



CASSINI
RESOURCES LIMITED

ASX Release (CZI)
3 September 2019

COMPANY PRESENTATION - WEST MUSGRAVE PROJECT PFS UPDATE

Cassini Resources Limited (ASX: CZI) is pleased to lodge a copy of the presentation that Managing Director Mr Richard Bevan will be presenting at the ASX Small and Mid-Cap Conference on Thursday 5 September 2019 at the International Convention Centre, Darling Harbour, Sydney.

For further information, please contact:

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Managing Director

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About the Company

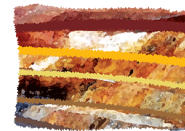
Cassini Resources Limited (ASX: CZI) is a base and precious metals developer and explorer based in Perth. In April 2014, Cassini acquired its flagship West Musgrave Project (WMP), located in Western Australia. The Project is a new mining camp with three existing nickel and copper sulphide deposits and a number of other significant regional exploration targets already identified. The WMP is the largest undeveloped nickel - copper project in Australia.

In August 2016, Cassini entered into a three-stage \$36M Farm-in/Joint Venture Agreement with prominent Australian mining company OZ Minerals Ltd (ASX: OZL). The Joint Venture provides a clear pathway to a decision to mine and potential cash flow for Cassini.

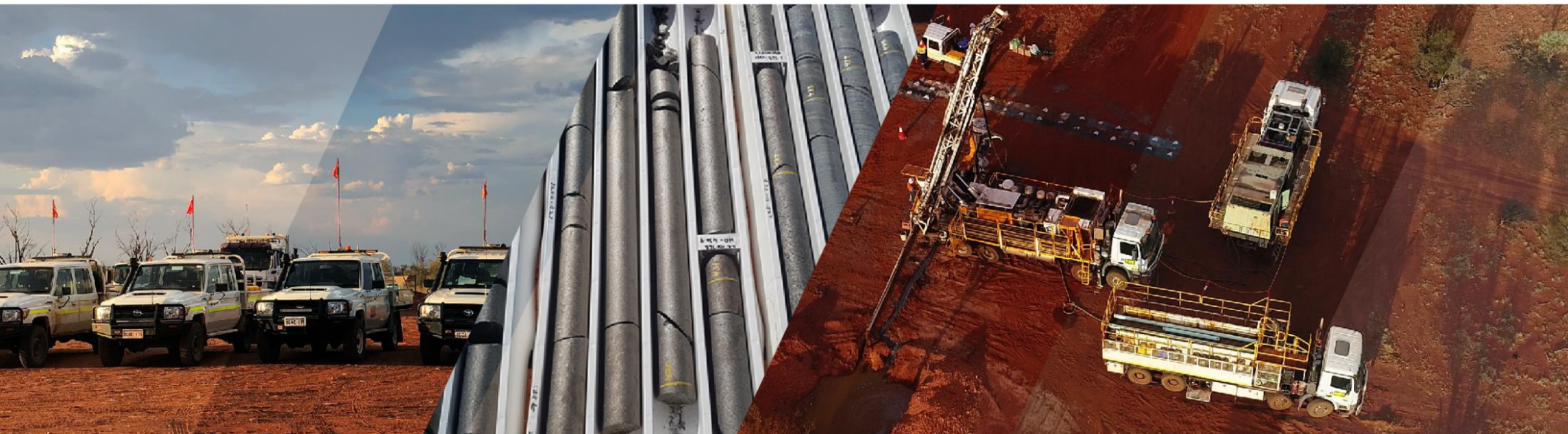
Cassini is also progressing its Mt Squires Gold Project, and the Yarawindah Nickel - Copper - Cobalt Project (CZI 80%), both located in Western Australia.

Company Presentation

West Musgrave Project – PFS Update September 2019



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www.cassiniresources.com.au

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Competent Persons Statement

The information in this statement which relates to the Mineral Resource data, including tenement information, drilling, sampling, and analytical results, geology interpretation, and selection of cut-off grade has been overseen by Mr Greg Miles who is a full-time employee of Cassini Resources Ltd and a Member of the Australasian Institute of Geoscientists. Mr Miles has sufficient relevant experience to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code, 2012 Edition.

The information in this report that relates to Nebo-Babel Mineral Resource estimate is based on information compiled by Mark Burdett, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (224519). Mark Burdett is a full-time employee of OZ Minerals Ltd. Mark Burdett has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC 2012). Mark Burdett consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Mark Burdett BSc (Geology), has over 18 years of relevant and continuous experience as a geologist including significant experience in Base Metal deposits. Mark Burdett has visited the site in August 2018.

Please refer to Cassini's ASX announcement of 7 December 2015 for the Competent Person Statement and JORC disclosure tables relating to the Succoth Mineral Resource Estimate.

Cassini is not aware of any new information or data, other than that disclosed in this report, that materially affects the information included in this report and that all material assumptions and parameters underpinning Exploration Results, Mineral Resource Estimates and Production Targets continue to apply and have not materially changed.

The nickel equivalent (NiEq) and copper equivalent (CuEq) calculations take into account resources, reserves, and grades as stated in latest ASX releases and assumes 100% payability for all metals recovered generating a commodity equivalent value for Ni, Cu, Co, Zn, Au, Ag, Pb and Mo. Only projects with JORC 2012 resources and reserves have been used. Nickel equivalent grade = $\text{Ni}\% + \text{Cu}\% \times 0.56$. Copper equivalent grade = $\text{Cu}\% + \text{Ni}\% \times 1.97$. Based on assumed recoveries of 73% for Cu and 59% for Ni and commodity prices shown below. It is the Cassini's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold. NiEq grades have been published to enable a comparison to similar sized nickel sulphide assets. CuEq grades have been published to enable a comparison to similar sized copper assets.

Forward Looking Statements

Some statements in this report regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results, and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. These risks and uncertainties include but are not limited to liabilities inherent in mine development and production, geological, mining and processing technical problems, the inability to obtain mine licenses, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel; incorrect assessments of the value of acquisitions; changes in commodity prices and exchange rates; currency and interest rate fluctuations; various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions; the demand for and availability of transportation services; the ability to secure adequate financing and management's ability to anticipate and manage the foregoing factors and risks. There can be no assurance that forward-looking statements will prove to be correct.

The production targets referred to in this announcement are based on 52% In-pit Indicated Resources and 48% Inferred Mineral Resources. The Inferred Resources do not determine the economic viability of the project, and approximately 80% of resources within the optimisation pit shells are in the Indicated Category during the pay-back period. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production targets themselves will be realised.

