# **ASX ANNOUNCEMENT**



25 March 2020

# MINCOR NICKEL OPERATIONS DEFINITIVE FEASIBILITY STUDY RESULTS

DFS demonstrates an economically robust project with low start-up capital requirements, a pretax IRR of 98%, low unit cash costs and peak annual nickel-in-concentrate production of >16,000t

## **Key Highlights:**

#### Strong financial returns<sup>1</sup>

- Pre-tax NPV<sub>7%</sub> of \$305m and 98% IRR
- EBITDA totalling \$585m
- Pre-tax and post-tax free cash flow generation of \$407m and \$315m respectively
- Capital payback of 12 months from first nickel concentrate production

### **Low cost operations**

- Life of Mine ("LOM") unit cash costs of operations of \$3.36/lb (US\$2.35/lb), with Cassini averaging \$2.71/lb (US\$1.90/lb)
- LOM AISC of \$4.47/lb (US\$3.13/lb), with Cassini averaging \$3.81/lb (US\$2.67/lb)

#### Low pre-production and LOM CAPEX

- Pre-production CAPEX of \$68m, mainly associated with mine development and related infrastructure
- Project peak cash requirement of \$97m including working capital; LOM CAPEX of \$179m
- Funding process well advanced with domestic and international institutions, with binding credit-approved terms sheets expected in the June 2020 quarter

#### **Physical parameters**

- Initial 5-year operation of 2.5Mt @ 2.9% Ni for 71kt of nickel-in-ore and 5kt of copper-in-ore respectively
- Mining inventory comprises 92% Ore Reserves (announced to ASX today) and 8% Inferred Mineral Resources<sup>2</sup>
- LOM nickel-in-concentrate production of 63kt (14kt annual average grading 14.9% Ni) with first production scheduled for the Dec quarter 2021, assuming mine development commences in the Sept quarter 2020
- Peak annual nickel-in-concentrate production of 16.4kt and 16.3kt in FY23 and FY24 respectively

# Significant upside potential from the base case outlined in the DFS

- Cassini delivered its second-best intersection to date on 6 January 2020 with <u>17.6m at 5.0% Ni</u>, which is outside the current Mineral Resource boundary and excluded from the DFS
- Two diamond drill rigs currently operating at Cassini, targeting potential repeats to the north and conversion of Inferred Mineral Resources into the Indicated category
- Exploration planned from underground at the Northern Operations (~1Mt of historical nickel production) targeting extensions of Durkin North and the 1.1km of untested basal contact between Long and Durkin

<sup>&</sup>lt;sup>1</sup> Unless otherwise stated, all cash flows are in Australian dollars. All years are financial years. All cash costs are calculated on a 100% payability basis. NPV is calculated from 1 July 2020 using a \$10.20/lb nickel price (US\$7.14/lb at an 0.70 AUD:USD exchange rate).

<sup>&</sup>lt;sup>2</sup> Note there is a low level of geographical confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.



Mincor Resources NL (ASX: MCR, "Mincor" or the "Company") is pleased to announce the results of the Definitive Feasibility Study ("DFS") on its integrated nickel re-start plan in the Kambalda District of Western Australia.

The Mincor Nickel Operations ("MNO" or "the Project") DFS confirms the potential to develop a 5-year operation producing 63,000 tonnes of recovered nickel-in-concentrate with relatively low capital intensity, as demonstrated by the estimated pre-production capital expenditure ("CAPEX") of \$68 million and pre-tax IRR of 98%, and attractive financial returns.

Based on a forecast nickel price of \$10.20/lb (US\$7.14/lb at an exchange rate of 0.70 AUD:USD), which is largely founded on medium to long term consensus pricing, MNO is expected to generate significant EBITDA and free cashflow at a low forecast all-in sustaining cost ("AISC").

The flagship Cassini mine (a greenfields discovery by Mincor) is forecast to contribute 56% of the total nickel-inconcentrate production over the initial life of the Project. MNO is expected to consist of Cassini and the Northern Operations (Long and Durkin North) at commencement, with the Miitel mine contributing in the back half of the project life.

Importantly, the DFS reflects a starting position only, as potential extensions to the LOM have been identified at Cassini, where recent diamond drilling returned a significant intersection of 17.6m © 5.0% Ni (see ASX Announcement, 6 January 2020) which is outside the current Mineral Resource boundary and has been excluded from the DFS. At the Northern Operations, underground drilling is planned once mine development commences targeting extensions and new discoveries in this well-endowed nickel mining area.

The DFS paves the way for a Final Investment Decision ("FID") by the Board of Mincor early in the September quarter, which would result in first nickel-in-concentrate production being achieved in the second half of CY2021. Mincor believes that this production timeline could be well timed to coincide with the forecast ramp-up in demand for Class 1 nickel for the burgeoning electric vehicle ("EV") battery market.

The Board of Mincor notes the current uncertainty associated with the impact of COVID-19 and the rapidly evolving nature of this pandemic. While it is not possible to forecast the implications of the COVID-19 crisis for new projects, such as Mincor's presented today, we believe the Company is equipped to deal with any potential project impacts stemming from COVID-19 given its strong cash position (detailed below) and nil debt. Key Risks to the Project are outlined on Page 39.

From a funding perspective, Mincor is well placed with \$52 million in cash at bank forecasted for 31 March 2020 and discussions for project funding with various financing partners is well underway. To this end, an Independent Technical Expert (AMC Consultants) was appointed in early March 2020 to undertake a technical due diligence review of the DFS and the process is well advanced. A number of domestic and international financial institutions are currently reviewing the opportunity with Mincor, and the Company is planning for the receipt of binding credit-approved terms sheets during the June 2020 quarter. Mincor and its debt adviser, Orimco, believe the Project has strong credit qualities given:

- the positive outcomes of the DFS;
- the geographic location of MNO;
- Mincor's strong nickel operating history in Kambalda;
- the high-grade nature of Cassini orebody in particular;
- the potential for Cassini to grow considerably given the recent drilling results;
- the Project's low capital intensity; and
- the presence of a Tier-1 processing and off-take counterparty in BHP Nickel West (which also means there is no requirement to construct a plant, a tailings dam and associated infrastructure).



A FID early in the September 2020 quarter would trigger immediate mobilisation of the Company's preferred mining contractor and the commencement of mine development at Cassini and the Northern Operations. The early works program at Cassini announced on 10 February 2020 is well advanced and is expected to be completed in April 2020, resulting in a fully accessible and development ready site.

Mincor Managing Director David Southam said the delivery of a positive DFS on the integrated nickel re-start plan just seven months after executing an Ore Tolling and Offtake Purchase Agreement ("OTCPA") with BHP Nickel West represents an excellent outcome for Shareholders.

"This establishes a clear blueprint for Mincor's return to nickel production at Kambalda, based on an integrated mining and production plan with relatively low capital intensity, low forecast operating costs and attractive financial returns. Importantly, capital expenditure and operating cost estimates in the DFS are based on tendered contract rates provided by the mining contractors," he said.

"I would particularly like to highlight that our greenfields discovery and flagship mine, Cassini, has made an exceptional contribution to the DFS accounting for 56% of the total nickel-in-concentrate production and a low unit cash cost of production of \$2.71/lb (US\$1.90/lb).

"What's important for Shareholders to appreciate is that the release of the DFS is just the beginning for Mincor, as we are already working on extending mine life. We ruled off the Mineral Resource at Cassini for the purposes of the DFS in November 2019, which was used for today's announcement of a maiden Cassini Ore Reserve. Given the spectacular results from recent extensional drilling, we believe there is excellent potential to further increase the Mineral Resource with infill and down plunge drilling. As announced on 18 March 2020, an infill drill program is already underway focused on converting some of the Inferred Mineral Resource at Cassini into the Indicated category, and initial results are very encouraging with hole MDD342 recently intersecting 8.2m @ 7.6% Ni. This is in addition to the high-grade intersection announced on 6 January 2020 of 17.6m @ 5.0% Ni.

"The Northern Operations in Kambalda represent one of the most highly endowed high-grade nickel sulphide mining areas in Australia. Historic ore production from the Northern Operations tenements (Otter Juan and Long mines) totals 23.0mt @ 3.6% for 818kt of contained nickel. We see excellent potential to explore the 1.1km of untested basal contact between Long and Durkin North, taking advantage of underground drilling access that will be created from mining the Long access incline drive to the Durkin orebodies. These orebodies were historically separated by a notional tenement boundary and could not be drilled from surface efficiently.

"Engagement with financial institutions for funding has been encouraging given our low-risk approach to development, low capital intensity, an exceptional counter-party in BHP Nickel West and significant operating history. We expect to provide further updates on the financing process during the June 2020 quarter.

"Our early works program at Cassini is also advancing well in shown in the photo below, which was taken recently of the Cassini box-cut being excavated this month," Mr Southam said.



Figure 1: Box-cut excavation at Cassini in mid-March 2020



Table 1: DFS Key Metrics

Parameter	Units	Project Total	Cassini	Miitel	Northern Operations
Physicals*					
Ore Mined	dmt	2,468,000	1,200,000	427,000	841,000
Head Grade	%	2.9	3.3	2.5	2.5
Ni in ore	t Ni	71,300	39,900	10,500	21,000
Recovery	%	88.5	88.6	88.0	88.6
Concentrate Grade	%	14.9	14.9	16.0	14.2
Ni in Concentrate	t Ni	63,100	35,300	9,200	18,600
Capital Costs					
Pre-Production Capex	A\$m	68	27	-	41
Production LOM Capex	A\$m	111	51	44	16
	A\$m	179	78	44	57
Unit Costs (100% payable basis)					
C1 Cash Cost	A\$/lb	3.36	2.71	4.15	4.19
Royalties	A\$/lb	0.32	0.46	0.30	0.08
Total Operating Costs	A\$/lb	3.68	3.16	4.47	4.26
Sustaining Capital	A\$/lb	0.80	0.65	2.15	0.40
All-in-Sustaining Costs (AISC)	A\$/lb	4.47	3.81	6.62	4.67
Pre-production Capex	A\$/lb	0.49	0.34	0.00	1.00
All-in Costs	A\$/lb	4.96	4.15	6.62	5.67
Financial Metrics					
Total Revenue	A\$m	1,187	669	179	339
Project Cash flow (pre-tax)	A\$m	407	291	31	85
NPV <sub>(7%)</sub> (pre-tax)	A\$m	305	223	19	63
EBITDA	A\$m	585			
IRR (pre-tax)	%	98			
Tax Paid	AŚm	(91)			

Total Revenue	A\$m	1,187
Project Cash flow (pre-tax)	A\$m	407
NPV <sub>(7%)</sub> (pre-tax)	A\$m	305
EBITDA	A\$m	585
IRR (pre-tax)	%	98
Tax Paid	A\$m	(91)
Project Cash flow (post-tax)	A\$m	315
NPV (7%) (post-tax)	A\$m	237
IRR (post-tax)	%	88
Capital payback period	Months	12

<sup>\*</sup> Totals in the physicals section of the table may not reconcile due to rounding.

# **Next Steps**

- Completion of the early works program at Cassini
- Appointment of the preferred mining contractor with the completion of the mining contract
- Receipt of binding credit-approved term sheets from financial institutions
- Final Investment Decision by the Board of Mincor



#### **DEFINITIVE FEASIBILITY STUDY DETAILS**

#### **Project Description**

Mincor has a long history of nickel mining in Kambalda dating back to the acquisition of the Miitel mine from Western Mining Corporation ("WMC") in 2000. The Company currently has in excess of 300km² of tenements in the Kambalda region. Furthermore, the Company has a high-quality nickel sulphide Mineral Resource and Ore Reserve base and development ready assets.

Before embarking on its nickel re-start strategy, the Company executed an Ore Tolling and Offtake Purchase Agreement ("OTCPA") with BHP Nickel West in August 2019. The commercial terms of the new OTCPA were materially improved, setting the foundation for the Company's integrated nickel re-start plan in Kambalda.

The OTCPA replaced the historical 20-year agreement Mincor had with BHP Nickel West, which expired in February 2019. Under the new OTCPA terms, Mincor now has the ability to blend ore from various operations to achieve the optimum processing and metallurgical outcomes while maximising project returns by selling nickel concentrate. The DFS philosophy was centred around the development of an optimised integrated mine plan from each mining operation with ore processed at the Kambalda Nickel Concentrator ("KNC") under the OTCPA.

