



CASSINI
RESOURCES LIMITED



Building An Australian Base Metals Company

ZINC EXPLORATION PROGRAM UNDERWAY

May 2016

SydneyResourcesRound-up

Corporate Overview



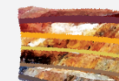
Capital Structure	AUD
Current Share Price (close 04/05/16)	\$0.045
Shares on Issue	220,899,079
Options on Issue	21,950,000
Market Capitalisation	\$9.9 million
Cash (31/03/16)	\$1.7M

Current Shareholders	%
MACA Limited (ASX:MLD)	13.5%
GR Engineering (ASX:GRE)	6.8%
BT Portfolio Services	5.4%
Directors & Management	5.2%

Board and Management	
Mike Young	Non Executive Chairman
Richard Bevan	Managing Director
Greg Miles	Executive Director
Dr Jon Hronsky	Non Executive Director
Phil Warren	Non Executive Director

Shareholder Concentration	%
Top 10	39.5%
Top 20	48.6%

Project Overview



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Zinc

West Arunta Zinc Project

- Emerging Project in a potential new Zinc region
- Significant scale with a 35km prospective horizon
- Maiden drill program underway
- Multiple follow-up targets

Gold

Mount Squires Gold Project

- Located on western edge of West Musgrave Project
- Historical drilling confirms shallow gold mineralisation
- Cassini consolidated ownership 2015
- Progressing approvals to access 2H 2016

Copper

Succoth Copper Deposit, West Musgrave Project

- Inferred Resource of 156Mt @ 0.6% Cu (0.3% Cu cut off)
- Shallow mineralisation, open along strike and at depth
- Significant potential to increase resource size
- Co-development opportunity with Nebo-Babel

Nickel-Copper

Nebo-Babel Deposits (Ni+Cu), West Musgrave Project

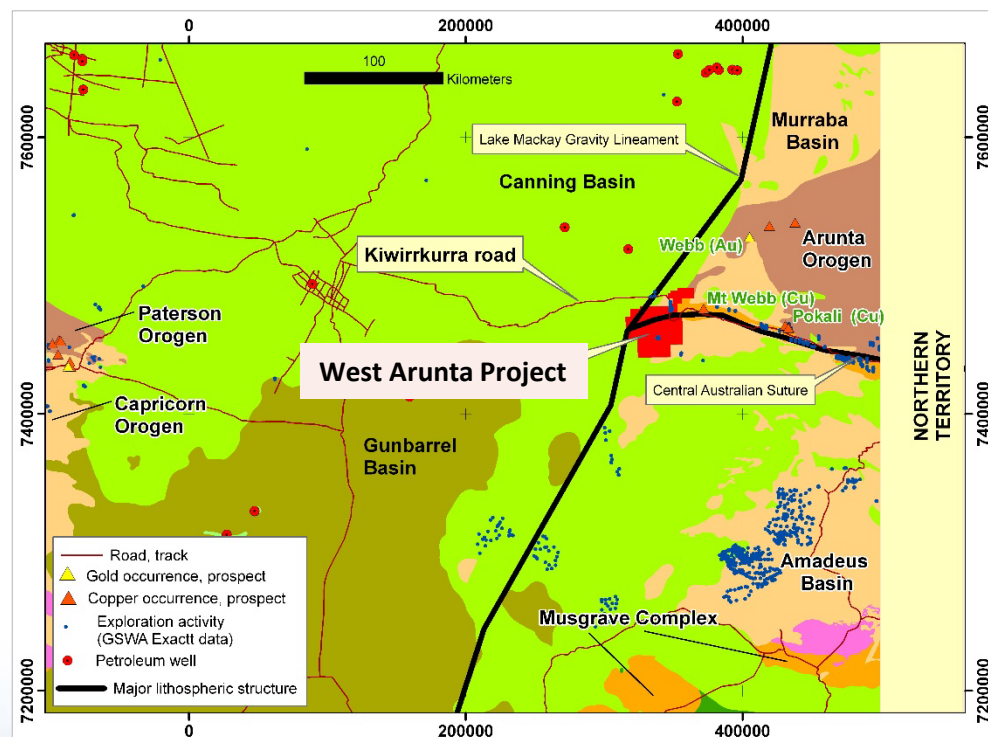
- Acquired in May 2014
- Resource of 203Mt @ 0.41% Ni, 0.42% Cu (0.3% Ni cut off)
- Scoping Study completed in April 2015
- Highly valuable asset - Low operating cost, long mine life.