Statements regarding plans with respect to the Company's mineral properties may contain forward looking statements. Statements in relation to future matters can only be made where the Company has a reasonable basis for making those statements.

Cassini Resources

A Unique Position

- ✓ Nebo-Babel is one of the largest, active nickel-copper development projects globally
- ✓ Strong JV partner **OZ Minerals (ASX:OZL)**
- ✓ OZL will spend >A\$50M delivering high quality PFS
- ✓ Cassini loan-carried through to “Decision to Mine”
- ✓ PFS scope expanded to de-risk several significant value-based opportunities
- ✓ PFS expected in early 2020



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Corporate Snapshot

CAPITAL STRUCTURE

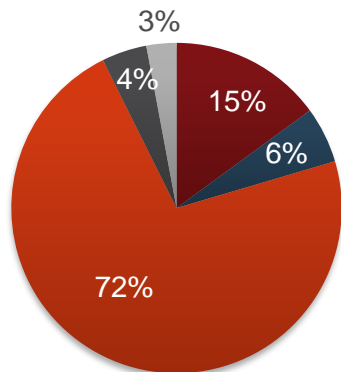
ASX Code	CZI
Frankfurt Stock Exchange code	ICR
ASX Share price (close 30-Aug-2019)	A\$0.08
Shares outstanding	415.5M
Options on Issue	29.72M
Market capitalization	A\$33.2 M
Cash (30 June 2019)	A\$8.0M

MAJOR SHAREHOLDERS (30 July 2019)

Atasa Holdings Pty Ltd	7.86%
Buxiao Yu	7.65%
Tinci (HK) Limited	6.02%
Mr Colin Iles	5.59%
Mr Sufan Siauw & Lusmiati Marsudidaja	5.12%

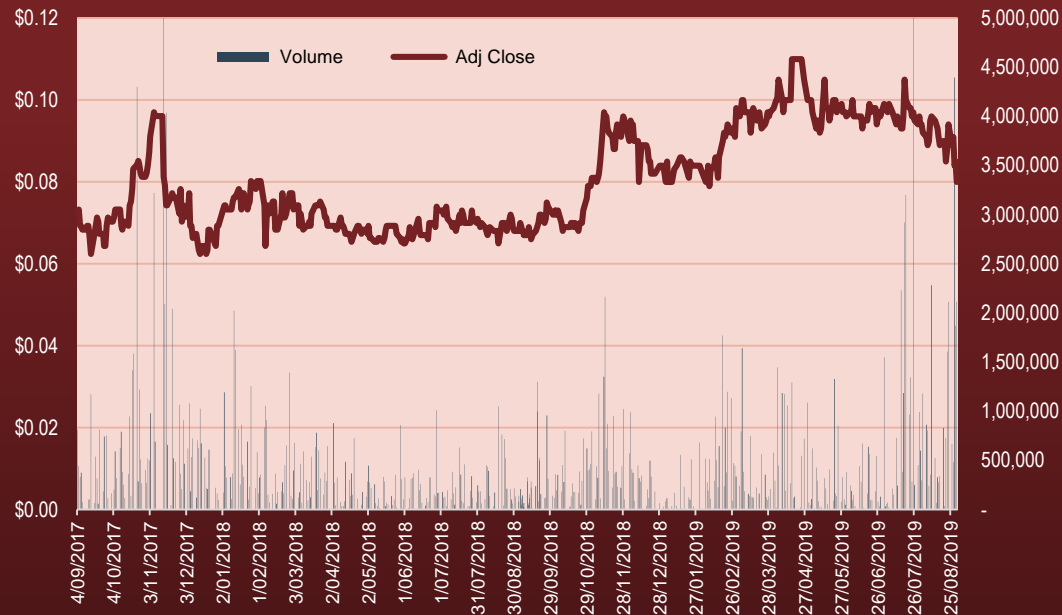
SHAREHOLDING

- Corporate
- Institutional
- Private
- Directors/Mgt
- Brokers



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SHARE PRICE PERFORMANCE - 24 month CZI Price & Volume



CASH EXPENDITURE - next 12 months

Corporate	A\$1.5M
Exploration (100% CZI Projects)	A\$1-\$1.5M
Forecast cash 30 June 2020	circa A\$5M

Asset Portfolio

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Earnin/Joint Venture
(OZL 70%, CZI 30%)

West Musgrave Project (Ni, Cu, Co, PGE)

STAGE: PRE-FEASIBILITY and EXPLORATION

STAGE: PRE-FEASIBILITY

- Nebo-Babel Deposits

STAGE: ADVANCED EXPLORATION

- Succoth Deposit

STAGE: EXPLORATION

- One Tree Hill
- Yappsu

- West Musgrave Project
- Mount Squires Project
- Yarawindah Brook Project



100% CZI Owned

Mount Squires Gold Project (Au)

STAGE: EXPLORATION

- 50km prospective trend
- First drill program complete

80% CZI Owned

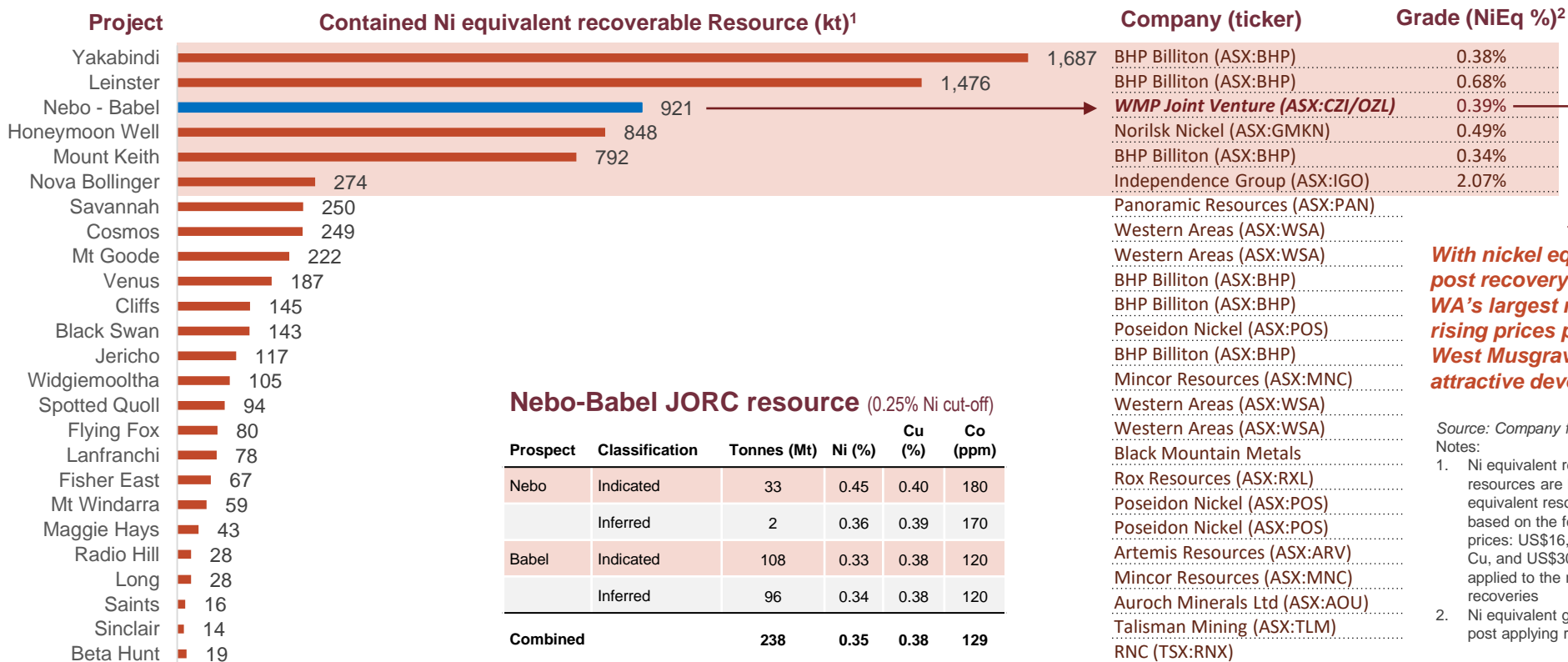
Yarawindah Brook Project (Ni, Cu, Co, PGE)