This DFS demonstrates optimised cash flows by scheduling production from three distinct mining operations, Cassini, Miitel and the Northern Operations (Durkin North and the Long mines). The location of these operations is shown in Figure 2 below.

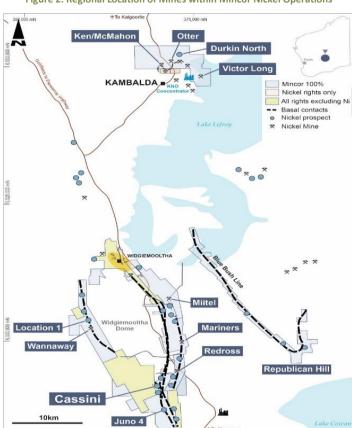


Figure 2: Regional Location of Mines within Mincor Nickel Operations

The mine design physicals and associated costs for the Cassini, Miitel and Northern Operations all feed into individual mine models. The outputs from each mining model then form part of an integrated mining and processing plan to optimise mining and processing schedules to deliver annual average throughput of between 500kt to 600kt of ore to KNC.



The DFS has adopted an underground contractor model for mining costs. The underground contractor model has lower capital intensity for a 5-year operation than an owner-mining model and was selected as the most efficient and lowest risk operational approach. A comprehensive tender process was undertaken for the Cassini, Miitel and Northern Operations with reputable and experienced underground mining contractors at the commencement of the DFS. This allowed Mincor to gain certainty on the mining cost metrics and, accordingly, these costs do not include contingencies.

#### Cassini

Cassini is an unmined nickel deposit located in the southern Goldfields region of Western Australia (WA), approximately 60km south of the Kambalda township via Goldfields Highway and Coolgardie – Esperance Highway. It is 100% owned by Mincor and is the flagship operation within the DFS.

Cassini is located on the southern section of the Widgiemooltha Dome. The geology of the Widgiemooltha Dome and the area to the south consists of a thrust repeated sequence of basic ultramafic extrusive and intrusives, with intercalated sediments and acid volcanics with nickel sulphide orebodies found at the base of the ultramafic sequence.

Mincor commenced drilling at Cassini in 2014 and has continued exploration and resource drilling at various rates over the past five years. Over the past 18 months, drilling activities and successes significantly ramped up with progressive Mineral Resource upgrades and a substantial increase in average nickel grades achieved.

The mine plan involves underground extraction of the Cassini deposit via a box-cut and decline, mining 1.2Mt of ore at an average nickel grade of 3.3% over a 5-year period. The ore will be hauled to KNC for blending with ore from the Northern Operations and Miitel as part of an integrated processing plan over the life of the Project. Nickel concentrate produced is sold to BHP pursuant to the OTCPA.

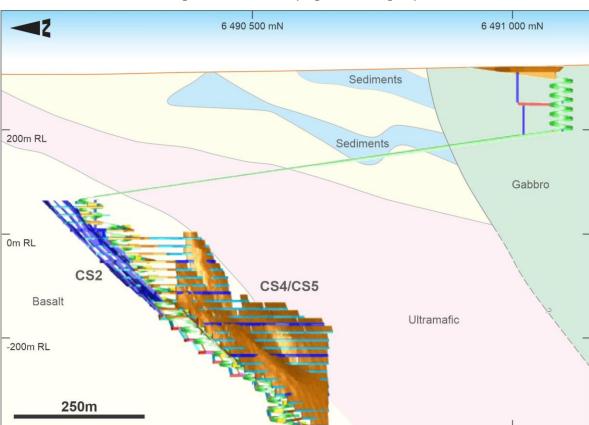


Figure 3: Cassini Mine Plan (Long-Section Looking East)



# **Northern Operations**

WMC began exploring for nickel sulphide deposits in the Kambalda region in the 1960's and made the first discovery in January 1966.

Historical ore production for the Northern Operation group of tenements (Otter Juan and Long mines) totals **23.0Mt** @ **3.6%** Ni for **818,000t** of contained nickel.

The Durkin North orebody ("**Durkin North**") is an unmined nickel deposit located beneath and to the north of the historical Durkin mine workings, part of the Otter Juan ("Otter") mine. The area of focus for Long is an unmined area located to the east of the existing Long decline at the northern deeps end of the Long mine. At their closest point in the upper levels, the Long and Otter mines are approximately 900m apart horizontally.

The mine plan involves underground extraction of the Durkin North and Long deposits, accessing the orebodies through the existing Otter and Long workings (Figure 4), mining 0.8Mt of ore at an average nickel grade of 2.5%. The ore will be hauled to KNC for blending with ore from Cassini as part of an integrated processing approach.

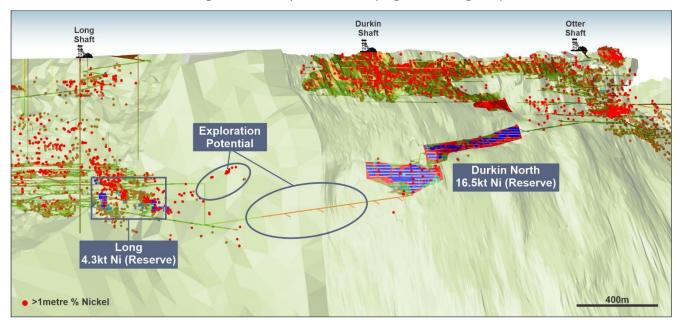


Figure 4: Northern Operations Location (Long Section Looking North)

#### Miitel

Mincor, as part of a Joint Venture with Clough (12%) and Donegal (12%), purchased the Miitel mine and surrounding tenements from WMC in 2000. In 2003, Mincor purchased the Clough and Donegal interest and now owns 100% of Miitel.

WMC commenced initial waste development at Miitel prior to the sale in 2000, with first ore production occurring in 2000 soon after acquisition of the mine. Historical production for Miitel between 2000 and 2016 totalled **2.5Mt** @ **2.9%** Ni for **72,000t** of contained nickel.

The mine operated under various contractors and with owner mining until the mine was placed on care and maintenance in February 2016 after a prolonged period of low nickel prices. Most of the underground infrastructure at Miitel was removed prior to being placed on care and maintenance. During the care and maintenance period the mine was allowed to be flooded to the portal which took over three years.



The DFS mine plan involves dewatering and rehabilitation of the mine prior to commencement of underground extraction of the South Miitel and Burnett deposits, accessing the orebodies through the existing Miitel portal and workings (Figure 5), mining 0.4Mt of ore at a nickel grade of 2.5%. This work is scheduled to commence in the second half of FY2023. Ore will be hauled to KNC, commencing in the second half of FY2024, and will effectively replace the ore from the Northern Operations. Accordingly, all capital expenditure associated with these works has not been classified as part of the pre-production CAPEX given that Miitel commences well into the Project life.

South Miitel
Portal

Om RL South Miitel
Miitel Central

Burnett

om RL

-800m RL

-1600m RL

-1600m RL

Figure 5: Miitel Channel (Long-Section Looking West)

# **Project Team**

The DFS was compiled in-house by Mincor personnel with the assistance of mining consultant Entech, an experienced and prominent mining engineering consultancy firm with significant Kambalda nickel experience.

Mincor personnel and external consultants who contributed to this study are outlined in Table 2 below.

**Table 2: Study Contributors** 

Contributor	Role/Section
Dean Will – Mincor Resources	Project Study Owner
Paul Darcey – Mincor Resources	Project Manager
Chen Sun – Mincor Resources	Accounting and Finance
Robert Hartley – Mincor Resources	Geology and Mineral Resources
Cube Consulting	Mineral Resource Modelling
Entech	Mining Engineering, Ventilation, Geotechnical
Operational Geotechs	Geotechnical Consulting (Cassini and Miitel)
Mikula Geotechnics	Geotechnical Consulting (Long)
Green Geotechnical	Geotechnical Consulting (Durkin North)
Glenrowan Consulting	Mine de-watering (Miitel)
Vector Solutions	Metallurgical Consulting
Botanica Consulting	Environmental Consultants
Rockwater	Hydrogeology and Hydrology studies (Cassini)
Safety and Emergency Management Consultants (SEMC)	Safety and Emergency Response Consulting
MYR Consulting	Risk Assessment



#### **Mineral Resources**

The Mineral Resources estimate for the DFS total 2.9Mt of Measured and Indicated (86%) and Inferred (14%) Mineral Resources (JORC Code 2012) at an average grade of 4.1% nickel for 119.5kt of contained nickel, (Table 3 below).

Table 3: Combined Mineral Resource Estimate for DFS

RESOURCE	Measured Indicated		ed	Inferred		Total			
RESOURCE	Tonnes	Ni (%)	Tonnes	Ni (%)	Tonnes	Ni (%)	Tonnes	Ni (%)	Ni Tonnes
Cassini	-	-	1,092,000	4.0	162,000	4.3	1,254,000	4.0	50,400
Burnett	-	-	241,000	4.0	-	-	241,000	4.0	9,700
Miitel	156,000	3.5	408,000	2.8	27,000	4.1	591,000	3.1	18,100
Durkin North	-	-	417,000	5.3	10,000	3.8	427,000	5.2	22,400
Long	-	-	209,000	4.9	198,000	4.3	407,000	4.6	18,800
Total	156,000	3.5	2,367,000	4.1	398,000	4.3	2,920,000	4.1	119,500

**Note:** The Combined Mineral Resource Estimates for the DFS in Table 3 above is a subset of Mincor's total Mineral Resource Estimates.

Refer to ASX Announcement 25 March 2020 for JORC 2012 tables 1 – 4 for Cassini and Long Mineral Resource Estimates. Refer to ASX Announcement 10 March 2016 for JORC tables 1 – 4 for Durkin North, Miitel and Burnett Mineral Resource Estimates. The tables may not total correctly due to rounding.

Cassini wireframing of geological domains was completed using detailed cross-sections, snapping to drill holes. Sample data was composited to 1m downhole lengths and flagged on domain codes generated from 3D mineralised and geological wireframes. Directional variography was performed for Ni, Cu, Co, Fe, MgO, S and As. Estimation was completed at the parent cell level using an Ordinary Kriging algorithm. Estimation validation techniques included Inverse Distance estimation, visual comparison of the composite and block grades, swath plots of grade and Kriging Quality parameters.

Miitel, Durkin North and Long North wireframing of geological domains were completed using detailed cross-sections. Sample data was composited to ore zone lengths and a triple accumulation variable calculated using element multiplied by density multiplied by width. Directional variography was performed for Ni, Cu, Co, Fe, MgO, S and As (where this information was available, as some historic drilling was not assayed for all elements). Estimation was completed at the parent cell level using an Ordinary Kriging algorithm on a 2D plane and then imported into the 3D models. Estimation validation techniques included Inverse Distance estimation, visual comparison of the composite and block grades, swath plots of grade.

#### **Ore Reserves**

The Ore Reserve estimates underpinning the DFS were based on the Mineral Resource Estimates as well as mining methods, designs, schedules, cost estimates and modifying factors determined as part of the DFS.

The Combined Ore Reserves for the DFS are summarised in table below.

**Table 4: DFS Combined Ore Reserves** 

MINE	Proved		Probable		TOTAL		
IVIIINE	Tonnes	Ni (%)	Tonnes	Ni (%)	Tonnes	Ni (%)	Ni Tonnes
Cassini	-	-	1,050,000	3.3	1,050,000	3.3	34,300
Burnett	-	-	271,000	2.6	271,000	2.6	6,900
Miitel	19,000	2.9	126,000	2.1	145,000	2.2	3,300
Durkin Nth	-	-	675,000	2.4	675,000	2.4	16,500
Long	-	-	162,000	2.7	162,000	2.7	4,300
Total	19,000	2.9	2,284,000	2.8	2,303,000	2.8	65,400

**Note:** Refer to ASX Announcement 25 March 2020 for JORC 2012 tables 1 – 4 for Cassini and Long Ore Reserve Estimates. Refer to ASX Announcement 10 March 2016 for JORC 2012 tables 1 – 4 for Durkin North, Miitel and Burnett Ore Reserve Estimates.