West Arunta Project



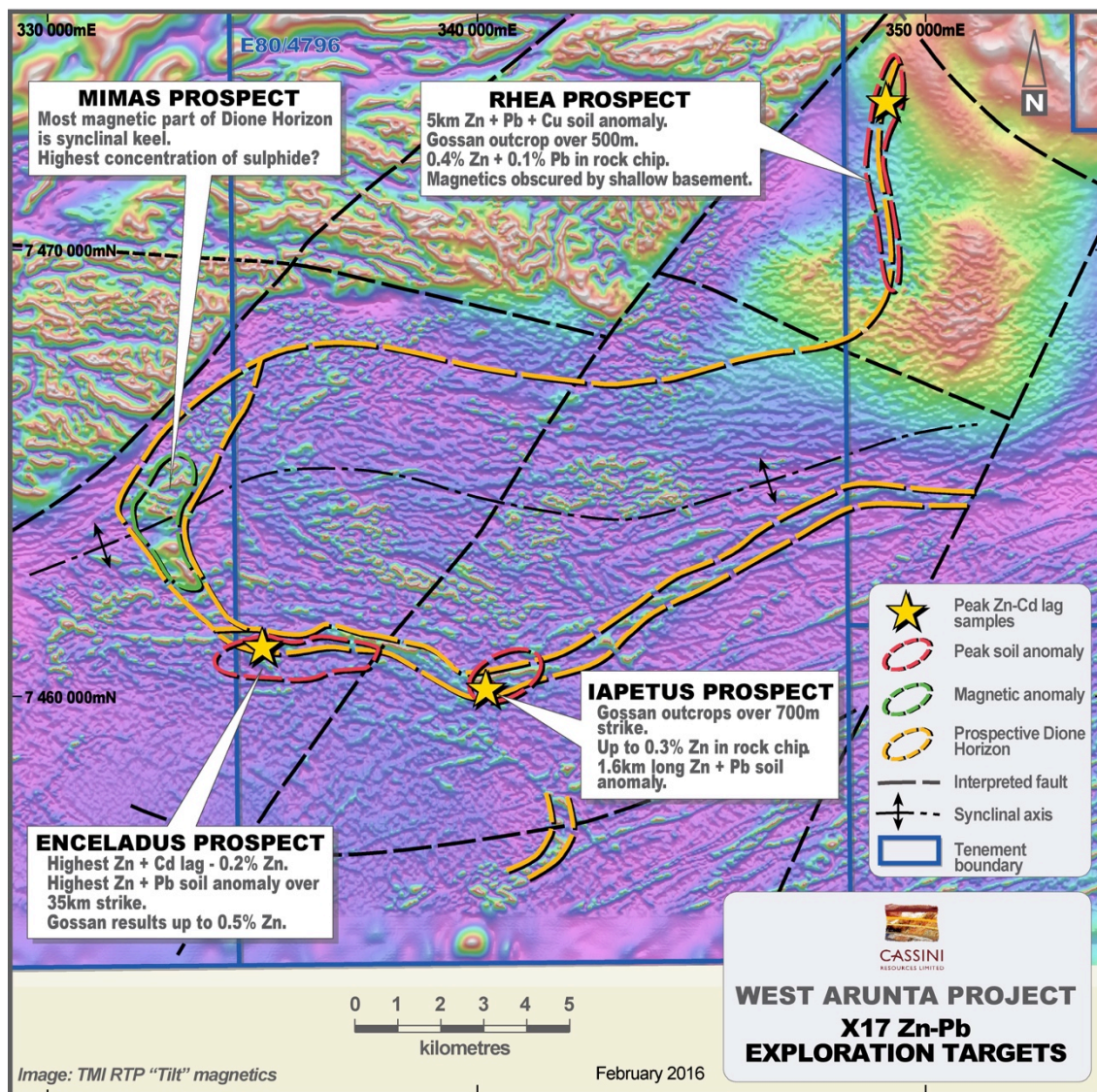
- 100% Cassini
- Greenfield zinc exploration project
- Identified by targeting of highly prospective regional-scale structures
- Minimal historical exploration with no previous drilling
- Significant progress made with low cost exploration work over past 18 months
- Multiple mineralised drill targets generated



Geochemical and Geophysical Anomaly

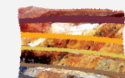


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- Project was originally identified from continental scale analysis of geophysical data
- Geophysics (magnetics) shows an interpreted prospective horizon of over 35km (Dione horizon)
- The recently identified coincident soil and lag anomalies align well on this prospective geology
- Mimas prospect in highly favourable syncline position, but no surface expression due to shallow transported sand cover

Discovery of Mineralised Outcrop (Gossans)



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- Low cost geochemistry program completed
- Exploration team identified 3 gossans at location of anomalous soil and lag samples
- Rock chip assays from gossans returned up to:
 - » Zn: 4720ppm (i.e. 0.47%)
 - » Pb: 1190ppm
 - » Cu: 290ppm
 - » Ni: 366ppm
- These results are considered highly anomalous for Zn and pathfinder elements (Pb, Cd, Cu, Ni, As, Ba & Tl)
- Weathering leaches (dilutes) metal concentrations – not indicative of fresh rock mineralisation grades



Completed Work:

- Initial soil sampling on 1,000 x 500m centres (broad spaced)
- Sampling was successful in identifying 3 gossans and a 35km prospective horizon

Planned Work:

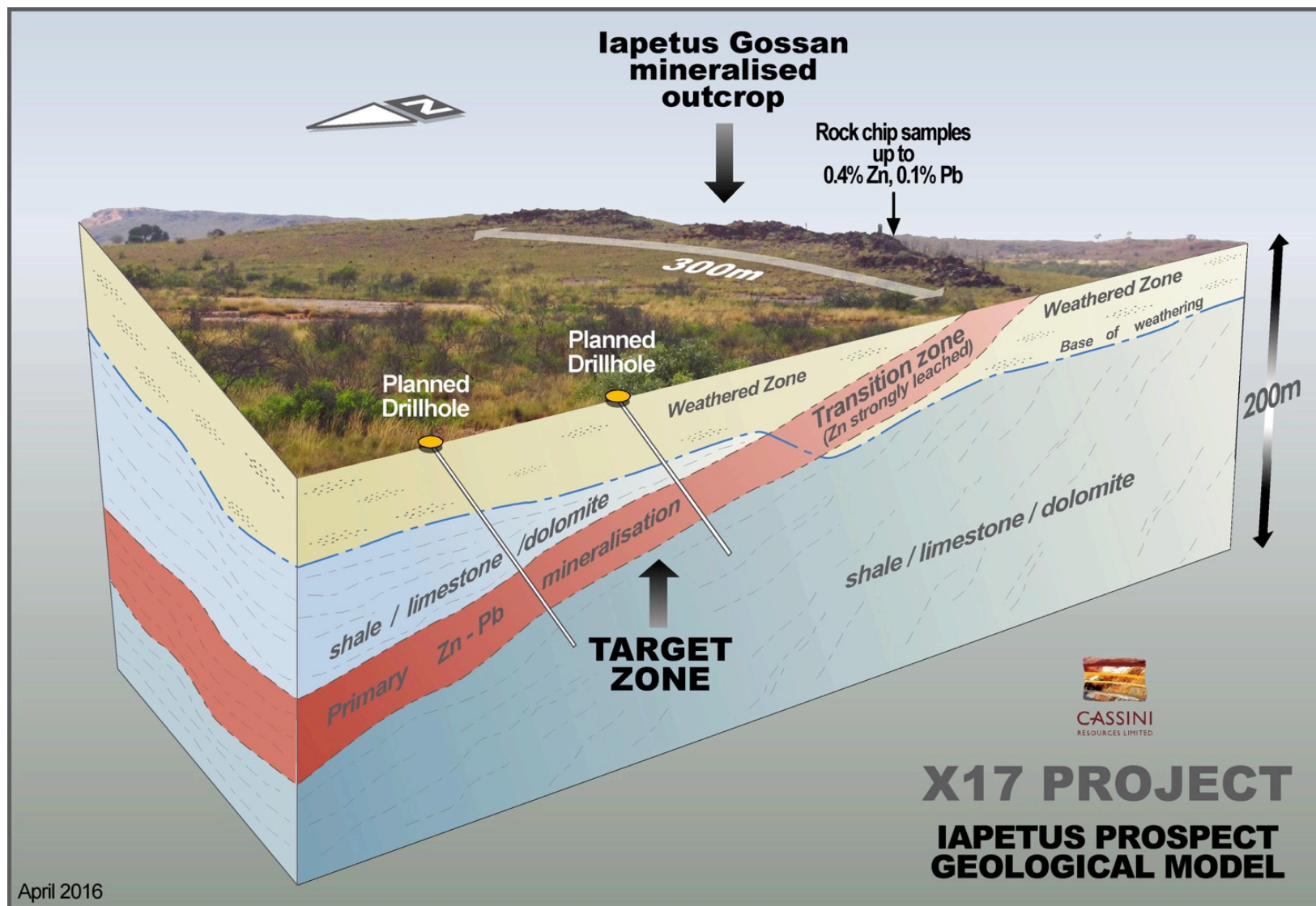
- Infill soil geochemistry to identify more targets
- Geochem program to run concurrently with drilling (~1,200 samples)
- Drill program is targeting fresh rock directly beneath the 3 gossans identified
- Up to approximately 1,600m of RC drilling
- Drilling has commenced



Drilling under the gossans



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Same Mineralisation Style as Century mine



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- Early stage geological interpretations suggests that West Arunta Project has potential to host sedimentary zinc deposits
- **Typically modest grade, large scale deposits**
- Modern day analogue is the Century Mine (MMG) in Mt Isa region of Queensland
- Century discovery resulted from a prominent Zn-Pb soil anomaly centred on a siltstone outcrop
- Rock chip samples from this outcrop returned only 1-2% Pb & Zn, later recognised as part of the orebody
- There was a very subtle geochemical and visual expression of the mineralisation due to **strong leaching**
- Century Deposit had a pre-production resource of 167mt @ 8.1% Zn, 1.2% Pb and 33g/t Ag