STAGE: EXPLORATION

- Under-explored
- Ni-Cu-Co massive sulphides

Nebo-Babel: Nickel-sulphide project benchmarking

Nebo-Babel is one of the largest nickel sulphide development projects in Australia and comparable in scale to the tier one nickel assets of BHP Billiton and Norilsk Nickel



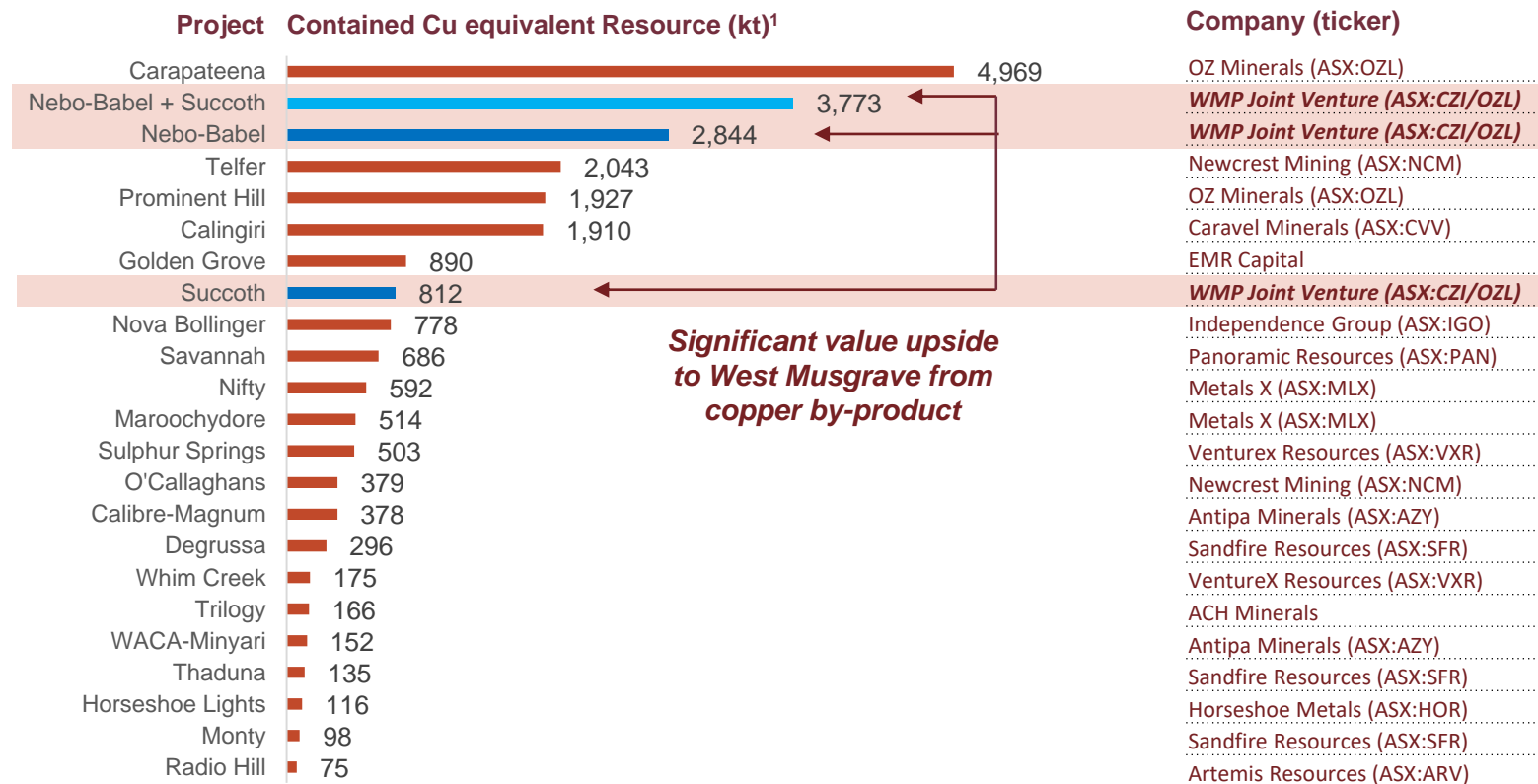
With nickel equivalent grades post recovery comparable to WA's largest nickel projects, rising prices position West Musgrave as a highly attractive development asset

Source: Company filings (14/8/2019)
Notes:

1. Ni equivalent recoverable resources are based on Ni equivalent resources calculated based on the following commodity prices: US\$16,050/t Ni, US\$5,732/t Cu, and US\$30,500/t Co; and then applied to the respective metal recoveries
2. Ni equivalent grades shown are post applying recoveries

West Musgrave: Copper project benchmarking

On a copper equivalent basis **West Musgrave is larger in scale than some of Australia's premier copper assets**



With significant scale on a copper equivalent basis, West Musgrave is a natural and high value addition to OZ Minerals project pipeline

Source: Company filings (15/08/2019)

