

Building an Extensive Cobalt Resource in Namibia

Africa Down Under 29 August 2018



ASX:CLA

#### 2

#### Disclaimer

This presentation has been prepared by Celsius Resources Limited ("Celsius" or "CLA"). The information contained in this presentation is a professional opinion only and is given in good faith.

The information contained herein is confidential and proprietary to the Company and is provided to recipients on the terms and conditions set out in this disclaimer. The document, in whole or in part, is not to be distributed, copied or reproduced, in any form, without the prior written consent of the Directors of the Company.

Certain information in this presentation has been derived from third parties and though CLA has no reason to believe that it is not accurate, reliable or complete, it has not been independently audited or verified by CLA.

Any forward looking statements included in this presentation involve subjective judgement and analysis and are subject to uncertainties, risks and contingencies, many of which are outside the control of, and maybe unknown to, CLA. In particular they speak only to the date of this presentation, they assume the success of CLA's strategies, and they are subject to significant regulatory, business, competitive and economic uncertainties and risks. Actual future events may vary materially from the forward looking statements and the assumptions on which these assumptions are based. Recipients of this presentation are cautioned not to place undue reliance on such forward looking statements.

CLA makes no representation or warranty as to the accuracy, reliability or completeness of information in this document and does not take responsibility for updating any information or correcting any errors or omissions which may become apparent after this presentation is released.

To the extent permitted by law, CLA and its officers, employees, related bodies corporate and agents disclaim all liability, direct, indirect or consequential (and whether or not arising out of the negligence, default or lack of care of CLA and/or any of its agents) for any loss or damage suffered by a recipient or other persons arising out of, or in connection with, any use or reliance on this presentation or information.

All amounts in AUD unless stated otherwise.

# Investment Highlights

Extensive source of Co, Cu & Zn sulphides

BROAD MINERALISATION CONFIRMED OVER 15KM+ WITH SIGNIFICANT FURTHER POTENTIAL STRIKE

Maiden JORC Resource: 112.4 Mt at 0.11% Co, 0.41% Cu & 0.43% Zn

#### LARGE-SCALE RESOURCE

Potential for high production rate and economies of scale



# CONVENTIONAL SULPHIDE FLOTATION WITH HIGH RECOVERIES

Conventional flotation recoveries of ~80% and demonstrated high leach extraction of >90%



# STRONG DEMAND FUNDAMENTALS

Future demand for cobalt, led by the looming electric vehicle and battery storage revolutions, driving prices higher

## Corporate Overview



Capital Structure

715.4M

41.9M

49.5M

96.8M

CTA \$0.12 (fully diluted)

\$12.4M

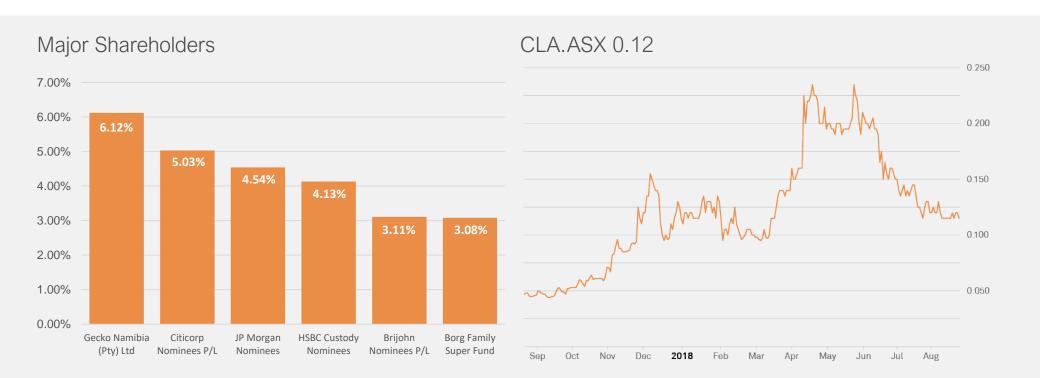
Shares (CLA)