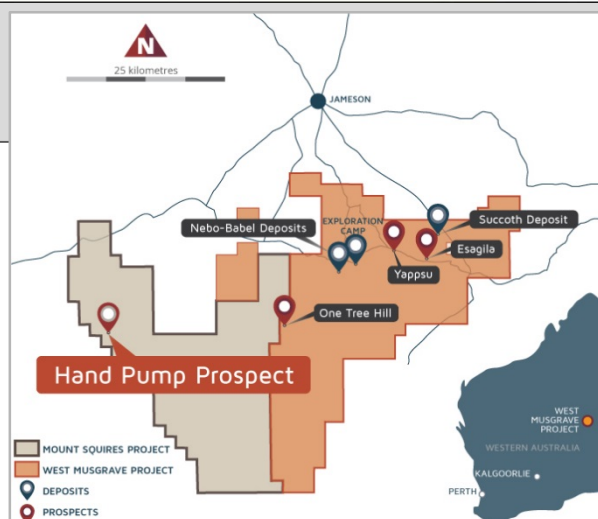
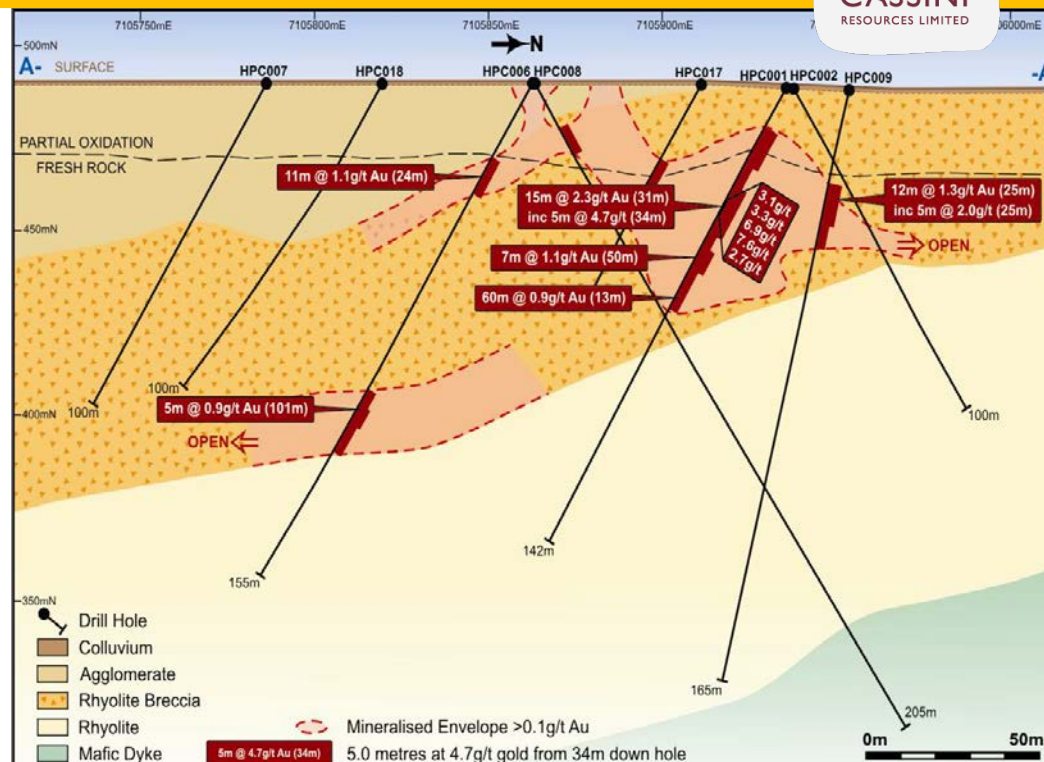
Century Mine – MMG Limited

Mt Squires Project – Emerging Gold Project



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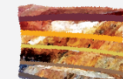
- Cassini has consolidated landholding prospective for gold (Mt Squires Project)
- Project area formerly held by WMC, Anglo American and Beadell Resources Ltd
- Mount Squires contains a number of recognised prospects including:
 - » Primer
 - » Impeller
 - » Handpump
- Handpump Prospect drilling returned
 - » 15m @ 2.3g/t from 31m including 5m @ 4.7g/t from 34m; and
 - » 2m @ 1.3 g/t including 5m @ 2.0g/t from 25m
- Other targets along strike remain untested
- Currently negotiating Native Title access agreement