Notes:

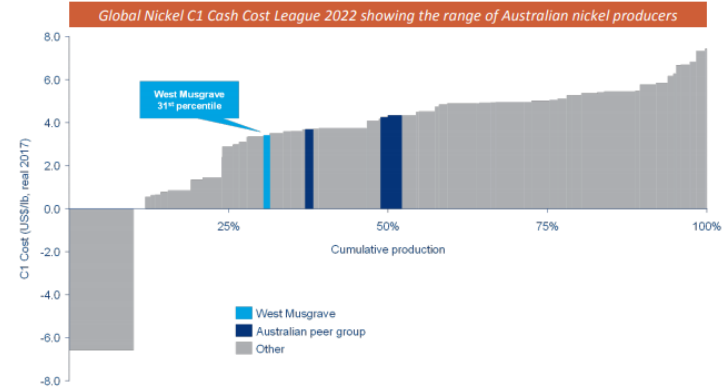
1. Cu equivalent recoverable resources are based on Cu equivalent resources calculated based on the following commodity prices: US\$5,710/t Cu, US\$16,090/t Ni, US\$2,264/t Zn, US\$2,050/t Pb, US\$1,513/oz Au, US\$17.16/oz Ag and US\$31,500/t Co; and then applied to the respective metal recoveries

Nebo-Babel PFS Update

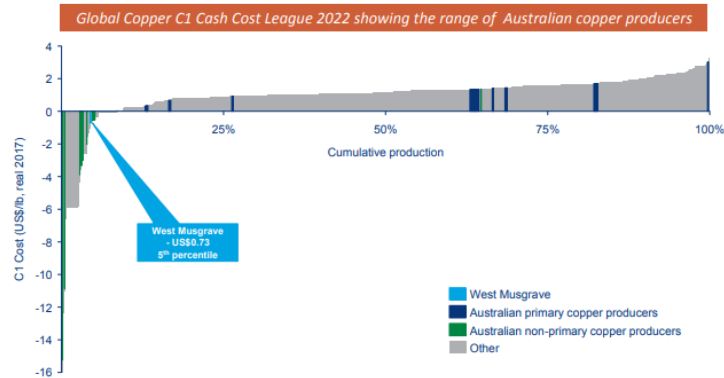
- **PFS extended to early 2020**
 - » Key work packages beyond accepted PFS level (resource, metallurgy)
 - » Expanded scope to fully de-risk opportunities to deliver significant cost saving and processing efficiencies:
 - further upside to attractive project economics
 - » Allow a clearly defined single path forward for BFS
 - » Opportunities to reduce overall timeline to production
- **West Musgrave remains a compelling investment**
 - » Long life, low cost base metals producer in stable jurisdiction
 - 2nd quartile producer of nickel*
 - 1st quartile producer of copper*
 - » OZL Board just approved additional A\$10M to complete PFS
 - This will take OZL's total expenditure to A\$50-55M
 - Few (if any) base metals developments are as progressed in Australia

* Cassini Scoping Study Announcement and Presentation – ASX 14 Nov 2017

Scoping Study C1 Cash cost graphs*



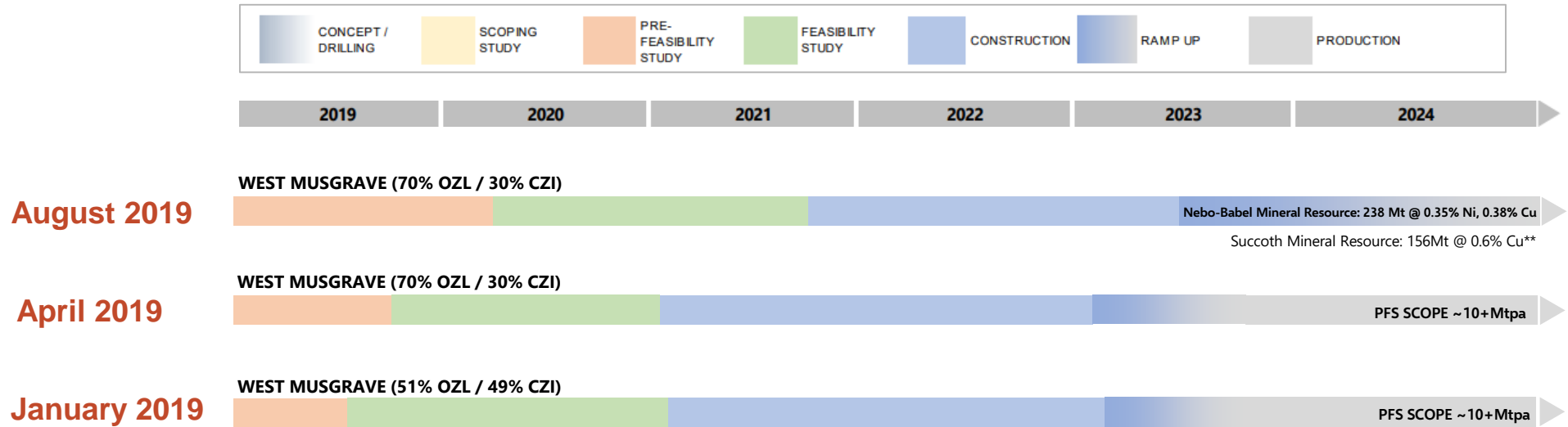
* Note: West Musgrave costs and production are the life-of-mine average. Cassini's costs for West Musgrave have been aligned with Wood Mackenzie's assumptions related to prices for by-products, and Wood Mackenzie's definition and methodology of C1 costs. The cost estimates are on a paid nickel basis. Source: Cost curve from Wood Mackenzie data, West Musgrave Project costs provided by Cassini Resources Limited



* Note: West Musgrave costs and production are the life-of-mine average. Primary copper producers are those that receive more than 65% of net revenue from copper sales on average. Cassini's costs for West Musgrave have been aligned with Wood Mackenzie's assumptions related to prices for by-products, and Wood Mackenzie's definition and methodology of C1 costs. The cost estimates are on a paid copper basis. Source: Cost curve from Wood Mackenzie data, West Musgrave Project costs provided by Cassini Resources Limited

Nebo-Babel PFS Update

Impact to project timeline



Overall impact of PFS extension

- BFS completion and ultimate production delayed by approx. 9 months
- Potential to accelerate BFS e.g. reserve drilling already brought forward