The Cassini Ore Reserve is a Maiden Ore Reserve and the Long Ore Reserve is the first Ore Reserve for Long published by Mincor since the purchase of the Long mine from IGO Ltd in June 2019. Both Ore Reserves were announced today, concurrently with this announcement. The Miitel, Burnett and Durkin North Ore Reserves were previously announced in March 2016.

All material was subjected to an economic evaluation in a detailed cost model underpinned by the DFS analysis. The mine plan is shown to be technically and financially feasible with a positive net present value assuming a discount rate of 7%. A flat nickel price assumption of \$22,500/t (US\$15,750/t; 0.7 AUD:USD) was used for the Ore Reserve financial evaluation, with ore processed at KNC under the OTCPA with BHP Nickel West. Revenue factors were also determined based on the OTCPA. Refer to a separate announcement today for the Ore Reserves tables.

Only Measured and Indicated Mineral Resources have been converted to Proved and Probable Ore Reserves. The Ore Reserves mine plan does not include Inferred Mineral Resources. However, Inferred Mineral Resources are included in the Mineral Inventory mine plan for the DFS but are minor (8%) in overall contribution to the total Mining Inventory.

The Inferred Mineral Resources contained within the mine design shapes were set to zero grade and shapes which no longer honoured the cut-off grade were removed from the Ore Reserves. Some shapes containing a combination of Indicated and Inferred Mineral Resource material remained above cut-off grade even when the Inferred Resource material was set to zero grade, with the result that, although these shapes were retained within the Ore Reserve, there is a reduction in grade and nickel metal in comparison to the Mineral Inventory.

#### **Mineral Inventory**

Mineral Inventory is an internal reporting term used by Mincor, which refers to the total Mineral Resources captured in the mine design and cost models. This includes Inferred Mineral Resource which has been excluded from the Ore Reserves reporting.

At Cassini, Inferred Mineral Resources constitute 13% of the Mineral Inventory. Most of the Inferred Resource materials included are either at the bottom of the mine or at the end of a development drive. Mincor has drilled and will continue to drill down plunge of this area and, given the announcement of drilling results such as 17.6m at 5.0% Ni in diamond hole MDD339, which are outside of the current Mineral Resource boundary, their inclusion has a high degree of confidence.

MDD339 is a significant step-out hole, being 115m down-plunge of the last reported CS4 intersection and 144m down-plunge from the deepest intersection in the core of the CS5 channel. Mincor also announced on 18 March 2020 that it had commenced an infill drilling program aimed at converting the Inferred Mineral Resource material to the Indicated Category, and to date, results from this program have been very encouraging.

At Miitel, a minor amount (8%) of Inferred Mineral Resource was included in the Mineral Inventory. This Inferred Resource material is located in a small airleg stoping area within Miitel South (N13 and N13A).

At Long, a minor amount (3%) of Inferred Mineral Resource was included in the Mineral Inventory. This Inferred Mineral Resource material is located at the end of existing development headings.

On a Project basis, only 8% of Inferred Mineral Resources has been included in Mining Inventory, meaning that 92% is from Ore Reserves.

The Combined DFS Mineral Inventory is shown in Table 5.



Table 5: Combined DFS Mineral Inventory

PECOLIPCE	TOTAL				
RESOURCE	Tonnes	Ni (%)	Ni Tonnes		
Cassini	1,200,000	3.3	39,900		
Burnett	271,000	2.6	6,900		
Miitel	156,000	2.3	3,500		
Durkin North	675,000	2.4	16,500		
Long	166,000	2.7	4,500		
Total	2,468,000	2.9	71,300		

The process to establish an integrated DFS case was iterative, meaning that by working through this optimisation model process, the individual mine schedules, mining sequences and models were optimised several times to deliver the DFS plan presented today.

# Geology

#### Cassini

The Cassini orebody as interpreted in the Mineral Resource is split into eight lodes, labelled CS2-CS9 as shown in Figure 6. From a mining perspective, the Mineral Resource has been delineated into two main areas based on spatial characteristics. These mining areas have been named by the dominant lode (CS2 or CS4).

The CS2 Area (CS2, CS3, CS6, CS7 and portion of CS5 lodes) consists of east-west trending parallel lodes, mainly offset, dipping at ~45° to the south with thickness from ~1m to ~7m, averaging 3m. The CS2 Area extends from ~260mRL (approx. 50mbs) to ~-240mRL (480m vertical extent). Grades and orebody thickness are inconsistent above ~75mRL.

The CS4 Area (CS4, CS8, CS9 and portion of CS5 Lodes) consists of parallel lodes striking northwest/southeast at ~125° and dipping at ~75-80° to the southwest. Average widths for the CS4, upper CS5 and CS9 lodes are 2-3m, with the CS5 lode thickening to 5-7m and up to 11m in parts below ~-250mRL (grades in this area also increase). The area extends from ~100mRL to -380mRL. Grades and thickness are inconsistent above ~10mRL.

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#### **Northern Operations**

There are two mining areas in the Durkin North mine plan, being the D1/D2 area and the D3/D5 area as shown in Figure 7. The D1/D2 area strikes predominantly east-west with a strike length of ~550m, extending from ~-85mRL (~420 mbs) to -260mRL (175m extent). This area gently plunges to the north resulting in a long strike over a relatively small vertical extent. The orebody in D1/D2 is generally narrow (1-3m), with one main lode and a small hangingwall splay in the southern area. The orebody dips to the north, with dips ranging from relatively shallow dipping (down to 45° in parts) up to 75°. The D3/D5 area strikes southeast/northwest with a strike length of ~380 m, extending from -270mRL to -450mRL (180 m extent). The plunge in this area tends to vertical. Dips are generally steeper than D1/D2, ranging from 65-80° to the north-east. The D3/D5 area contains several closely spaced economically extractable lodes in parallel, with widths 1-3m.

The Long Mineral Resource generally strikes northwest-southeast. The Mineral Resource is spread out over an extensive area. Ore pod strike lengths are variable, ranging from 20-30m to ~500m. Some areas dip steeply and continuously to the north-east at approximately 70-80°, while other ore pods are flat dipping at 15-25°. The orebody is generally less than 2m thick.

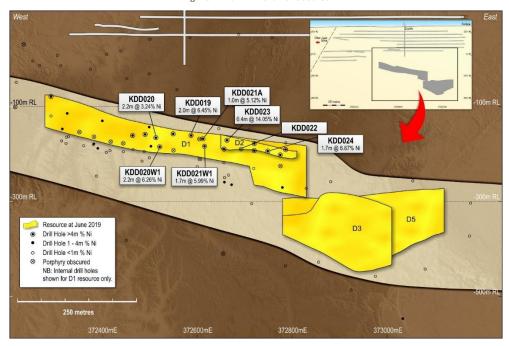


Figure 7: Durkin North Orebodies

### Miitel

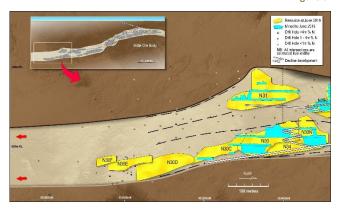
In general, ore at Miitel is located at the steeply dipping contact between footwall basalt and a less competent hanging wall ultramafic unit.

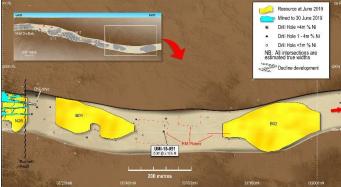
The majority of the Miitel area consists of the N30 and N31 lodes as shown in Figure 8. Both areas strike roughly north-south. The N31 has a strike length of ~180m, extending from ~-400m RL (~705mbs) to -300m RL (100m extent). The N30 has a strike length of ~450m, extending from ~-580m RL (~885mbs) to -430m RL (150m extent) and plunging gently to the south. Both areas consist of single lodes dipping sub-vertically (60-70°) to the east, with widths from 1-8m (N31) and 2-10m (N30).

There are two mining areas in the Burnett mine plan, being the B01 and B02 areas. Both areas strike at  $^{\sim}330\text{-}340^{\circ}$ . The B01 has a strike length of  $^{\sim}260\text{m}$ , extending from  $^{\sim}-415\text{m}$  RL ( $^{\sim}725\text{mbs}$ ) to  $^{\sim}290\text{m}$  RL ( $^{\sim}125\text{m}$  extent). The B02 has a strike length of  $^{\sim}340\text{m}$ , extending from  $^{\sim}-460\text{m}$  RL ( $^{\sim}420\text{mbs}$ ) to  $^{\sim}310\text{m}$  RL ( $^{\sim}150\text{m}$  extent). Both areas consist of single lodes dipping sub-vertically ( $^{\sim}80^{\circ}$ ) to the north-east, with widths ranging from 1-5m.



Figure 8: Miitel Orebodies





#### **Mining**

#### Cassini

The Cassini mine will be accessed via a new box-cut and portal. Capital works for the box-cut, commenced in February 2020 and are expected to be completed by April 2020. The stope optimisation process showed that the economic portion of the Cassini orebody (commences from 250m below surface). Based on geotechnical analysis and the results of geotechnical drilling, the box-cut has been located ~700m to the south of the orebody where near-surface ground conditions are more favourable.

A twin decline system will be developed from the box-cut zone to the production zone, with access and return air declines excavated in parallel, allowing primary ventilation to be established early in the mine life. Ventilation and secondary egress will be via a raise system developed from the ventilation decline to the box-cut (Figure 9).

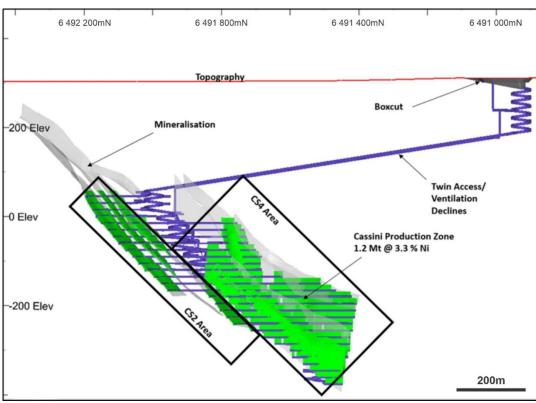


Figure 9: Cassini Mine Design and Mining Inventory



Based on the orebody spatial and geotechnical characteristics, the primary mining method proposed is bottom-up longitudinal longhole stoping (LHS) with modified Avoca assuming cemented rockfill (CRF). This mining method requires minimal capital development and provides void support for dilution mitigation. Vertical sub-level intervals are 15m floor-to-floor, allowing good drill and blast control. Areas with no top access (i.e. crown stopes or levels directly beneath sill pillars) will be mined using conventional longhole open stoping, retaining in-situ pillars for support. Maximum open stope strike lengths of 30m have been applied based on geotechnical studies. Slots to open stoping spans have been designed assuming handheld development methods. Subsequently mined stopes in filled levels will be fired against fresh CRF without the requirement for additional slotting.

Stopes will be mined from the ends of the orebody retreating towards central level accesses from the decline, with each stoping level to be completed before stoping in the level above commences. The stoping block will be split into independent panels of several levels to allow concurrent mining, with each panel separated by a 1.5m thick high strength (8% cement) CRF sill pillar.

Drilling and blasting will be carried out using conventional electric over hydraulic drill rigs and diesel charge wagons. A modern diesel mechanised fleet will load and haul broken material to surface. Mullock will be delivered to a waste dump to be constructed close to the portal. Ore will be delivered to a run-of-mine (ROM) pad for subsequent haulage to KNC. Waste for fill will be backhauled from surface and mixed with cement delivered by agitator trucks to the fill location. Loaders will deliver the CRF (3% cement) to the stoping voids. Specialist underground contractors will provide equipment, personnel and consumables required for the works. Mincor will supply technical support, environment health and safety (EHS) support, site management and diesel.

A minimum mining width (MMW) of 1.5m in the shallower-dipping CS2 area and 1m in the steeper-dipping CS4 area (true width) was designed. Additional unplanned stope dilution assumptions were applied assuming 'skins' of a certain thickness on each hangingwall and footwall contact based on geotechnical studies and stope width and depth below surface (mbs) as summarised in Table 6.