Listed options: CLAO-AUD 0.01 strike

**Unlisted options** 

Market cap (AUD)

Cash (June 30)



# Directors and Management

Brendan Borg Managing Director	<ul> <li>A geologist with over 20 years' experience gained working in management, operational and project development roles in the Exploration and Mining industries</li> <li>Experience includes Rio Tinto Iron Ore, Magnis Resources Limited, IronClad Mining Limited, Lithex Resources Limited and Sibelco Australia Limited</li> <li>Director of Tempus Resources Limited (ASX:TMR) and geological consultancy Borg Geoscience Pty Ltd</li> </ul>
Bill Oliver Non-Executive Chairman	<ul> <li>A geologist with over 20 years' experience in the international resources industry working for both major and junior companies</li> <li>Former roles include Rio Tinto, Harmony Gold, Bellamel Mining and BC Iron</li> <li>Director of several ASX listed companies, including Tando Resources Limited (ASX:TNO)</li> </ul>
Pine van Wyk Project Director	<ul> <li>Metallurgical Engineer with extensive experience in developing and operating mines in Namibia</li> <li>Formerly with Rössing Uranium and Paladin Energy Ltd at their Langer Heinrich Uranium project as Operations Manager, taking the project from feasibility to full production</li> <li>Currently Managing Director of the Gecko Namibia group of companies</li> </ul>
Ranko Matic Non-Executive Director	<ul> <li>Over 20 years' experience in the areas of financial and executive management, accounting, audit, business and corporate advisory</li> <li>Director of a Chartered Accounting firm and a Corporate Advisory company based in Perth, Western Australia</li> </ul>
Melanie Ross Company Secretary	<ul> <li>Over 18 years' experience in financial accounting and analysis, audit, business and corporate advisory services in public practice, commerce and state government</li> <li>Currently a Director of a corporate advisory company based in Perth that provides corporate and other advisory services to public listed companies</li> </ul>
Edward Legg Project Development Manager	<ul> <li>20 years' experience, developing and managing mining projects in Southern Africa, more specifically in South Africa, Zambia, and the DRC</li> <li>Former experience at AngloGold Ashanti/Anglo Platinum, Metorex Ltd and Vale/ARM JV in Zambia</li> </ul>

### Cobalt – A commodity in demand





#### Why Cobalt?

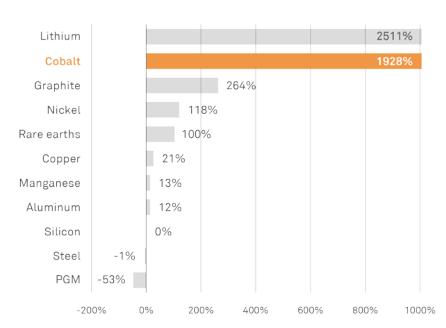
- Substantial price appreciation over the past two years to more than USD \$90,000/tonne
- Battery-grade cobalt chemicals have seen greater price increases than equivalent LME metal prices
- Chinese EV manufacturers shifting towards cobalt-based lithium ion batteries
- Security and supply concerns in DRC means more diverse sources of cobalt needed

#### 7

## Cobalt – Best Exposure to Battery Boom?

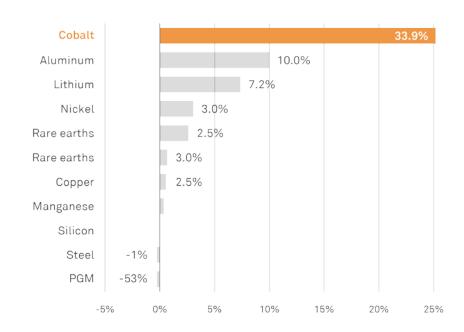
In a 100% EV world ...

demand for commodities would change by ...\*



<sup>\*</sup>in % of global market today

incremental annual commodity demand would deplete reserves by ...