Nebo-Babel PFS Update

Comparison to Further Scoping Study

	FSS	PFS Update	PFS Commentary
LOM	8	>15 (+Succoth)	Additional 50km infill drilling to deliver LOM extension and maiden reserve
Throughput	10Mtpa “Sequential”	10Mtpa “Bulk”	Bulk separation flowsheet provides better recoveries with lower operating costs
Ni Production	20-25ktpa	In line with FSS	Cassini retains 30% of product
Ni C1 Costs	US\$2.00-2.30/lb	-	40% of cost derived from power generation
Ni Con grade & recovery	10.8% Ni @ 59.0%	10.9% Ni @ 67.4%	Low impurities, further recovery improvements expected
Cu Production	25-30ktpa	In line with FSS	Improved logistics solution to Esperance
Cu C1 Costs	US\$0.20-0.40/lb	-	Highly leveraged to comminution and power opportunities currently under investigation
Cu Con grade & recovery	22.7% Cu @ 72.6%	26.4% Cu @ 84.6%	Quality product with potential for further improvement
Capex	A\$730-800M	-	10Mtpa anchors FSS order of magnitude
Power	60MW solar-diesel	55MW solar-wind-diesel	PPA process underway – Confidence in lowering cost assumptions used in FSS
Innovation	Nil	“...a modern mine”	Opportunities: remote operations, autonomous mining, new flotation technology...etc

Nebo-Babel PFS - Key Opportunities

Priority	Detail	Opportunity / Risk
1 Comminution – Loesche Mill	Complete pilot test work in Germany before inclusion in base case	<p>Potential for 30% reduction in power for similar capital cost of SAG / Ball Mill circuit</p> <p>Very common technology used in cement industry, never before applied to base metal comminution</p>
2 Processing	Trials of Woodgrove and HydroFloat Cell technology	Reduced size/footprint and air consumption compared to conventional float cells, reducing capex & opex
3 Resource & Reserve update	Additional 50km of infill drilling completed since April '19 resource update	Targeting >80% Indicated resources for LOM including Maiden Reserve.
4 Power	<p>Currently 70-80% renewable penetration</p> <p>Large number of proposals received. Identify partner to deliver additional cost savings</p>	<p>Options to further reduce reliance on high cost fossil fuels</p> <p>Leverage to dynamic renewable energy sector</p>
5 Workforce Planning	Evaluation of Remote Operations Centre and Autonomous Mine Haulage	<p>Potential to reduce labour costs and infrastructure from site</p> <p>Maintaining balanced social responsibilities</p>
6 LOM extensions	Succoth and other exploration	Will underpin further reduction in power costs through longer amortisation of capital costs

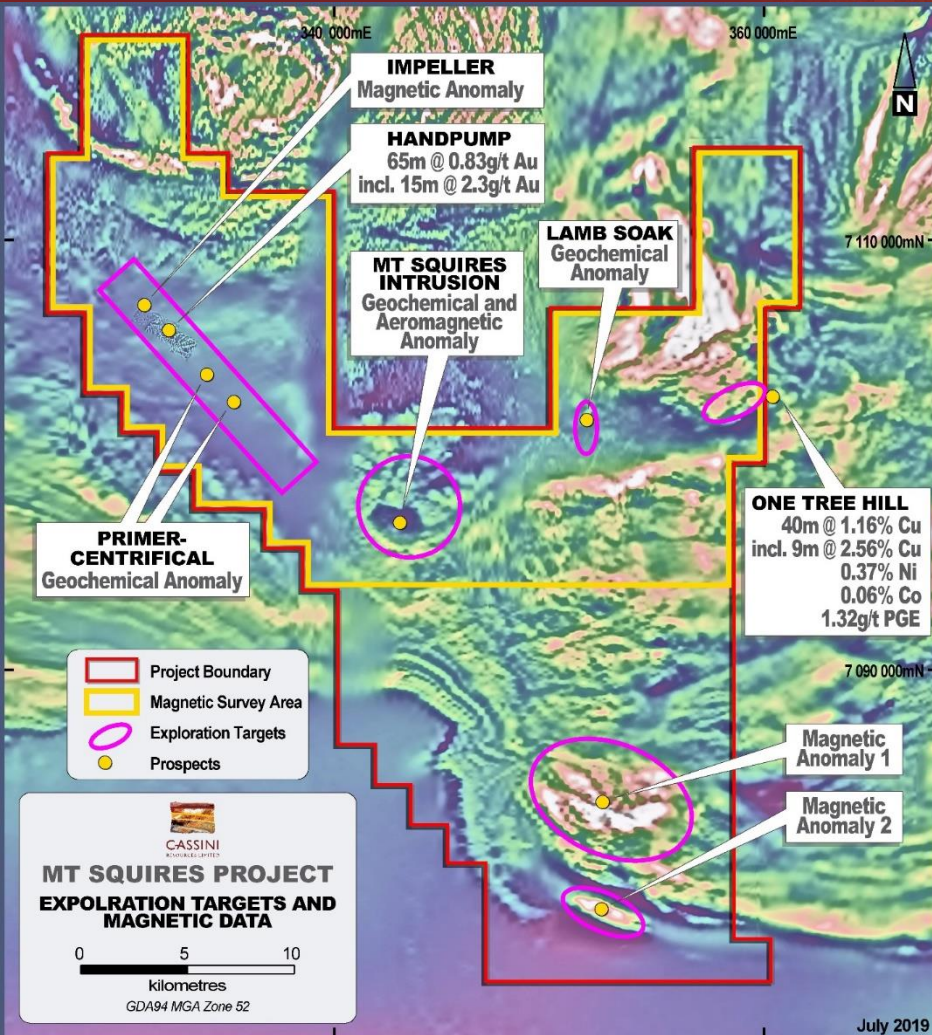
Other Exploration Projects



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Mount Squires Gold Project (CZI 100%)



Large scale greenfield gold project

- 50km structure with confirmed gold mineralisation
- Previous drilling (2009):
 - » 15m @ 2.3g/t Au from 31m, including **5m @ 4.7g/t** from 34m
- Aeromagnetic survey completed over priority targets to assist with mapping and targeting
- RC Drill program at Handpump Prospect complete, results early September