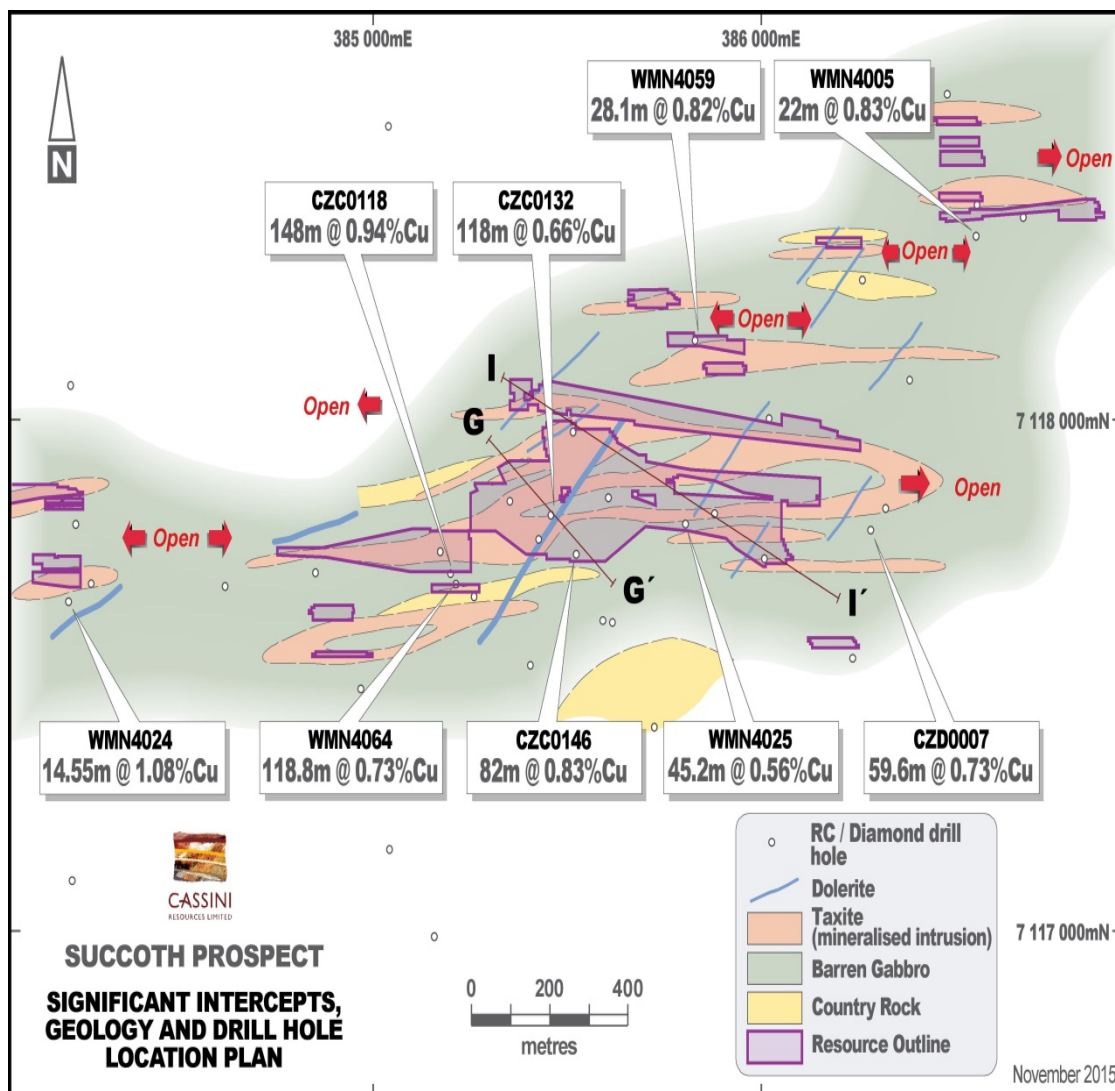
Handpump Prospect: Section 332200E

Source: Beadell Resources Limited,
ASX release 1 March 2010

Succoth Copper Deposit



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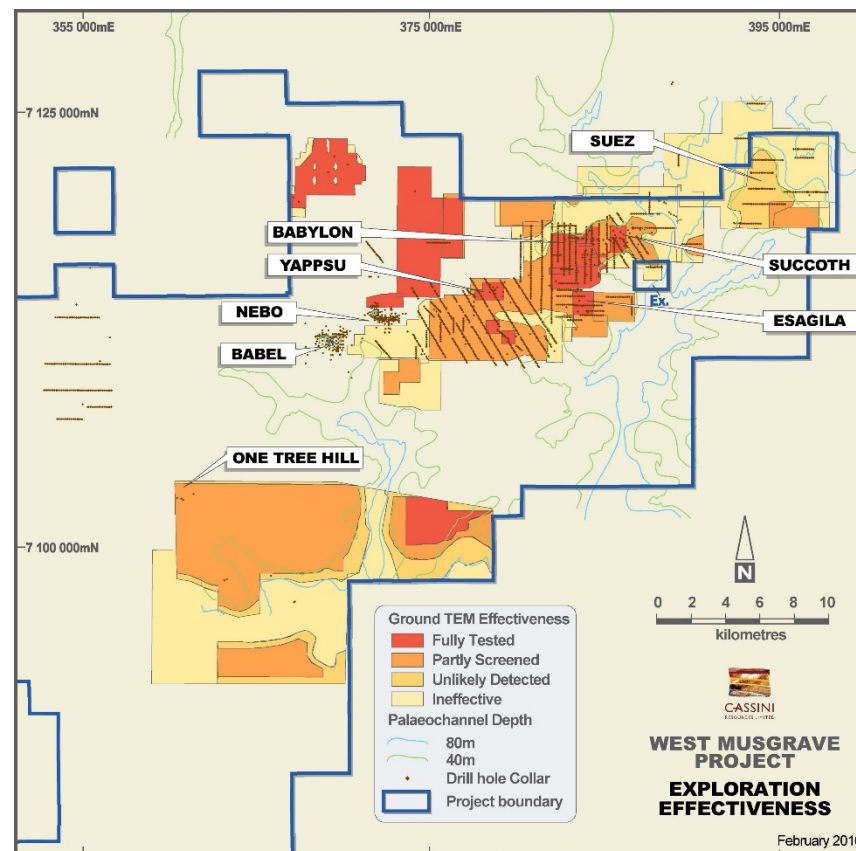
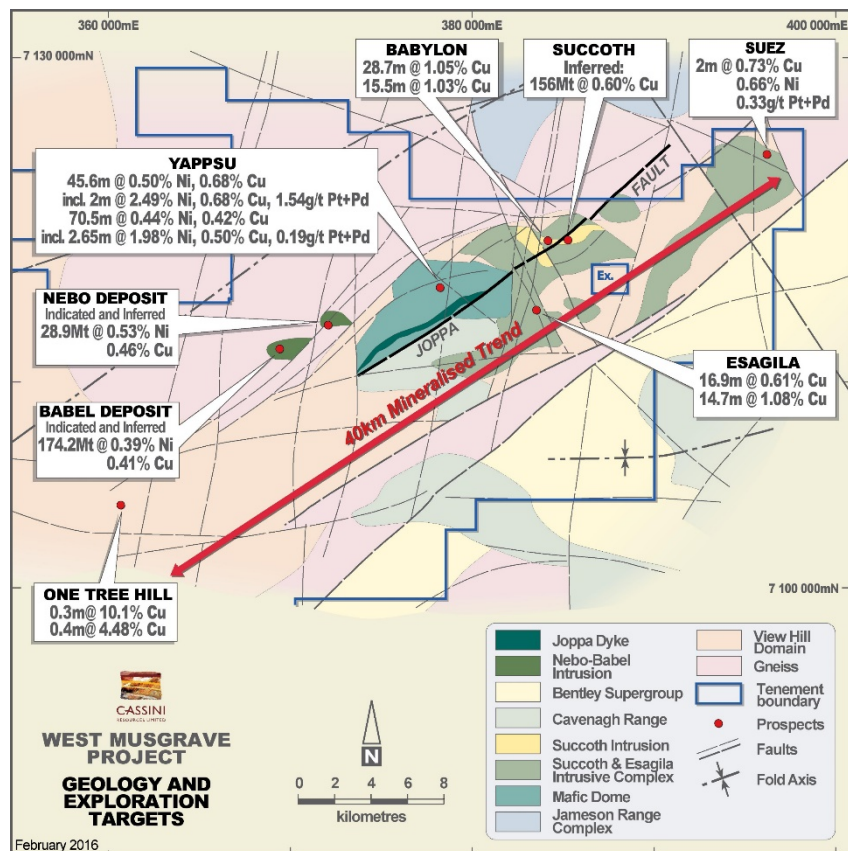
- Cu + PGE sulphide deposit located 13km NW of Nebo-Babel (N-B)
- Inferred 156mt @ 0.60% Cu (0.3% Cu cut off)
- Infill drilling highly likely to significantly increase resource
- Shallow, open-pitabile resource
- Potential to add 15+ yrs mine life to N-B or develop stand-alone project
- Future exploration drilling to target massive Cu *and* Ni sulphides zones
- EIS funding for 2 holes in 2016

West Musgrave: A complete exploration pipeline



Exploration success provides value to Nebo-Babel development

- High value extension and infill targets at Nebo-Babel
- Advanced exploration to grow the Succoth resource
- 40km mineralised trend still largely under-explored



Nebo-Babel: Preparing for a turn in the nickel market



- Nebo-Babel has the potential to become a very significant nickel-copper mine in the right environment
- Recent work confirms Nebo-Babel has:
 - » Significant metal production profile
 - » Low operating costs
 - » Long mine life with opportunity to extend
 - » Highly marketable product
 - » Strong economics in the right environment
- Significant exploration potential – much of the area remains untested
- Cassini will continue to optimise the project in a cost effective manner

Summary Metrics	4Mtpa Case (LOM)	Staged Case (LOM)
Processing Capacity	4.0Mtpa	1Mtpa - 4Mtpa
Average Strip Ratio	3.3:1	3.3:1
Total Mineral Inventory	32.1Mt	32.1Mt
Initial Mine Life	9 years	12 years
Total Ni in concentrate	111,400t	113,000t
Total Cu in concentrate	129,500t	127,800t
Average Ni Recovery	71.0%	71.8%
Average Ni Concentrate grade	12.9%	12.9%
Average Cu Recovery	82.4%	82.6%
Average Cu Concentrate grade	28.0%	28.0%
Average C1 costs Ni in con (US\$/lb Ni)	\$1.39	\$1.61

Two scenarios have been studied:

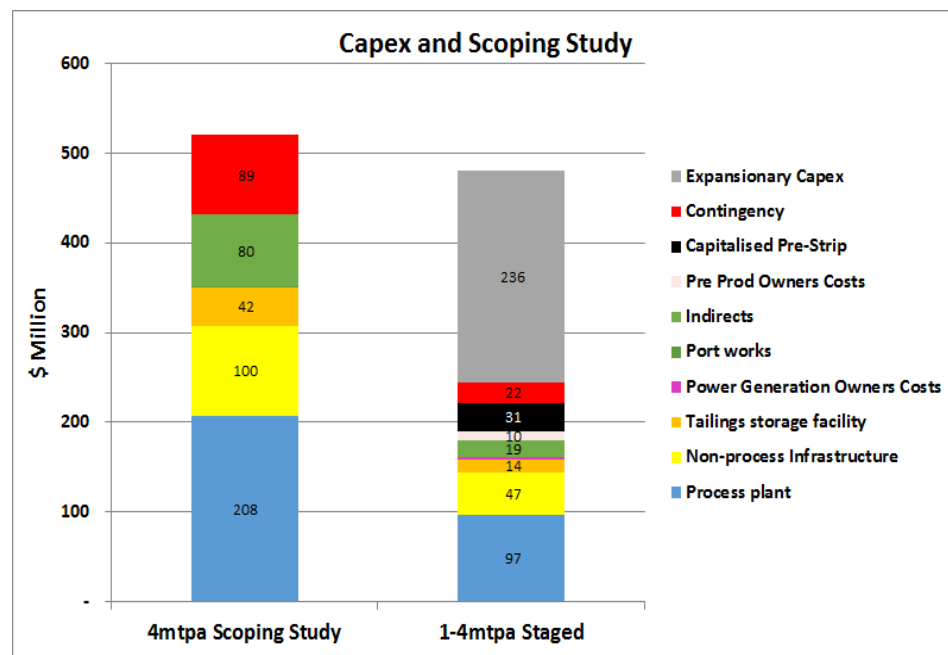
1. 4Mtpa Scenario – 4Mtpa from start-up. Maximum “value” and production profile
2. Staged Scenario – Initial 1Mtpa expanding to 4Mtpa in year 4/5, reduced funding requirement

Nebo-Babel: Reduction in Pre-production Capex

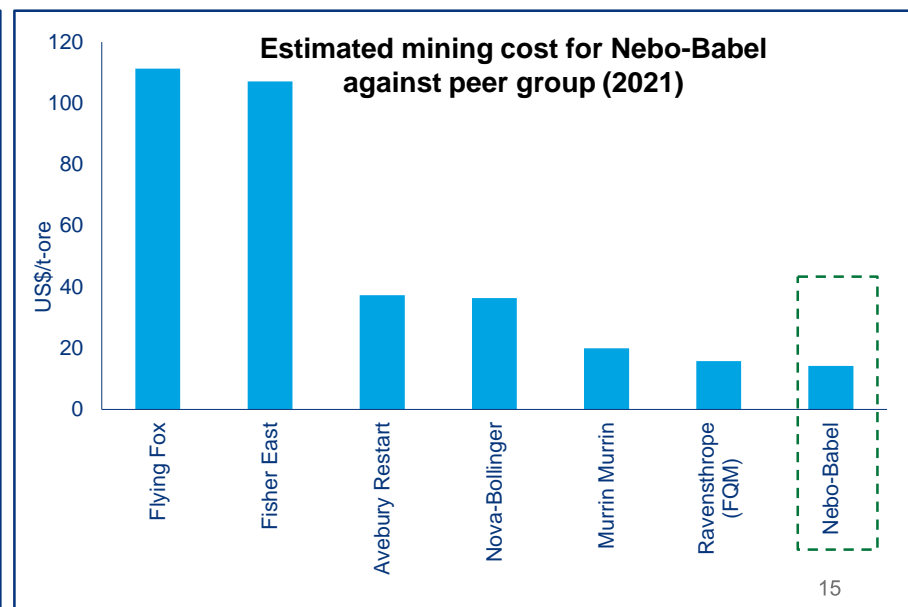
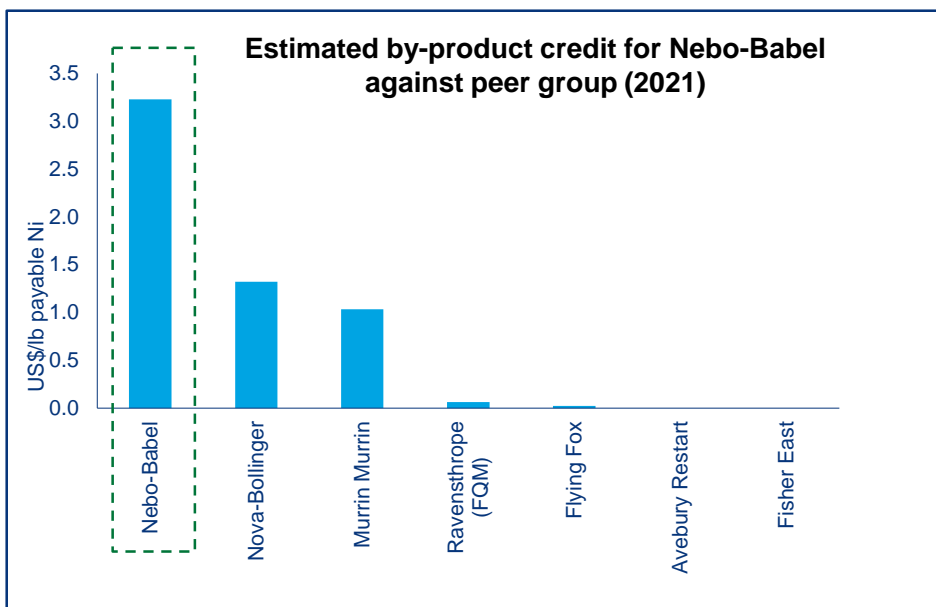
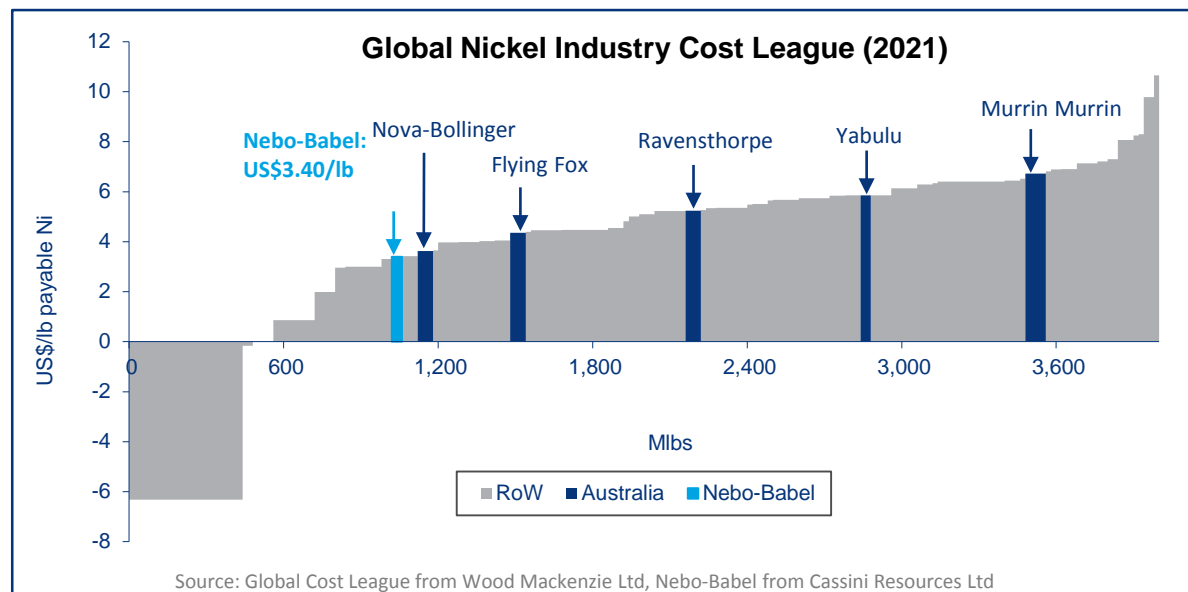


