decline	120m / mth																		
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Material Assumptions	Commentary			
		Stope Drilling	250m / d	
		Stope Boggging	1,000t / d	
		Stope Backfilling	700m³ / d	
	Dilution = +0.5m to stope width			
	Mining Recovery = 95%			
	Scheduled resource rates are as follows:			
		Activity	Rate	Number Of (Max.)
		Jumbo	250m / mth	2
		Production	1,000t / d	2
		Longhole Drilling	250m / d	2
	CRF Backfilling	700m3 / d	2	
Other constraints on schedule are:				
<ul style="list-style-type: none"><li>• Stoping on a level cannot commence until primary ventilation and secondary egress for that level has been established,</li><li>• Except in the case where a sill pillar exists, stoping on a level cannot commence until production activities on the level below have been completed.</li></ul>				
Metallurgical Factors or Assumptions	The Study uses metallurgical results as announced to the ASX on 8 & 10 July 2020. These results include the following:			
	<ul style="list-style-type: none"><li>• Nickel recovery of up to 97% using conventional flotation techniques</li><li>• Nickel concentrate grading 16% Ni and 7g/t total PGE's achieved from massive ore</li><li>• Bulk concentrate grading as high as 15% (Ni + Cu) and 12g/t total PGE's were achieved from matrix violarite ore</li></ul>			
Marketing and Processing Assumptions	Revenues, surface haulage and downstream costs have been assumed based on a generic toll treatment agreement as follows:			
	<ul style="list-style-type: none"><li>• 75% Payability. Consensus ranges from 70-80% (Entech Data)</li><li>• Surface haulage \$10/t ore hauled; and</li><li>• Processing/penalties/general and administration costs \$61/t ore milled.</li></ul>			

Material Assumptions	Commentary																																	
	There is no toll treating nor offtake agreement in place at the time of this Study.																																	
Capital Costs	<p>Pre-production capital is expenditure prior to processing of first ore scheduled early year 2 of the project. Capital items were included from applicable projects in the Entech database and the assumed existing level of infrastructure.</p> <table><tr><th>Capital Item</th><th>Cost</th></tr><tr><td>Site Establishment</td><td>\$3.5M</td></tr><tr><td>Boxcut Excavation and Works</td><td>\$4.2M</td></tr><tr><td>Service Infrastructure</td><td>\$1.4M</td></tr><tr><td>Underground Development</td><td>\$8.6M</td></tr><tr><td>Total</td><td>\$17.7M</td></tr></table> <p>Site establishment includes costs for setup of roads and drainage, surface infrastructure (including offices and workshops) and rock dumps.</p> <p>The boxcut cost was calculated from the designed volume and a unit cost of \$12 /bcm.</p> <p>Underground development includes decline, level development and vertical development required to establish access to the first ore drives.</p>	Capital Item	Cost	Site Establishment	\$3.5M	Boxcut Excavation and Works	\$4.2M	Service Infrastructure	\$1.4M	Underground Development	\$8.6M	Total	\$17.7M																					
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Operating Costs	See Mining Cost section below.																																	
Nickel Price	The Study used a base case nickel price of \$8.00/lb. At the time the financial model was being compiled this was close to and at times under the spot price and also below the long-term average consensus price at the time.																																	
Mining Costs	<p>Mining costs for the Rosie financial analysis were determined from recent applicable detailed underground mining projects in the Entech database. Key unit costs assumed are summarised below:</p> <table><tr><th>Item</th><th>Unit</th><th>Comment</th></tr><tr><td>Decline Dev. (5.5mW x 5.8mH)</td><td>\$/m</td><td>\$4,000</td></tr><tr><td>Lateral Dev. (5.5mW x 5.8mH)</td><td>\$/m</td><td>\$3,900</td></tr><tr><td>Lateral Dev (4.5mW x 4.5mH)</td><td>\$/m</td><td>\$3,000</td></tr><tr><td>Dev. Stripping</td><td>\$/m<sup>3</sup></td><td>\$75</td></tr><tr><td>Raiseboring</td><td>\$/m</td><td>\$5,000</td></tr><tr><td>Escapeway Raise</td><td>\$/m</td><td>\$2,500</td></tr><tr><td>Longhole Drilling</td><td>\$/m</td><td>\$40</td></tr><tr><td>Cemented Rockfill Placed</td><td>\$/t placed</td><td>\$26 - \$97</td></tr><tr><td>Truck Haulage</td><td>\$/tkm</td><td>\$4.40 - \$5.50</td></tr><tr><td>Power Cost</td><td>\$/kWh</td><td>\$0.28</td></tr></table>	Item	Unit	Comment	Decline Dev. (5.5mW x 5.8mH)	\$/m	\$4,000	Lateral Dev. (5.5mW x 5.8mH)	\$/m	\$3,900	Lateral Dev (4.5mW x 4.5mH)	\$/m	\$3,000	Dev. Stripping	\$/m <sup>3</sup>	\$75	Raiseboring	\$/m	\$5,000	Escapeway Raise	\$/m	\$2,500	Longhole Drilling	\$/m	\$40	Cemented Rockfill Placed	\$/t placed	\$26 - \$97	Truck Haulage	\$/tkm	\$4.40 - \$5.50	Power Cost	\$/kWh	\$0.28