Mining Area	Filled Stopes	Unfilled Stopes Width < Drives	Unfilled Stopes Width > Drives
CS2 Depth <500mbs	0.25m FW/0.25m HW	0.25m FW/0.5m HW	0.25m FW/0.5m HW
CS2 Depth >500mbs	0.25m FW/0.25m HW	0.25m FW/1.0m HW	0.25m FW/0.5m HW
CS4 Depth <500mbs	0.25m FW/0.25m HW	0.25m FW/0.5m HW	0.25m FW/0.5m HW
CS4 Depth >500mbs	0.25m FW/0.25m HW	0.25m FW/1.0m HW	0.25m FW/0.5m HW

**Table 6: Cassini Unplanned Dilution Assumptions** 

Fill stopes had an additional 3% dilution at zero grade included to account for bogging of fill material. The total global average planned and unplanned stope dilution (including fill dilution) proportion within the mine plan stope shapes is 30%.

Mining recoveries of 95% were applied to stopes to allow for issues such as local orebody spatial variability and material left behind during remote loading. Rib pillars were also applied in unfilled areas based on geotechnical studies. A total global ore loss of 8% results from these assumptions.

Ore drives will be driven along strike and split-fired where possible to minimise development dilution. A shanty-back profile has been applied in the shallower-dipping CS4 area. The drive profiles allow operation of a modern 5m³ loader fleet providing efficient productivity. A mining recovery of 100% and no unplanned dilution was assumed for ore development. Approximately 22% of the total 1.2Mt ore production will be from development, with the remaining 78% from stoping.



Key mining parameters are presented in Table 7.

**Table 7: Cassini Key Mining Parameters** 

Parameter	CS2 Area	CS4 Area	
Decline Development	5,500m		
Capital Lateral Development	3,80	0m	
Operating Lateral Development	8,30	0m	
Vertical Development	2,80	0m	
Ore Drive Size	4.2mW x	4.5mH	
Stope MMW (pre-dilution)	1.5m	1.0m	
Average Stope Dip	45°	75°	
Average Stope Size (Strike x Up-Dip Height x Width)	5m x 17m x 4.4m, average 1,200t	5m x 12m x 3.7m, average 730t	
Open Stope Dilution	5m x 17m x 4.4m, average 1,200t 5m x 12m x 3.7m, average 73		
Fill Stope Dilution	0.5m + 3% fill diln		
Mining Recovery	95% +3% pillar loss		

The ventilation circuit consists of fresh air flow into the portal and down the decline. Secondary fans located in the decline will route fresh air to working faces through flexible ducting.

Return air will be drawn through a longhole rise system in the production area, through the ventilation decline and out of the mine via exhaust fans located on the ventilation rise surface collar in the box-cut.

The circuit is based on detailed ventilation analysis considering the proposed fleet, which also indicated that no mechanical refrigeration will be required at the mine.

# **Northern Operations**

A long-section view of the mine design is shown below.

Figure 10: Northern Operations Mine Design (Long-Section Looking North-East) 371 000mE 372 000mE 373 000mE **Historic Durkin** Workings Long Workings New **Durkin North** Return Air Rise Access Developed from Otter Long Access Developed from Long **Existing** Spanner 1km Decline 1000 Elev



The Durkin North mine is planned to be accessed both through the existing Long mine and the existing Otter mine. Both mines are accessible and require minimal rehabilitation. The Durkin North access decline will be developed from both sides and will connect Long and Otter when broken through. The Long designs are all located within the existing Long capital development. Long orebodies will initially be accessed through the Long-Victor portal. Once the Durkin decline has broken through, all access will be via the Otter portal, as this provides a shorter haul distance than the Long-Victor portal with additional ventilation benefits.

Based on the orebody spatial and geotechnical characteristics, the primary mining method proposed is bottom-up longitudinal longhole stoping (LHS) with modified Avoca assuming cemented rockfill (CRF). This mining method requires minimal capital and development and provides void support for dilution mitigation.

Vertical sub-level intervals are 14-16m floor-to-floor, allowing good drill and blast control. Areas without top access (i.e. crown stopes or levels directly beneath sill pillars) will be mined using conventional longhole open stoping, retaining in-situ pillars for support. Maximum open stope strike lengths of 20m have been applied based on geotechnical studies. Slots to open stoping spans have been designed assuming handheld development methods. Subsequently mined stopes in filled levels will be fired against fresh CRF without the requirement for additional slotting.

Stopes will be mined from the ends of the orebody retreating towards central level accesses from the decline, with each stoping level to be completed before stoping in the level above commences. The Durkin North stoping blocks will be split into independent panels of several levels to allow concurrent mining, with each panel separated by a 1.5m thick high strength (8% cement) CRF sill pillar. The Long stoping blocks are sufficiently spatially separated to allow independent mining without sill pillars.

Drilling and blasting will be carried out using conventional electric over hydraulic drill rigs and diesel charge wagons. A modern diesel mechanised fleet will load and haul broken material to surface. Mullock will be delivered to the existing waste dumps at Otter and Long. Ore will be delivered to the existing ROM pad for subsequent haulage to the toll-treatment processing plant by road trains. Waste for fill will be backhauled from surface and mixed with cement delivered by agitator trucks to the fill location. Loaders will deliver the CRF (3% cement) to the stoping voids. Specialist underground contractors will provide equipment, personnel and consumables required for the works. Mincor will supply technical support, EHS support, site management, and diesel.

A MMW of 1m was applied for both areas. Additional unplanned stope dilution assumptions were applied assuming 'skins' of a certain thickness on each hangingwall and footwall contact. Durkin had a 0.5m skin applied (final mining void 1.5m) and Long had a 0.5m skin included for filled stopes and 1.0m for open stopes. The Durkin ore had a subsequent additional allowance for unplanned dilution at zero grade (inclusive of fill dilution) as summarised in the table below.

**Table 8: Durkin North Unplanned Stope Dilution Assumptions** 

Source	Tonnes
Filled Stopes Unplanned Dilution	15%
Open Stopes Unplanned Dilution	67%
Mass Firing Intersection Stopes Unplanned Dilution	67%

The Long stopes had an additional 2% dilution at zero grade included to account for bogging of fill material.

At Durkin North, mining recoveries of 95% were applied to filled stopes to allow for issues such as local orebody spatial variability and material left behind during remote loading. For open stopes, a mining recovery of 68% was applied to allow for retention of rib pillars in these areas. Mass firing stopes through access intersections had a mining recovery of 80% applied.



At Long, a mining recovery of 95% was applied to filled stopes, and 90% to open stopes. 5m thick rib pillars were placed every 20m along strike in the open stoping areas based on geotechnical studies.

Ore drives will be driven along strike under geological control. A shanty-back profile has been applied in the shallower-dipping areas of Durkin. The drive profiles allow operation of a modern 3m³ loader fleet providing efficient productivity. A mining recovery of 100% and no unplanned dilution was assumed for ore development. Approximately 32% of the total 1.2Mt ore production will be from development, with the remaining 68% from stoping.

Key mining parameters are presented in Table 9.

**Table 9: Northern Operations Key Mining Parameters** 

Parameter	Durkin North	Long
Decline Development	3,900m	400m
Capital Lateral Development	1,400m	500m
Operating Lateral Development	7,900m	2,500m
Vertical Development	2,000m	1,100m
Ore Drive Size	3.5mW x 4.0mH	3.5mW x 4.0mH
Stope MMW (pre-dilution)	1.0m	1.0m
Average Stope Dip	D1/D2 45-75°; D3/D5 70°	75°
Filled Stope Dilution	0.5m + unplanned dilution	0.5m + 2% fill dilution
Open Stope Dilution	0.5m + unplanned dilution	1.0m
Mining Recovery	95% filled stopes; 68% open stopes; 80% mass fired stopes	95% filled stopes, 90% open stopes+ 3% ore loss due to rib pillars

Prior to breakthrough of the Durkin access, the ventilation circuits will be separate. Fresh air will be drawn through the Long and Otter portals by primary fans located on the existing return air rises to surface. Secondary fans located in the decline will route fresh air to the Durkin access working faces through flexible ducting. Once breakthrough of the Durkin access occurs, fresh air will be drawn through the Otter decline and Durkin access, past the Durkin and Long workings and out of the ventilation rises at Long. The circuit is based on detailed ventilation analysis considering the proposed fleet, which also indicated that no mechanical refrigeration will be required at the mine. Allowance has been made for refurbishment of existing primary fans and supply of new units as required.

#### Miitel

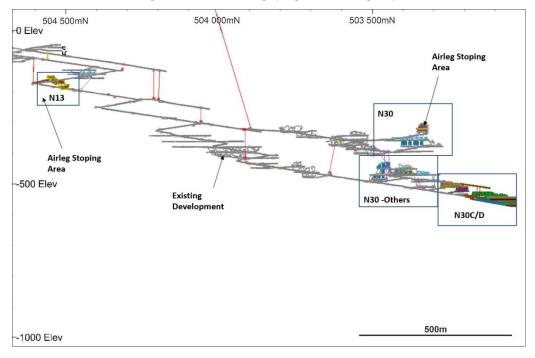
Long-section views of the mine design are shown in Figure 11 and Figure 12.



507 750mN 507 500mN 507 250mN B01 -250 Elev B02 Upper Decline Existing 3m Dia. Return Development Air Rise 1.8m Dia. Lower Decline -500 Elev Return Air/ **Escape Rises** 250m

Figure 11: Burnett Mine Design (Long Section Looking East)





The orebodies are planned to be accessed through the existing Miitel portal and decline. The Miitel decline will require dewatering and rehabilitation of ground support and services prior to the commencement of development. These capital costs are detailed later in this announcement.

Currently the mining schedule allows for the mining fleet (including personnel) at Miitel to be sourced from the Northern Operations. This will be dependent on whether mine life can be extended at the Northern Operations.

Based on the orebody spatial and geotechnical characteristics, the primary mining method proposed is bottom-up longitudinal longhole stoping (LHS) with modified Avoca assuming cemented rockfill (CRF). This mining method requires minimal capital and development and provides void support for dilution mitigation. Vertical sub-level intervals are 15-20m floor-to-floor. Areas without top access (i.e. crown stopes or levels directly beneath sill pillars)



will be mined using conventional longhole open stoping, retaining in-situ pillars for support. Maximum open stope strike lengths of 12m have been applied based on geotechnical advice. Slots to open stoping spans have been designed assuming handheld development methods. Subsequently mined stopes in filled levels will be fired against fresh CRF without the requirement for additional slotting. Some areas will be mined using overhand cut-and-fill methods or airleg stoping, dependent on orebody geometry. All these methods were previously successfully applied at Miitel by MCR.

Drilling and blasting will be carried out using conventional electric over hydraulic drill rigs and diesel charge wagons. A modern diesel mechanised fleet will load and haul broken material to surface. Mullock will be delivered to the existing waste dump. Ore will be delivered to the existing ROM pad for subsequent haulage to the toll-treatment processing plant by road trains. Waste for fill will be backhauled from surface and mixed with cement delivered by agitator trucks to the fill location. Loaders will deliver the CRF (3% cement) to the stoping voids. Specialist underground contractors will provide equipment, personnel and consumables required for the works. Mincor will supply technical support, EHS support, site management, and diesel.

MMW and unplanned dilution (inclusive of fill dilution) were applied as detailed in Table 10. Dilution was assumed to be waste grade.

Mining MethodMin. Mining WidthDilutionLHOS with Pillars1.0m1.5mCut & Fill3.5m2.5% fill dilnLHS with CRF1.0m0.5m + 1.5% fill dilnMass Blast at Intersections Additional Dilution50%

**Table 10: Miitel Unplanned Stope Dilution Assumptions** 

Mining recoveries were applied as per Table 11.

Table 11: Miitel Stope Mining Recovery Assumptions

Mining Method	Mining Recovery
LHOS with Pillars	95%
Cut & Fill	97.50%
LHS with CRF	91%
Mass Blast at Intersections Additional Dilution	80%

A mining recovery of 100% and no unplanned dilution was assumed for ore development. Approximately 47% of the total ore production will be from development, with the remaining 53% from stoping.

Key mining parameters are presented in Table 12.