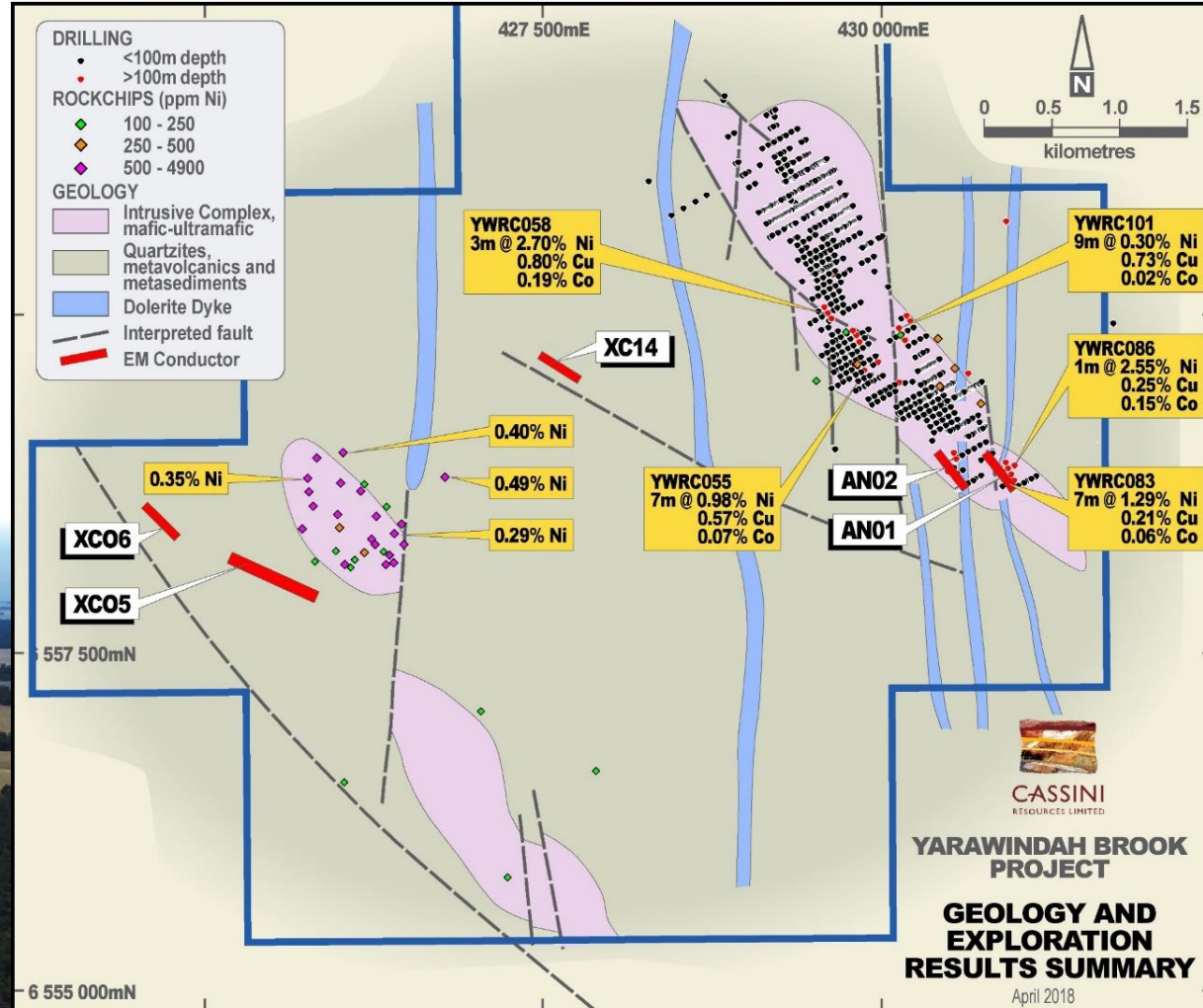
Yarawindah Brook Ni-Cu-Co Project (CZI 80%)



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Increasing exposure to battery metals

- Under-explored magmatic Ni-Cu system
- Last drilled 2007:
 - » 7m @ 1.29% Ni, 0.21% Cu, 0.06% Co
 - » 3m @ 2.70% Ni, 0.80% Cu, 0.19% Co
- 2018 geophysics identify new conductors
- Cassini building a land position
- Field program December 2019

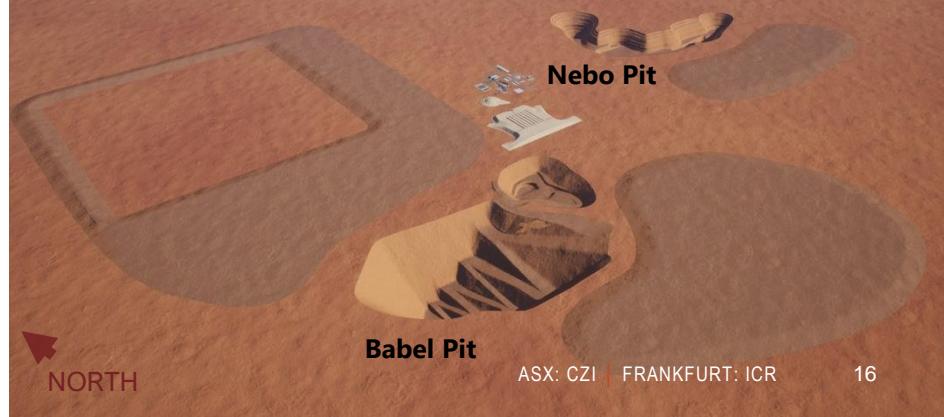


Realising Value

- ✓ Exposure to a large scale, long life Ni + Cu sulphide projects in a safe, first world jurisdiction
- ✓ Project de-risked by **strong technical and financial partner** OZ Minerals
- ✓ **Re-rate opportunity** with delivery of positive PFS
- ✓ Progressing **multiple options for funding** construction
- ✓ Progressing **early stage exploration** projects
- ✓ Leveraged to positive Ni and Cu price outlook and **emerging battery metals thematic**



The PFS is considering multiple design options. —
This diagram is just one of the options being considered.