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Economic Assumptions	A discount rate of 5% has been used for financial modelling. This number was selected as a generic cost of capital and is considered as a sensible discount rate for funding a project within Western Australia. The Study																																	



Material Assumptions	Commentary																																																				
	outcome has been tested for key financial inputs including the discount rate. This is shown in Figure 13 in the Sensitivity Analysis section of the document.																																																				
Infrastructure	Infrastructure on site would include but is not limited to roads, drainage, office, workshops and rock dumps.																																																				
Geotechnical Assumptions	The Study is based on very limited geotechnical data. The mining method and modifying factors applied have simply been extrapolated from mines with a similar geology.																																																				
Cut-Off Parameters	<p>Cut-off grades were determined based on mining costs from the Entech database and processing and revenue assumptions determined in discussions with the Company.</p> <p>Recoveries were separated into two distinct domains: a pentlandite dominant 'Massive' domain and a violarite dominant 'Upper' domain. Accordingly, two separate cut-off grades were calculated for these two domains.</p> <table><tr><th>Parameter</th><th>Unit</th><th>Pentlandite</th><th>Violarite</th></tr><tr><td>Nickel Price</td><td>US\$/lb</td><td>\$8.00</td><td>\$8.00</td></tr><tr><td>Exchange Rate</td><td>US\$/AU\$</td><td>\$0.70</td><td>\$0.70</td></tr><tr><td>Concentrator Recovery</td><td>%</td><td>97%</td><td>89%</td></tr><tr><td>Payability</td><td>%</td><td>75%</td><td>75%</td></tr><tr><td>Royalty</td><td>%</td><td>2.5%</td><td>2.5%</td></tr><tr><td>Mining Cost</td><td>\$/t ore</td><td>\$152.11</td><td>\$152.11</td></tr><tr><td>Surface Haulage Cost</td><td>\$/t ore</td><td>\$12.63</td><td>\$12.63</td></tr><tr><td>Processing Cost</td><td>\$/t ore</td><td>\$53.22</td><td>\$53.22</td></tr><tr><td>Administration Cost</td><td>\$/t ore</td><td>\$6.49</td><td>\$6.49</td></tr><tr><td>Sustaining Capital Cost</td><td>\$/t ore</td><td>\$3.50</td><td>\$3.50</td></tr><tr><td>Conc. Transport Cost</td><td>\$/t ore</td><td>\$17.31</td><td>\$17.31</td></tr><tr><td>Fully Costed Final COG</td><td>% Ni</td><td>1.4%</td><td>1.6%</td></tr></table>	Parameter	Unit	Pentlandite	Violarite	Nickel Price	US\$/lb	\$8.00	\$8.00	Exchange Rate	US\$/AU\$	\$0.70	\$0.70	Concentrator Recovery	%	97%	89%	Payability	%	75%	75%	Royalty	%	2.5%	2.5%	Mining Cost	\$/t ore	\$152.11	\$152.11	Surface Haulage Cost	\$/t ore	\$12.63	\$12.63	Processing Cost	\$/t ore	\$53.22	\$53.22	Administration Cost	\$/t ore	\$6.49	\$6.49	Sustaining Capital Cost	\$/t ore	\$3.50	\$3.50	Conc. Transport Cost	\$/t ore	\$17.31	\$17.31	Fully Costed Final COG	% Ni	1.4%	1.6%
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Environmental	It is assumed for the purpose of this Study that there are no significant environmental impediments anticipated for the project																																																				
Community and Social	It is assumed for the purpose of this Study that there are no significant community or social impediments anticipated for the project																																																				
Legal and Permitting	<p>The Project is located on a granted mining tenement with no known native title factors which would impede development or affect economics. It is assumed for the purpose of this Study that there are no significant permitting impediments anticipated for the project.</p> <p>There are no other known legal impediments anticipated for the project</p>																																																				
Schedule and project timing	The next stage of project development commences with a number of options studied that will be fed into a Pre-feasibility Study. When that is completed a timeframe for development and production will be finalised and communicated.																																																				
Audits and Reviews	The Study was reviewed internally by Company personnel																																																				