**Table 12: Miitel Key Mining Parameters** 

Parameter	Burnett	South Mitel
Decline Development	2,000m	200m
Capital Lateral Development	700m	200m
Operating Lateral Development	4,100m	1,800m
Vertical Development	1,200m	600m
Ore Drive Size	3.5mW x 4.0mH	4.0mW x 4.5mH
Stope MMW (pre-dilution)	1.5m	1.5m
Average Stope Dip	75-85°	75-85°
Filled Stope Dilution	0.5m + 1.5% fill diln	0.5m + 1.5% fill diln
Open Stope Dilution	1.5m	1.5m
Mining Recovery	91% filled stopes; 95% open stopes; 80% mass fired stopes; 97.5% cut and fill	91% filled stopes; 95% open stopes; 80% mass fired stopes; 97.5% cut and fill

Fresh air will be drawn through the Miitel portal by primary fans located on the existing return air rises to surface. These fans will be established (at owners' cost) during the de-watering and rehabilitation of the Miitel decline, prior to the commencement of development. Secondary fans located in the decline will route fresh air to the working faces through flexible ducting. The circuit is based on detailed ventilation analysis considering the proposed fleet, which also indicated that no mechanical refrigeration will be required at the mine.

#### **Geotechnical Analysis**

#### Cassini

The mining method, box-cut design, mine design and modifying factors are based on detailed geotechnical analysis to DFS standard carried out by independent geotechnical experts Operational Geotechs (OG).

The twin decline route from the portal has been undertaken based on geotechnical drilling in the area and the results incorporated into wall designs and ground support regimes. Capital development from the portal has been designed in competent Gabbro, which then traverses through hanging wall basalt, into hanging wall ultramafic and finally, the capital development below the 70m RL (~230m below surface) and for the remainder of the mine, has been designed within the footwall basalt unit.

No major stress concentrations were identified during numerical modelling as the mine design is relatively shallow (<700m below surface). Overall the ground conditions in the Cassini decline are expected to be predominately good to excellent.

### **Northern Operations**

The geotechnical design parameters for Durkin North were generated by Mincor geotechnical staff during operations in 2016. These were ultimately derived from a 2008 independent expert's report on Durkin North and Mincor's experience mining in similar conditions at Mariners, Miitel, and Otter.

Geotechnical design parameters for Long were determined based on a detailed analysis carried out by Entech and Mikula Geotechnics in early 2020. The Long geotechnical parameters have been applied for the entire Long operation and until the halfway point of the incline access drive from Long to Durkin North ~530m RL.



Key points related to the analysis were:

- The proposed mining methods are achievable;
- Geotechnical design parameters (location of capital development, stope spans and pillar design, stoping sequence, modifying factors and ground support assumptions) have been estimated to a feasibility study level of accuracy and incorporated into the mine plan;
- The existing Long seismicity monitoring system will be re-commissioned. Allowance has been made for this in capital costing.

#### Miitel

The geotechnical aspects of the historically mined and developed Miitel ore surfaces are well understood and were managed by Mincor as part of the operating requirements of the mine. The likely ground conditions and required mine design parameters for mining of the Burnett and N30 extensional ore bodies were assessed by the Mincor site geotechnical department prior to the mine being placed on care and maintenance together with assistance from expert consultant Green Geotechnical Consulting.

Ground support recommendations were updated in late 2019 by independent geotechnical engineers, Operational Geotechs, who previously had five years' operating experience at the Miitel mine. Ground support recommendations also included estimates of rehabilitation requirements during de-watering of Miitel prior to commencement of development. Key points related to the analyses are:

- The proposed mining methods are achievable; and
- Geotechnical design parameters (location of capital development, stope spans and pillar design, stoping sequence, modifying factors and ground support assumptions) have been estimated to a Definitive Feasibility Study level of accuracy and incorporated into the mine plan.

#### Mine Schedule

#### Cassini

The mining schedule has been designed to ramp up ore production to approximately 300-350ktpa as quickly as possible, while minimising any potential stoping tail at the end of the mine plan. The mine plan coloured by year scheduled to be completed is shown in Figure 13.



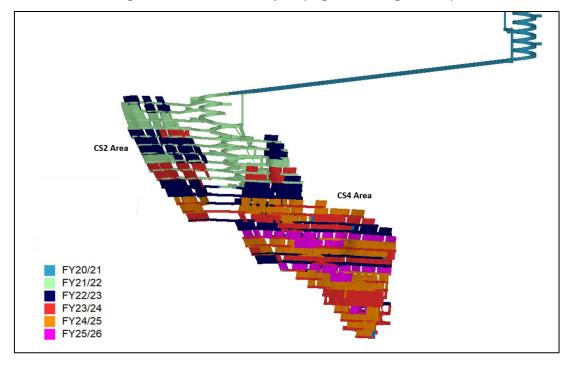


Figure 13: Cassini Mine Schedule by Year (Long-Section Looking North-East)

# **Northern Operations**

The mining schedule is designed to achieve ore production of approximately 300ktpa as quickly as possible, while minimising any potential stoping tail at the end of the mine plan. The mine plan coloured by year is shown in Figure 14.

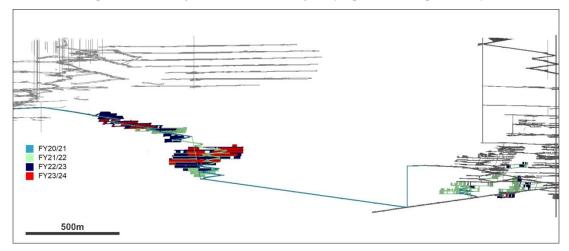


Figure 14: Northern Operations Mine Schedule by Year (Long-Section Looking North-East)



#### Miitel

The mining schedule has been designed to achieve ore production of approximately 300ktpa as quickly as possible after mine re-entry, while minimising any potential stoping tail at the end of the mine plan. The mine plan coloured by year is shown in Figure 15 and Figure 16.

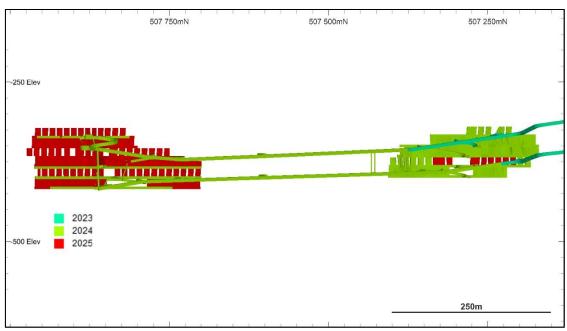
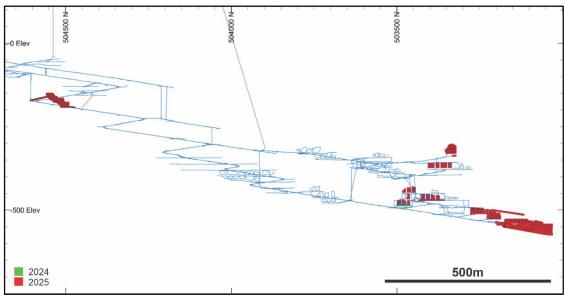


Figure 15: Burnett Mine Schedule by Year (Long-Section Looking East)







# **Integrated Plan**

The process to get to the final DFS case was an iterative one, meaning that by working through this optimisation model process, the individual mine schedules, mining sequences and models required were adjusted several times to deliver the most optimised DFS plan. The optimised Mincor Nickel Operations plan is shown in Figure 17.

FY20 FY21 FY22 FY23 FY24 FY25 FY26 Start End Cassini Development FY21 Q1 FY22 Q1 Production FY22 Q1 FY26 Q3 **Durkin North** FY21 Q1 FY22 O1 Development Production FY22 Q1 FY24 Q4 Long Development FY21 Q1 FY21 O4 Production FY21 Q4 FY24 Q1 Miitel Development FY23 O1 FY24 O2 Production FY24 Q3 FY26 Q2 ОТСРА Processing FY22 O2 FY26 O3

Figure 17: Integrated Mine Development, Production and OTCPA Processing Plan

The Cassini box-cut and site clearing commenced in February 2020 and will be completed by April 2020, meaning that it has been excluded from this plan.

Underground development for the Cassini and Northern Operations is scheduled to commence in the September 2020 quarter. The development commencement date is subject to securing funding requirements and Board approval of the DFS. Final ore processing is scheduled for the March 2026 quarter.

Each of the mines has been scheduled separately, but with the overall objective for the Project to deliver between 500ktpa – 600ktpa of ore (on average) to the KNC. Figure 18 shows the planned mine production by mine per quarter and the processing schedule for Mincor Nickel Operations.

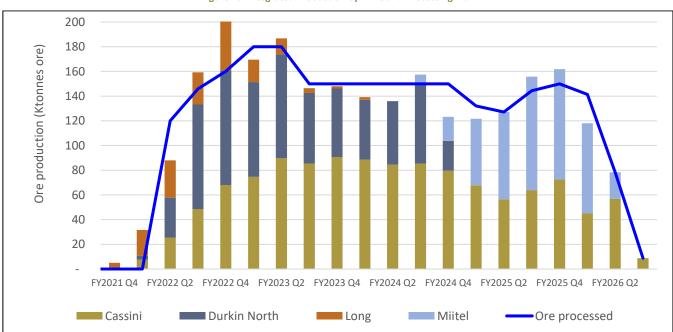


Figure 18: Integrated Production by Mine and Processing Plan



#### Mining technology

With the start-up of Cassini and the re-start of the mines previously under care and maintenance, Mincor plans to incorporate some of the most modern technology to enhance safety, operational efficiency and reduce costs.

An important aspect of the DFS is the use of electric light vehicles (EV) underground. The use of these vehicles has been considered to improve air quality and reduce primary ventilation power costs within each of the mines.

Other key technologies which will be utilised in the operations are:

- Installation of underground Wi-Fi in development and production areas for control of equipment and realtime monitoring of ventilation, pumping and fleet activity;
- Tele-remote control and laser guided technology on loaders; and
- Production drills will be fitted with Minnovare Production optimiser to ensure that longhole drilling conforms to design, thereby minimising dilution.

# **Dewatering (Miitel)**

The Miitel mine is currently flooded to the portal (~-288mRL), with a total estimated water volume of approximately 1,500mL. Average inflows calculated from historical pumping data collected were 19L/s for South Miitel and 6L/s for Burnett.

The proposed dewatering strategy was developed by specialist engineering consultancy Glenrowan Consulting, who also assisted Mincor with the dewatering of Mariners mine.

The dewatering strategy included in the DFS is as follows:

- Drilling of a borehole approximately 340m from the surface close to and below the previous main pump station site;
- Installation of a large pumping capacity borehole pump which will allow power supply to be re-established to the main pump station;
- Once the power supply to the main pump station is established, progressively dewatering the north decline with Flygt pump sets mounted on pontoons at the water interface;
- Power will be re-instated throughout the mine as dewatering progresses;
- Helical rotor pumps will be installed as the final production dewatering system, with removal of the temporary Flygt pump setup once the initial Burnett dewatering phase is complete; and
- A small crew with jumbo and IT will manage the pumping systems, rehabilitate ground support and install services during the dewatering period. The ground support re-entry estimates have been provided by Operational Geotechs.

All water from the dewatering activities will be pumped to the surface to settling dams which were utilised previously for dewatering at Miitel and remain on care and maintenance. The water is then pumped to Lake Lefroy and Lake Fore under a Prescribed Premise Licence.

As can be seen in Figure 8, Miitel ore is not scheduled until FY2024, and work has commenced to ensure all statutory licensing is in place to dewater Miitel.



#### **Mine Services and Infrastructure**

#### Cassini

Activities undertaken as part of the Cassini early works (ASX Announcement 10 February 2020) include the box-cut construction and site clearance work. Office infrastructure, including administration and first aid buildings will be re-located from Widgiemooltha Gold Project and Miitel respectively. The remainder of the required office and workshop infrastructure will be mobilised following the execution of the underground mining contract.

Dewatering requirements for the Cassini mine are expected to be less than 4L/s during operations based on a detailed hydrogeological assessment. Water will be pumped up a rising main through the return air system raises and decline to newly built settling dams located on the surface near the portal. Mine service water will be sourced from these dams, with any excess water transferred through a new pipeline (~4.4km length) to nearby Lake Eaton for discharge (application W6336/2019/1 pending). Potable water will be sourced from the nearby Coolgardie-Norseman water line.