Compared to Scoping Study, current pre-production capital estimates are:

- Pre strip mining is now capitalised (4mtpa, \$57 million)
- Water supply costs increased \$24m to \$31m (pumping 130km from Cobb Depression)
- Reduce estimate on road construction / upgrade
- Camp/airstrip costs reduced (more rooms at lower cost/room)
- Lower estimate of Temporary Facilities and Capitalised pre prod Owners costs
- EPCM cost reduced from 17% to 12%
- Contingency reduced from 20% to 10%



Nebo-Babel: A low operating cost project



Investment Proposition

- Active exploration and development company
- West Arunta drilling program imminent – first holes into a **new mineral system**
- Significant Nebo-Babel Ni/Cu sulphide project means **huge** leverage to increasing base metal prices
- Excellent project pipeline
- Multiple programs planned throughout 2016
- Funded to execute next phase of exploration



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Appendix

Nebo-Babel Resource Estimate (0.3% Ni cog)

Mineral Resource estimate by independent consultancy CSA Global, February 2015

Prospect	Classification	Tonnes Mt	Ni %	Cu %	Co ppm	Fe ₂ O ₃ %	MgO %	As ppm	S %
Nebo	Indicated	25.8	0.52	0.46	215	15.9	4.7	2.0	2.8
	Inferred	3.0	0.60	0.48	229	16.4	4.9	2.5	4.0
	Total	28.9	0.53	0.46	217	16.0	4.7	2.0	3.0
Babel	Indicated	69.7	0.39	0.42	139	14.8	7.7	1.9	2.4
	Inferred	104.5	0.38	0.40	135	14.8	7.8	2.3	2.3
	Total	174.2	0.39	0.41	137	14.8	7.7	2.2	2.4
Combined	Total	203.1	0.41	0.42	148	15.0	7.3	2.1	2.4

Succoth Inferred Resource Estimate (0.3% Cu cog)

Mineral Resource estimate by independent consultancy CSA Global, December 2015

Type	Tonnes (Mt)	Cu (%)	Cu Metal (t)	Pt (ppm)	Pd (ppm)
Oxide	5	0.59	31,000	0.04	0.11
Fresh	151	0.60	912,000	0.04	0.11
Total	156	0.60	943,000	0.04	0.11

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Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled or reviewed by Mr Greg Miles, who is an employee of the company. Mr Miles is a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Miles consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The information in this report that relates to the Mineral Resources has been compiled by Mr Aaron Green, who is a full-time employee of CSA Global Pty Ltd. Mr Green is a Member of the Australian Institute of Geoscientists 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 Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Green consents to the disclosure of this information in this report in the form and context in which it appears.

The Company 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 Mineral Resource Estimates and Exploration Results as reported in the market announcements dated 13, 15 April 2015 and 7 December 2015, continue to apply and have not materially changed.

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.

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