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ASSOCIATION OF MINING
AND EXPLORATION COMPANIES
2019 MEMBER

Appendix A: Mineral Resource Table

West Musgrave Project Indicated and Inferred Mineral Resources^{1,2,3}

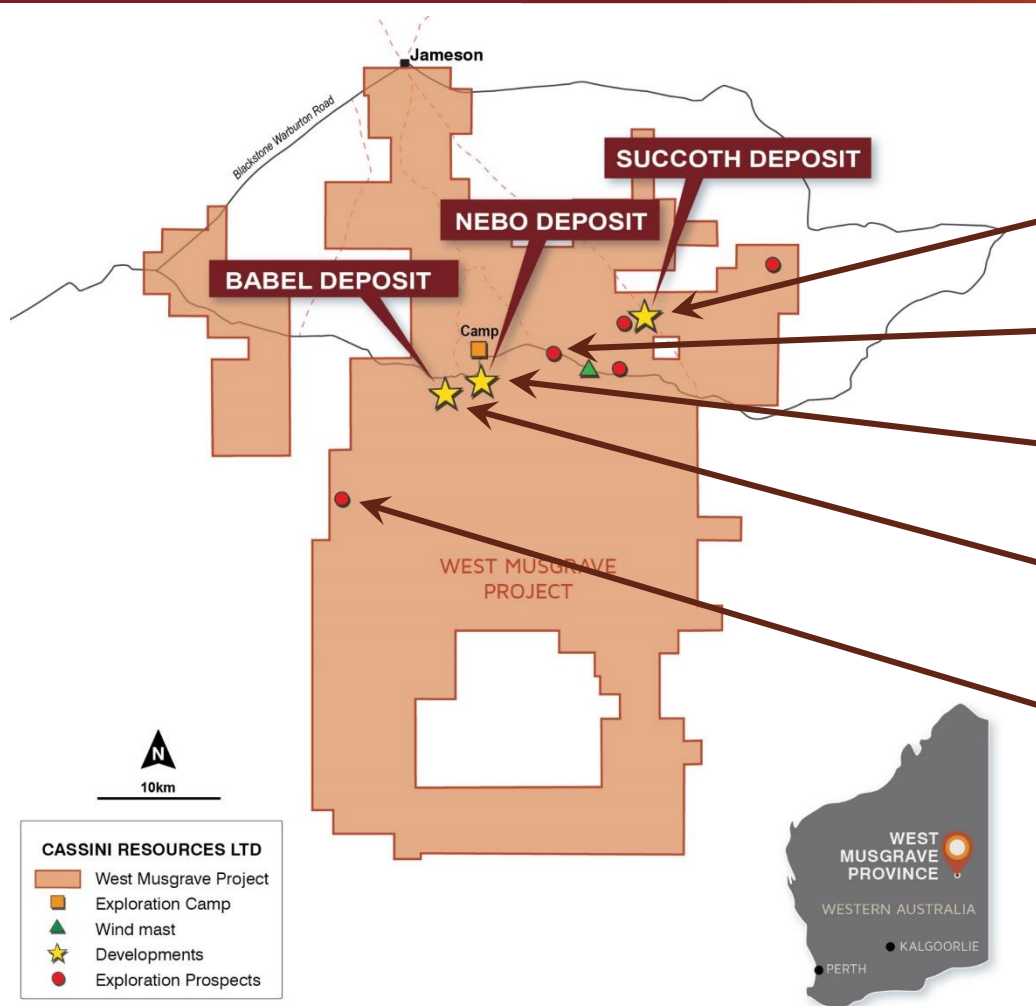
Deposit	Classification	Tonnes (Mt)	Ni (%)	Cu (%)	Co (ppm)	Au (ppm)	Pd (ppm)	Pt (ppm)
Nebo	Indicated	33	0.45	0.40	180	0.05	0.09	0.07
	Inferred	2	0.36	0.39	170	0.04	0.08	0.07
	Total	34	0.44	0.40	179	0.04	0.08	0.07
Babel	Indicated	108	0.33	0.38	120	0.06	0.10	0.09
	Inferred	96	0.34	0.38	120	0.07	0.11	0.09
	Total	204	0.34	0.38	120	0.06	0.10	0.09
Nebo + Babel	Total	238	0.35	0.38	129	0.06	0.10	0.09
Succoth	Inferred	156	0.06	0.60	-	0.02	0.11	0.09

Table subject to rounding errors

NOTES:

1. Nebo-Babel Indicated and Inferred Mineral Resource, 12 April 2019. Mineral Resources reported within a A\$24 NSR pit shell and at 0.25% Ni Cut-off. Refer to the Mineral Resource Statement and Explanatory Notes for full details https://www.ozminerals.com/uploads/media/190412_ASX_Release_-_OZL_Nebo-Babel_Mineral_Resource_Statement.pdf.
2. Succoth Deposit Inferred Mineral Resource estimate (0.3% Cu cut-off), 7 December 2015
3. The Mineral Resource estimates have been completed in accordance with the guidelines of the JORC Code (2012 edition) - Refer to the company website page: <http://www.cassiniresources.com.au/jorc-compliance>

West Musgrave Project



SUCCOTH:

Latest drilling highlights resource upside

YAPPSU:

Identified Nebo-style mineralisation

NEBO:

Identification of high-grade Angie Lode

BABEL:

New mineralised extension: H-T Lode

ONE TREE HILL:

Best-ever intersections in 2019 and all open

First-class Stakeholder Engagement



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- Continuing engagement with stakeholders to add value through PFS & beyond
 - » Social Impact and Opportunities Assessment
 - » Consultation with local indigenous community, Ngaanyatjarra Council and government agencies
 - » Best practice environmental studies to assist regulatory approvals