Power is currently planned to be supplied by diesel gensets provided and managed by the underground contractors. The Company is also analysing other power options including connection to the BHP 66kV power line located  $\sim$  4km from Cassini, which represents a potential cost saving opportunity.

The underground mining contractor will supply and manage all equipment and labour associated with provision of mine services, with the costs included in the schedule of rates.

A plan of the proposed Cassini surface infrastructure setup is shown in Figure 19.

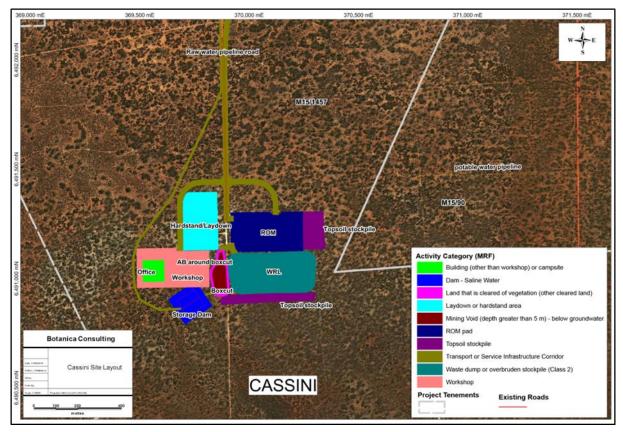


Figure 19: Cassini Surface Setup



#### **Northern Operations**

Significant underground and surface infrastructure from previous operations is currently installed at both Otter and Long mines, which remain on care and maintenance. The underground power and dewatering systems for the Long mine are operational. The Otter mine will require the installation of underground infrastructure which has been allowed for as part of the pre-production CAPEX.

Maximum mine inflows for Durkin North and Long are expected to be approximately 8L/s at each mine, based on historical data. Mine water will be dewatered to the Otter, Durkin and Victor dams, located on the surface. Mine service water will be sourced from these dams. Potable water will be sourced from the nearby BHP water line.

Both mines are connected to the mains power grid. Power for both surface facilities and underground workings is planned to be supplied from the BHP grid at Mincor cost.

The underground mining contractor will supply and manage all equipment and labour associated with the provision of all other mine services, including any required refurbishment of existing facilities, with the costs included in the schedule of rates.

#### Miitel

The Miitel mine was placed on care and maintenance in February 2016. Prior to care and maintenance, the mine was stripped of most of its underground infrastructure and allowed to flood. It took just under three years (approx. 34 months) for the mine to flood to the portal location.

All mine services will need to be re-established during the dewatering and re-entry works. This has been scheduled and costed based on input from expert engineering consultants. The office and workshop infrastructure remain insitu.

Maximum mine inflows are expected to be approximately 25L/s, with these inflows based on historical pumping data. Mine water will be dewatered to the existing settling dams on the surface. Mine service water will be sourced from these dams. Potable water will be sourced from the nearby Coolgardie-Norseman water line.

Mincor will arrange power supply through the BHP-owned Lanfranchi-Redross 66kV line, as was the case during previous operations. Allowance has been made in the capital costing for re-connection of power to the mine.

The underground mining contractor will supply and manage all equipment and labour associated with provision of all other mine services, including any required refurbishment of existing facilities, with the costs included in the schedule of rates.

#### **Ore Transport**

Ore will be delivered by the haulage contractor from each site ROM to the KNC ROM. On delivery and exit to the Kambalda ROM pad, each truck will be weighed over a certified weighbridge. Ore will be built into individual stockpiles for each mine with known weight at the KNC ROM pad for each campaign parcel. A blending plan is implemented before processing each campaign.

Eight haulage companies were invited to tender for the surface haulage works for the Cassini, Miitel and Northern Operations. A detailed tender process was undertaken to reduce contractor estimate and uncertainty. The rates received from the haulage contractors were reviewed and assessed, with a rate selected for the DFS. A 1.5% moisture content was assumed for costing purposes based on historical Mincor transported ore.



Cassini and Miitel ore will be loaded from the ROM pad at each site and hauled to the KNC ROM pad using 100 tonne road trains via the Coolgardie – Esperance Highway and the Goldfields Highway, for a total distance of 72km and 56km respectively.

Durkin North ore will be loaded from the Otter Juan ROM pad and Long ore will be loaded from the Long-Victor ROM pad initially. All ore from Northern Operations ore will be placed on the Otter Juan ROM pad once the Durkin North access is broken through into Long. Ore will be hauled to the KNC ROM pad via Durkin Road. The Otter Juan ROM pad is approximately 4km from KNC and the Long ROM pad is approximately 3km from KNC.

The size of the road trains that can be used to deliver ore from Northern Operations is not constrained by the same limits as Cassini and Miitel as the Durkin Road is privately owned.

#### **Metallurgical Test Work**

Metallurgical evaluation was undertaken to validate the metallurgical inputs for the integrated financial model. ALS were engaged to prepare and test five annual composite ore samples, designed to be representative of the range of ore types scheduled to be processed during the Project.

Mincor plans to blend nickel sulphide ore from the three mining centres over a five-year period. Ore from each mine has been approved by BHP Nickel West for processing at the KNC.

Drill core from the mining locations was used to prepare five representative samples of ore which will be mined and processed in the mine plan. These annual composites were prepared based on the contribution of each ore source in each financial year of the mine plan.

Metallurgical evaluation undertaken by ALS of five ore samples were representative of the range of ore types scheduled in the mine plan and delivered the following outcomes:

- All ore samples responded well to the standard BHP Nickel West reagent suite of SEX, CuSO4 and guar gum;
- Nickel recoveries were good to excellent at 87-91%;
- Concentrate Fe:MgO ratios were excellent, ranging from 12-24;
- Concentrate nickel grades of 13-15% were achieved;
- Validation of the DFS mining plan blending strategy which blends Cassini ore with Durkin North and Long ore during the first 32 months of processing; and
- Validation of the metallurgical inputs for the DFS financial model.

# **KNC Processing Plant and OTCPA**

A critical element of the DFS is the OTCPA with BHP Nickel West, which was announced on the ASX on 5 August 2019. Under the OTCPA, Mincor has the right to process a minimum of 200ktpa and up to a maximum of 600ktpa of nickel sulphide ore at the KNC, which is owned and operated by BHP Nickel West. This plant has processed ore from 35 different orebodies in the Kambalda region. Ore mined from each operation will be trucked to the surface and stockpiled at KNC. A front-end loader will then be used to transport ore from the surface stockpile at the KNC into the ROM bin to feed the mill at a pre-determined blending mix.

The KNC design was based on a conventional sulphide processing route using traditional grinding and flotation technology to produce saleable nickel-copper-cobalt concentrate. The existing KNC will undergo a refurbishment by BHP Nickel West six months prior to the commencement of processing of Mincor's ore.



Nickel concentrates produced at KNC will be sold to BHP Nickel West for further downstream processing at the Kalgoorlie Nickel Smelter and, ultimately, the Kwinana Nickel Refinery, where nickel sulphate for the EV battery market will be produced.



Figure 20: Kambalda Nickel Concentrator

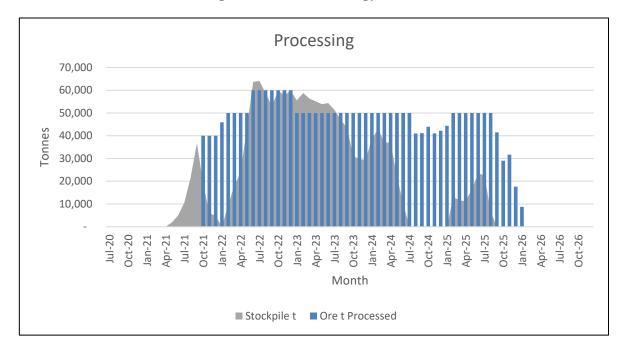
The OTCPA commences on the date of delivery of first ore and expires on 31 December 2025. Pricing is based on an agreed percentage of various quoted LME prices for nickel, copper and cobalt. These percentages are protected through confidentiality arrangements with BHP Nickel West and therefore cannot to be disclosed. Processing costs charged by BHP Nickel West are based on a fixed and variable charge, where the most efficient processing cost per tonne is achieved at the highest throughput rate. For the purposes of the DFS, any processing costs and sales revenue beyond 31 December 2025 (which is minimal based on the processing profile depicted below) is assumed to be consistent with the terms of the existing OTCPA.

Ore processing under the OTCPA will be measured on a monthly basis by delivering a blended stockpile of ore from each mine to the KNC. When the initial required quantity of ore has been delivered to KNC the processing campaign will commence and is expected to be relatively consistent over the Project life. Mincor will utilise a consultant metallurgist at the KNC to supervise the ore being fed into the plant and processed during each campaign period. This consultant will also be in charge of reviewing BHP's processing and recovery optimisation procedures.

Figure 21 shows the planned processing plan per month and the subsequent mine stockpile for all operations.



Figure 21: DFS - Planned Processing per Month



Based on the above processing plan, nickel in concentrate production is shown in Figure 22.

Nickel Concentrate Production (tonnes 20,000 18,000 16,000 14,000 12,000 10,000 16,377 16,312 8,000 13,756 6,000 10,868 4,000 5,772 2,000 FY23 FY24 FY21 FY22 FY25 FY26 ■ Nickel Concentrate ■ Copper Concentrate ■ Cobalt Concentrate

Figure 22: DFS - Nickel in Concentrate Production

The OTCPA with BHP Nickel West offers Mincor security in selling its product to the world's largest mining company as a counterparty. The OTCPA offers modern offtake terms (payability) for nickel concentrate and, combined with the DFS mine plan, provides a substantial improvement in revenue and cash flow returns in comparison to the previous OTCPA which expired in February 2019.



# **Capital and Operating Costs**

#### **Capital Costs**

The pre-production capital cost for the Project is estimated at \$68 million. No contingency has been provided for the capital rates as they are predominantly based on tendered contract rates. Sustaining capital includes on-going mine capital development at each mine as well as dewatering and underground rehabilitation costs for the Miitel mine. A summary of the Project capital costs by mine and financial year (FY) is presented in Table 13.

Unit Item Total FY21 FY22 FY23 FY24 FY25 FY26 **Pre-production** Cassini A\$m 27 24 **Durkin North** A\$m 39 34 A\$m 2 2 Long 68 60 8 Sustaining A\$m Cassini 51 18 27 **Durkin North** A\$m 8 8 A\$m 8 Long Miitel 44 A\$m 10 23 5 29 10 1 111 29 37 Total Cassini A\$m 78 24 21 27 **Durkin North** A\$m 47 34 13 A\$m 7 Long 10 3 Miitel A\$m 10 23 10 1 44 **Total** 179 65 37 37 29 10

Table 13: Capital Costs by Mine and Financial Year

#### **Operating Costs**

Unit costs can only be disclosed on a 100% payable basis given the confidentiality requirements surrounding the OTCPA with BHP Nickel West. Mincor notes that this is common industry practice and aligns with the same reporting methodology used by ASX-listed nickel producer Western Areas Limited. On this basis, the C1 unit cash cost for the Project is \$3.36/lb (US\$2.35/lb). The Cassini C1 unit cash cost is \$2.71/lb (US\$1.90/lb) due to the high-grade nature and thickness of the orebody.

Mincor understands that these cost outcomes will place the Project unit cash costs towards the lower end of the global 2nd quartile cost curve. Given the low capital intensity of the Project, the AISC is \$4.47/lb (US\$3.13/lb). As a guide, the current spot price on nickel (before applying payability) been recently trading around \$8.60/lb to \$9.30/lb.

Mining rates adopted in the DFS were sourced from tendered contract rates from underground mining contractors. Productivities are based on a combination of benchmarked hard rock underground mines in similar operating environments in Australia and internationally, and the Company's underground operating experience in Kambalda.

A summary of operating costs on a per tonnes and per pound basis are provided in (Table 14 and Table 15) below.



Table 14: Operating and Sustaining Capital Costs per Tonne of Ore Milled

ltem	Units	Project Total	Cassini	Miitel	Northern Operations
Ore Tonnes Milled	dmt	2,468,000	1,200,000	427,000	841,000
Mining Cost	A\$/t	135.6	123.4	139.1	151.3
Haulage Cost	A\$/t	7.6	10.6	8.6	2.8
Processing Cost (excl. penalties)	A\$/t	53.2	53.9	56.1	50.8
Overhead Cost	A\$/t	7.2	7.4	7.5	6.6
By-product credits	A\$/t	(14.5)	(19.6)	(13.2)	(7.8)
C1 Cash Costs	A\$/t	189.1	175.8	198.0	203.7
Royalties	A\$/t	18.0	29.2	14.4	3.7
<b>Total Operating Costs</b>	A\$/t	207.1	204.9	212.5	207.4
Sustaining Capital	A\$/t	44.9	42.2	102.3	19.6
All-In-Sustaining Costs	A\$/t	252.0	247.1	314.7	227.1

Table 15: Operating and Sustaining capital Costs by Nickel Metal in Concentrate (lb/Ni)

Item	Units	Project Total	Cassini	Miitel	Northern Operations
Mining Cost	A\$/lb	2.41	1.90	2.93	3.11
Haulage Cost	A\$/lb	0.13	0.16	0.18	0.06
Processing Cost (excl. penalties)	A\$/lb	0.94	0.83	1.18	1.04
Overhead Cost	A\$/ lb	0.13	0.11	0.16	0.14
By-product credits	A\$/ lb	(0.26)	(0.30)	(0.28)	(0.16)
C1 Cash Costs	A\$/ lb	3.36	2.71	4.15	4.19
Royalties	A\$/lb	0.32	0.46	0.30	0.08
<b>Total Operating Costs</b>	A\$/lb	3.68	3.16	4.47	4.26
Sustaining Capital	A\$/lb	0.80	0.65	2.15	0.40
All-In-Sustaining Costs	A\$/lb	4.47	3.81	6.62	4.67

# **Project Financials**

# **Financial Results**

The key financial assumptions adopted in the DFS are shown below.

**Table 16: Key Financial Assumptions** 

Financial Assumption	DFS
Nickel Price	US\$15,750/t or US\$7.14/lb
Copper Price	US\$6,400/t or US\$2.90/lb
Cobalt Price	US\$42,000/t or \$19.05/lb
AUD: USD	A\$1.00 = US\$0.70
Inflation	2%
Discount Rate	7%

The key financial assumptions outlined above were chosen based on a careful consideration of market forecasts (such as numerous broker reports and recent Independent Expert Reports) and consensus views for both



commodity prices, exchange rates (such as Consensus Economics) and the discount rate (taking into account reductions in the cost of capital and other DFS discount rates utilised). Commodity price assumptions have been applied on a flat line basis over the LOM.

The recent nickel spot price has been ranging between \$19,000/t to \$20,500/t versus the DFS assumption of \$22,500/t and Mincor is mindful that the detrimental impact of the recent US/China trade wars, and now Covid-19, have had on base metal pricing. However as outlined in this announcement, first processing of ore is not scheduled to occur until the December 2021 quarter, some six quarters from now.

The Company prepared a cash flow and financial analysis model for the integrated mine plan to determine Net Present Value ("NPV") of the Project, as outlined below.

Northern **Parameter** Units **Project Total** Cassini Miitel Operations **Total Revenue** A\$m 669 179 339 1,187 EBITDA AŚm 585 368 75 142 Net Cashflow (pre-tax) A\$m 85 407 291 31 NPV (7%) (pre-tax) A\$m 305 223 19 63 Pre-production capex A\$m 68 27 IRR (pre-tax) % 98 Total Net Cashflow (post-tax) A\$m 315

**Table 17: Key Financial Metrics** 

The maximum cash drawn is approximately \$97 million, which occurs 16 months after mine development commences in the December 2020 quarter. Quarterly and cumulative cash flows are shown below.

237

88

12

A\$m

%

Months

NPV (7%) (post-tax)

Capital pay-back period

IRR (post-tax)

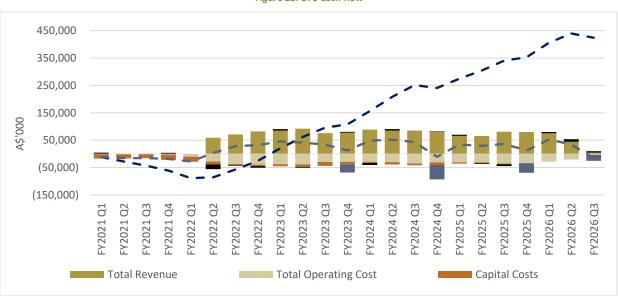


Figure 23: DFS Cash flow



A sensitivity analysis for the pre-tax NPV (7%) indicates that the Project is most sensitive to nickel price and, nickel grade, as depicted below.

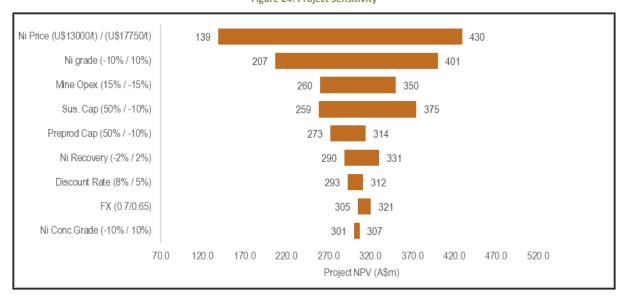


Figure 24: Project Sensitivity

The following two tables depict Project pre-tax NPV at a range of USD nickel prices and AUD:USD exchange rates, followed by Project pre-tax NPV using varying discount rates.

Table 18: pre-tax NPV sensitivity table for a range of US\$ nickel prices and US\$: A\$ foreign exchange rates

		Ni Price US/t							
(1	NPV pre-tax)	US\$12,750/t	US\$13,750/t	US\$14,750/t	US\$15,750/t	US\$16,750/t	US\$17,750/t	US\$18,750	
	0.60	247	315	389	457	534	602	673	
	0.65	181	245	313	375	446	509	575	
JSD	0.68	147	207	272	332	400	460	523	
FX:AUD/USD	0.70	125	184	247	305	371	430	491	
FX:	0.75	77	132	191	245	306	361	418	
	0.80	34	86	141	192	250	301	354	
	0.85	(3)	45	97	145	200	247	298	

Table 19: Pre-tax NPV sensitivity table for a range of US\$ prices and discount rate

		Ni Price US\$/t							
	NPV (pre-tax)	US\$12,750/t	US\$13,750/t	US\$14,750/t	US\$15,750/t	US\$16,750/t	US\$17,750/t	US\$18,750/t	
	5%	139	202	269	331	401	463	528	
SD	6%	132	193	258	318	386	446	509	
AUD/USD	7%	125	184	247	305	371	430	491	
: AU	8%	119	176	237	293	358	414	473	
X.	9%	113	168	228	282	344	399	457	
	10%	107	160	218	271	332	385	441	



# **Funding Requirements**

The estimated pre-production CAPEX required for the Project is \$68 million, while the maximum cash drawdown is \$97 million. The difference represents working capital requirements while ore stockpiles are built up to a sufficient level to ensure that an efficient processing profile is maintained. Mincor's cash balance is forecasted to be \$52 million at 31 March 2020.

The Company has engaged debt advisory specialist Orimco to assist in arranging project funding from domestic and international financial institutions ("financier group"). An Independent Technical Expert ("ITE") review is currently underway with a final report to be provided to the short-listed financiers for due diligence purposes early in the June 2020 quarter. In addition, an Information Memorandum has been sent to the financier group and discussions have been progressed with a number of participants. Mincor's goal is to seek binding credit approved terms sheets during the June 2020 quarter, to assist the Board in making a Final Investment Decision on the Project. The ultimate funding matrix will be based on the level of financing and terms and conditions agreed with financial institution(s).

Mincor also has a very supportive shareholder base, with Squadron Resources Pty Ltd as the largest shareholder at 13.8%, Independence Group at 4.3%, plus a number of large institutional investors and substantial family office funds below the 5% disclosure threshold.

#### **Upside Opportunities**

Mincor is of the view that today's DFS represents just the starting point for the future of its nickel operations in the Kambalda District. The Company has a number of opportunities to increase mine life through a combination of exploration and resource extension drilling programs which are either already in progress or planned for when mine development occurs across the Project. Some of those specific opportunities include:

1. Cassini Mineral Resources – as announced on 6 January 2020, Mincor intersected 17.6m @ 5.0% Ni which is currently outside the Mineral Resource boundary, and 115m down-plunge from the last reported intersection on the CS4 surface. The results from this intersection are excluded from the DFS. A discrete drilling program is currently underway with the aim of upgrading the Mineral Resource and convert Inferred material to the Indicated category.

As Cassini has been drilled deeper (although still shallow compared to a number of Kambalda style deposits), the thickness and grade of the deposit has increased. This is evidenced by the last three Mineral Resource upgrades which have delivered substantial increase in ore tonnes and average grade on each occasion.

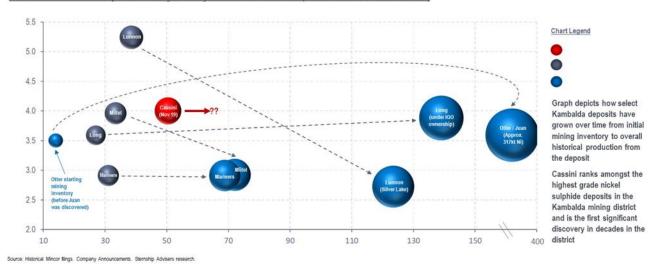
The extract below from a recently announced Corporate Presentation provides a historical view on the typical nickel tonnage growth with Kambalda deposits over recent history and shows where Cassini currently sits on that spectrum with the November 2019 Mineral Resource.



Figure 25: Typical Kambalda Nickel Tonnage Growth

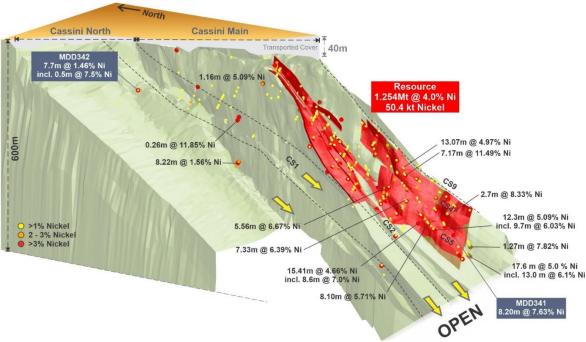
#### History of long-life assets in the Kambalda district which exceeded initial mine life projections

Kambalda District Nickel Deposits - Starting Inventory vs. Historical Production (Nickel Grade vs Contained Nickel)



2. Cassini North – In late February 2020, Mincor secured an additional diamond drill rig to drill adjacent to Cassini, at Cassini North. Economic grade intersections have previously been reported from this area and interpreted channel structures at Cassini North bear a strong resemblance to the Cassini Mineral Resource. Should this exploration program yield results, resulting in the estimation of a Mineral Resource, the area could be accessed via an ore drive over a short distance (<500m) and the initial capital infrastructure will not be required. However, it should be noted that no Mineral Resource or study currently exists for Cassini North, and it is merely an exploration focus at this stage.

Figure 26: Cassini Exploration Potential





- 3. **Durkin North extension** the currently defined Durkin North Mineral Resources are all open to the east towards Long. Only one surface drill hole which was partly porphyry affected (i.e. partially stoped out), exists outside the current Mineral Resource shapes. The channel is well defined and underground drilling targeting this area has strong potential to provide nickel intersections with the potential to extend the mine life of Durkin North.
- 4. **Northern Operations exploration program** As part of the pre-production CAPEX at the Northern Operations, a 1.1km incline development will be completed which will link the Long and Durkin North orebodies (Figure 27). This incline provides an ideal opportunity to drill from an underground position into a large area that remains completely untested. Historically, this area has not been drilled from surface and was difficult to access from underground due to a tenement boundary split between IGO and Mincor which no longer exists. The Long complex and Mincor's operations in this area produced the most nickel sulphides from the entire Kambalda area, highlighting the significant exploration opportunity that exists in this area.