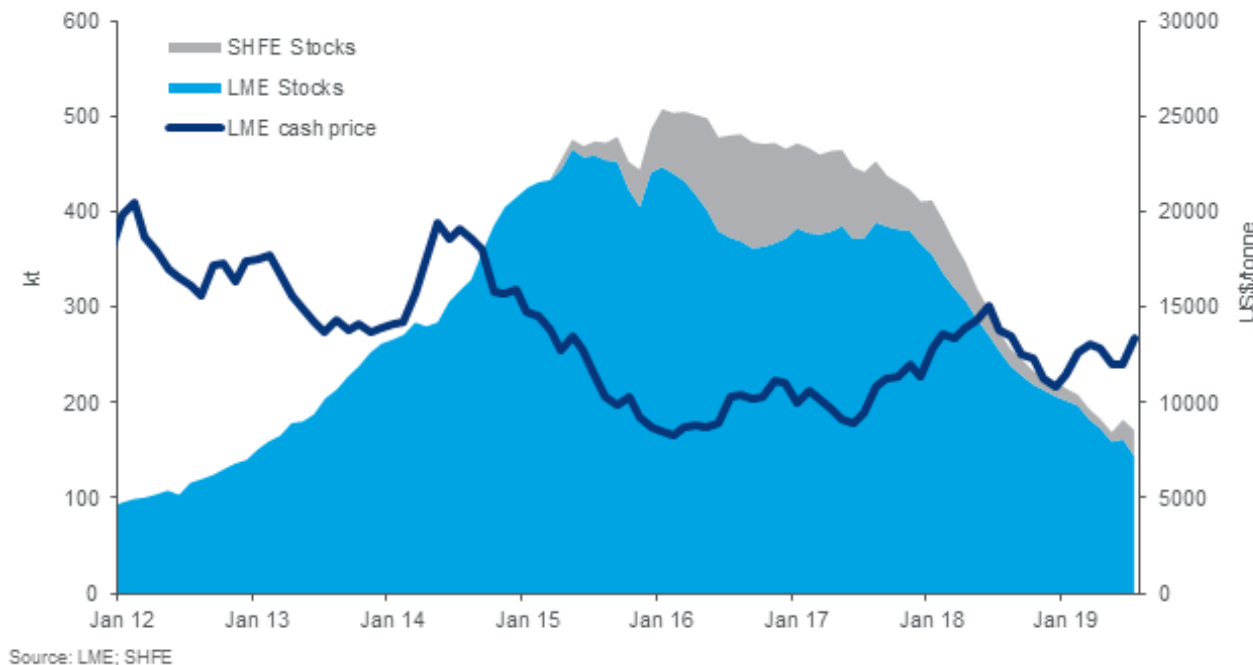


Commodity Markets

NICKEL MARKET

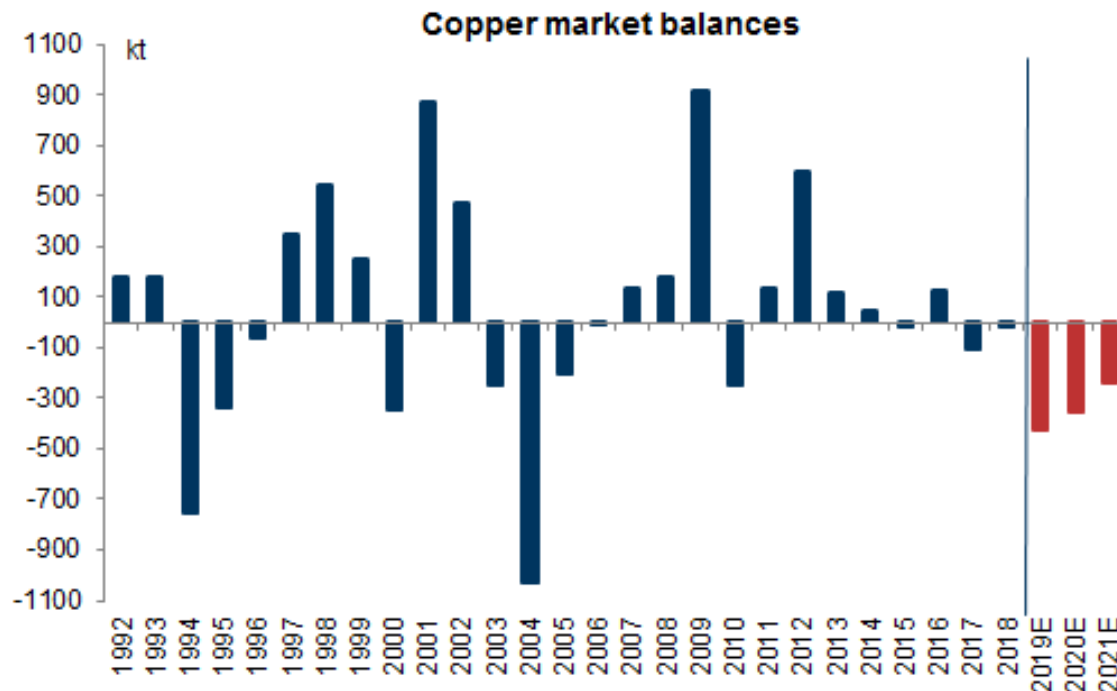
- Current nickel market in deficit
- Ni inventories at 6-year lows
- Primary demand from stainless steel increasing
- Exponential growth in nickel required for battery and EV market
- Battery grade nickel deficit predicted by 2024*
- Growth in demand specifically for Class 1 nickel products
- Very few new sulphide projects in pipeline

* Bloomberg



Copper – the cornerstone of the EV market

- Trade war has taken its toll on copper
- Copper mine supply entering a period of significant weakness
- 2019-21 expected to see weakest supply growth in a decade
- Copper exploration priority of Majors
- Positive exposure to the ongoing vehicle electrification
- Prices have to rebound above \$6,500/t



... over 20 million EV charging points could be deployed and that means the world needs to produce around 2.5 times more copper by 2030 - and that means a lot of money needs to be spent to find and produce it.

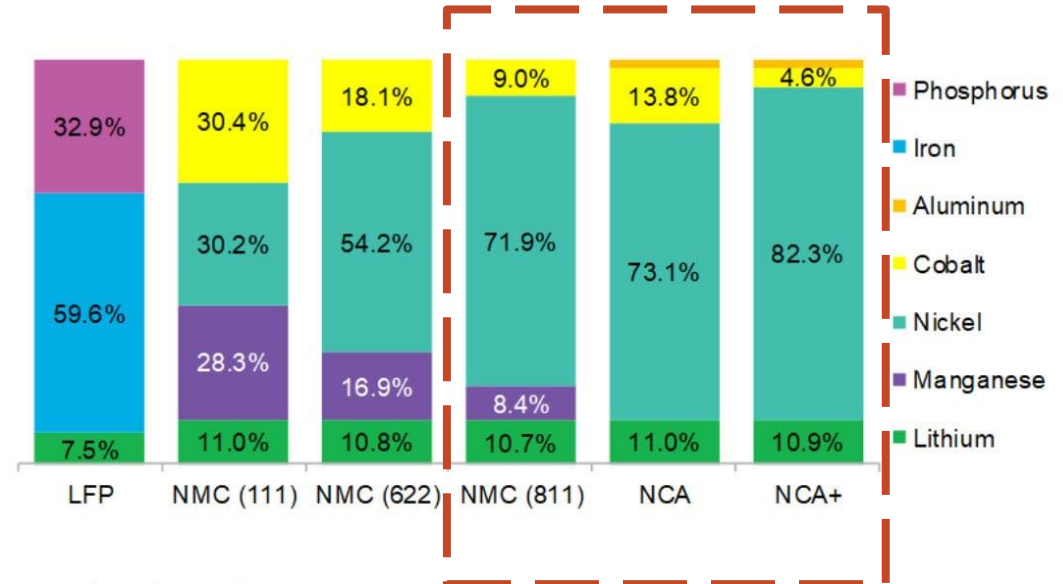
Wood Mackenzie

Global Battery Market

- Industry leaders Tesla, LG and BMW shifting to high Ni cathodes to increase energy density
- A 60kwh NMC811 battery needs **70kg of nickel**, 11kg of lithium and 9kg of cobalt¹
- Significant legislative support for transition to EV in China, Canada ...
- These changes will drive a significant increase in global nickel demand in the **mid-late 2020s**

1. BHP, IDTechEx

Metal content of battery chemistries, by weight



Source: BloombergNEF