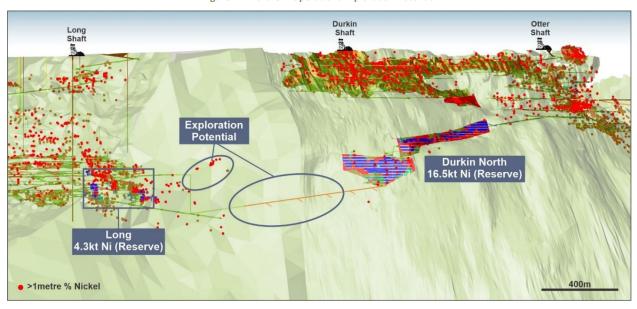


Figure 27: Northern Operations Exploration Potential

5. **Regional exploration program** – Mincor's tenement holdings contain over 120km of the prospective basal contact between basalts and overlying komatiitic ultramafic volcanics as shown in Figure 2. These contacts are the focus for nickel sulphide mineralisation. In addition to ongoing exploration in the Cassini area, Mincor will be actively exploring other regional targets including Juno, Ken, Republican Hill and Location1.

# 6. Other DFS optimisation opportunities:

- **Grid power at Cassini** potential to connect to the existing BHP Nickel West 66kV powerline 4km to the North of Cassini, rather than utilising diesel power. Discussions with BHP have commenced;
- Improved performance on mining schedule potential to mine faster than DFS scheduled rates;
- Mine design optimisation potential to reduce development by improved mine design;
- Using EV Battery technology for other mine vehicles the use of electric-driven jumbo's, service vehicles; loaders and trucks would change ventilation requirements, improve air quality and reduce power costs; and
- **Mining Technology** the opportunity to adopt new mining technologies to reduce costs and/or improve productivities.



# **Key Risks**

Mincor has identified a number of key risks to the Project. These include, but are not limited to:

- 1. Confidence in the resource model the Company has undertaken resource drilling to upgrade the majority of the resource to the Indicated Mineral Resource category. This has formed the basis for the Ore Reserve used in the DFS and a separate ASX Announcement was made today in respect of Mincor's updated Mineral Resource and Ore Reserves. Grade control drilling costs provided for in the DFS should ultimately increase the confidence of some of the Indicated to the Measured Mineral Resource category once in operation.
- 2. **Geotechnical Risks** to be managed using industry standard ground control methods (cable bolting, meshing, shotcrete) tailored to the specific requirements of MNO in line with the recommendations from geotechnical modelling and analysis. Geotechnical work completed is at DFS level and has been completed by consultants that have worked extensively at each of the mining areas.
- 3. Mining Risks the proposed mine schedule and mining method is considered conventional in approach and is expected to provide the run-of-mine ore tonnage and quality. The operational aspects of development and production are generally considered relatively low risk. Most of the operational workforce will be supplied by the selected mining contractor. The mining contractor costs included in the DFS are material in value and are based on tendered rates and are subject to final contract negotiations with the selected preferred contractor. Mincor is currently working on an agreed contract form with the shortlisted contractors. In addition, should issues surrounding the longevity and reach of COVID-19 persist for an extended period, the sourcing of that workforce from the mining contractor could become problematic and result in Project start-up delays and/or changes in costs.
- 4. **Hydrogeology Risks** dewatering of existing workings at Miitel is required and timeframes are based on modelling of inflows and volumes underground. Across the Project, the Company believes the estimates of inflows are conservative, however variations can occur.
- 5. **Processing Risks** Pursuant to the OTCPA, BHP Nickel West is responsible for processing Mincor ore through the KNC, which has been on care and maintenance since mid-2018. BHP Nickel West has processes in place to manage the transition from care and maintenance to operations.
- 6. **Accuracy of production and development rates and associated costs** production scenarios are modelled using benchmarked production rates and previous data from Mincor operations and industry rates. Costs have been sourced from an extensive mining contractor tender process.
- 7. **Amount and timing of pre-production capital** current capital expenditure estimates are at DFS level and are subject to change. DFS capital estimates do not include a contingency provision as majority of the capital costs are mine development costs which are subject to firm contractor tendered rates.
- 8. **Funding Risks** Mincor is reliant on additional funding to secure pre-production CAPEX and complete full mine commissioning. While the process to secure financing is underway, there is no guarantee that funding will be achieved. There are other risks, in addition to the above, which may impact a financiers funding appetite, and these mainly include geopolitical and international risks (such as trade wars and the recent COVID-19 pandemic which has created market uncertainty), commodity pricing views and foreign exchange forecasts.
- 9. Lower than forecast commodity price (AUD) A prolonged suppression of the nickel price or a substantial strengthening of the Australian dollar has the potential to reduce the Project NPV. The financial model supporting the Project is based on a flat nickel price derived from medium to long term consensus pricing, and the hedging strategy can be enacted to protect from any downside movements in commodity pricing. Global uncertainty, global production declines and lack of demand caused by COVID-19 can also impact commodity prices.



# **Approvals**

As announced on 10 December 2019, all key Western Australian State Government approvals have been received for the Cassini mine. The Northern Operations are already fully permitted, and no Federal Government approvals are required.

MNO are located on approved Mining Leases and a deferred production agreement is in place with the Ngadju People for the Cassini mine. A notification will be required to be submitted to DMIRS, via Safety regulation system (SRS), notifying of Commencement of Operations at all mines prior to mining starting. The tables below provide a summary of the granted statutory approvals and outstanding approvals as at the time of this announcement. The Company considers the outstanding approvals are routine in nature.

**Table 20: Cassini Statutory Approvals** 

Mine	Govt Dept.	Approval	Approved / Outstanding	Comments
		Project Management Plan	Α	Oct 19 – SG0237887
		Mining Proposal / Mine Closure Plan	Α	Reg ID 82552
	Department of	Notification to Mine	Α	Submitted to commence box-cut
	Mines, Industry Regulation and safety (DMIRS)	Dangerous Goods	N/A – To be checked annually	Mine is expected to be below threshold for this licence.
Cassini		Explosive Magazine Licence	0	Will be permitted when contractor mobilised
	Danastarantaf	Clearing Permit	Α	CPS8636/1
	Department of Water and	Work Approval (Lake Eaton South Pipeline) and Putrescible Landfill.	0	W6336/2019/1
Environmental regulation (DWER)	regulation (DWER)	5C Licence Ground Water Licence	Α	(GWL154213(5)
	MRWA	Heavy Haulage Intersection.	Α	Redross intersection approved for Heavy haulage.

**Table 21: Miitel Statutory Approvals** 

Mine	Govt Dept.	Approval	Approved / Outstanding	Comments
		Project Management Plan	А	Submitted Nov 2000 and remains place as approved document.
	DMIRS	Mining Proposal / Mine Closure Plan	А	NOI and Mining Proposal amendments submitted and approved. Mine Closure Plan updated every 3 years.
	DIVIRS	Notification to mine	0	Require notification to DMIRS that mine will come out from Suspension
	Miitel	Dangerous Goods	N/A – To be checked yearly	Mine is expected to be below threshold for this licence.
Miitel		Explosive Magazine Licence	0	Will be required once mine is dewatered.
		Prescribed Premise Licence L8577/2011/1	A (as is) O (dewatering)	Sewage facility Putrescible landfill  Requires amendment to re-instate Lake Lefroy and Lake Fore pump-line (dewatering). Includes Miitel putrescible landfill.
		Ground Water License	Α	GWL204037(1)
	MRWA	Heavy Haulage Intersection	0	Required to get agreement with MRWA to access Coolgardie-Esperance Highway.



**Table 22: Durkin North Statutory Approvals** 

Mine	Govt Dept.	Approval	Approved / Outstanding	Comments
		Project Management Plan	А	Otter Juan Lodged PMP specific to Otter Juan, Coronet and Durkin Mines.  Discussions with DMIRS confirmed that a new PMP would not be required.
	DAMPC	Mining Proposal	А	NOI submitted for Otter Juan and surrounding tenements.
Durkin North	DMIRS	Notification to Mine	0	Require notification to DMIRS that mine will come out from Suspension
		Dangerous Goods	N/A – To be checked yearly	Durkin North expected to be below threshold
		Explosive Magazine Licence.	0	Durkin North will require a surface magazine licence when contractor mobilises.
	DWER	Ground Water Licence	Α	GWL105537(4)

**Table 23: Long Statutory Approvals** 

Mine	Govt Dept.	Approval	Approved / Outstanding	Comments
		Project Management Plan	А	PMP Lodged for Long Mine  Discussions with DMIRS confirmed that a new PMP would not be required.
		Mining Proposal	Α	NOI submitted for Long-Victor mine.
	DMIRS	Notification to Mine	0	Require notification to DMIRS that mine will come out from Suspension
Long		Dangerous Goods	N/A – To be checked yearly	Long expected to be below threshold
	Explosive Magazine ETS0002363	Α	Long has an UG Magazine currently licensed (24/06/2024)	
		Ground Water Licence	Α	GWL151344(6)
DWE	DWER	Prescribed Premise Licence L8575/2011/1	А	Mine Dewatering Solid waste Facility Inert landfill site Putrescible landfill

# **Project Timeline**

Following Board approval of the DFS, the following project development activities will be undertaken:

- 1. Complete Cassini site works and box-cut early in the June 2020 quarter;
- 2. Mining contracts: negotiate final contract with remaining two underground mining contractors, select final contractor and send letter of intent based on negotiated final contracts and pricing at each site;
- 3. Complete ITE of the DFS;
- 4. Negotiate and secure binding credit approved term sheet from financiers in the June 2020 quarter;
- 5. Final Investment Decision to be made early in the September 2020 quarter to enable contractor mobilisation in the same quarter;
- 6. Execute the mining and logistics contracts during the June 2020 quarter;
- 7. Commence pre-production CAPEX (mining development) in the September 2020 quarter;
- 8. Ore to be stockpiled onto the KNC ROM pad in the June 2021 quarter;
- 9. First ore processing campaign to commence in December 2021 quarter;
- 10. First concentrate production in the December 2021 quarter; and
- 11. Receipt of first sales payment in the December 2021 quarter.



#### The table below provides the milestones for MNO from the decision to mine.

**Table 24: Mincor Nickel Operation Milestones** 

Milestone	Month
Completion of Cassini Box-cut	June 2020 quarter
Funding / Financing	June 2020 quarter
Award Underground Mining Contract	June 2020 quarter
Commence Cassini Development	September 2020 quarter
Commence Northern Operations Development	September 2020 quarter
First Development Ore (Long)	June 2021 quarter
First Ore Campaign at KNC	December 2021 quarter

Competent Person Statement: The information in this Announcement that relates to nickel Exploration Results and Mineral Resources is based on information compiled by Robert Hartley, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Hartley is a full-time employee of Mincor Resources NL. Mr Hartley has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Hartley consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this Announcement that relates to nickel Ore Reserves at Cassini and Long is based on information compiled by Dean Will, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Will is a full-time employee of Mincor Resources NL and has sufficient experience 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 "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Will consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this Announcement that relates to nickel Ore Reserves at Burnett, Miitel and Durkin North is based on information compiled by Paul Darcey, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Darcey is a full-time employee of Mincor Resources NL and has sufficient experience 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 "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Darcey consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The Ore Reserves and Mineral Resources underpinning the production targets included in this Announcement were prepared by Messrs Will and Hartley respectively in accordance with the requirements of the JORC Code. Messrs Will and Hartley respectively consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

**Future performance:** This Announcement contains certain forward-looking statements and opinion. Forward-looking statements, including projections, forecasts and estimates, are provided as a general guide only and should not be relied on as an indication or guarantee of future performance and involve known and unknown risks, uncertainties, assumptions, contingencies and other important factors, many of which are outside the control of MCR and which are subject to change without notice and could cause the actual results, performance or achievements of MCR to be materially different from the future results, performance or achievements expressed or implied by such statements. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward looking statements or other forecast. Nothing contained in this announcement nor any information made available to you is, or and shall be relied upon as, a promise, representation, warranty or guarantee as to the past, present or the future performance of MCR.



# - ENDS -

# Approved by: Board of Mincor Resources NL

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