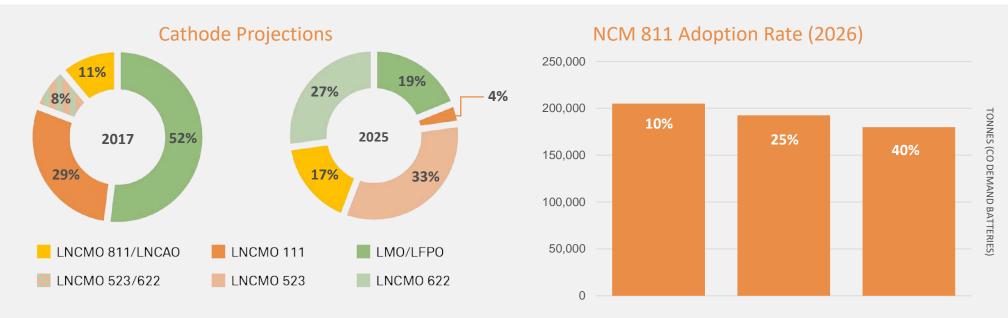


Source: UBS

#### Cobalt – Market Outlook

#### Cobalt-containing cathode will dominate EV and Storage applications within 10 years

- Benchmark Mineral Intelligence forecasts that the use of cobalt in batteries will **more than triple** between 2017 and 2026 despite the shift to lower cobalt batteries during this timeframe
- Removing cobalt from both NCA and NCM technology is not easy and presents problems: safety and cell life
- Even if nickel-cobalt-manganese (NCM) 811 cathodes takes off, overall impact would be limited



Sources: Freeport Cobalt and Benchmark Mineral Intelligence

# Namibia: A Premier Mining Destination

#### A politically stable jurisdiction:

- Established regulatory structure
- Strong public and governmental support for mining
- Favourable tax considerations for producing downstream products in Namibia.

#### Exceptional infrastructure:

- Regional capital Opuwo boasts airport and hospital
- Sealed roads from Opuwo to Windhoek and Walvis Bay Port
- 320MW hydroelectric power station at Ruacana linked to 330kV power grid



### Opuwo Project Overview

100km+ of Co-Cu prospective horizon

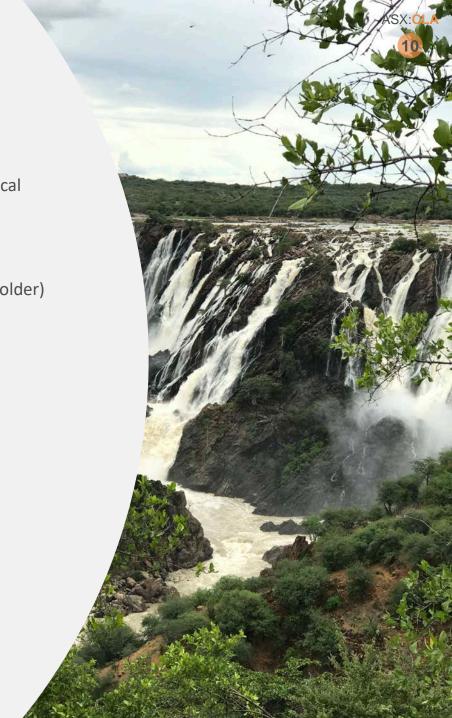
95% owned and 5% loan-carried share with local Namibian group

6.12% owned by Gecko Namibia (largest shareholder)

1,470 km<sup>2</sup> total project area

~10km strike of existing resource zone

66kV & existing power lines 33kV



#### Mineralisation

Mineralisation is low in deleterious elements

- The JORC Compliant Mineral Resource estimate comprises 112.4 Mt at 0.11% Co, 0.41% Cu and 0.43%
   Zn cutoff grade of 0.06% (or 600 ppm) Co
- The Mineral Resource estimate represents contained cobalt of 126,100 tonnes and consists of:
  - Indicated: 72.0 Mt at 0.11% Co, 0.42% Cu
     and 0.41% Zn
  - Inferred: 40.5 Mt at 0.12% Co, 0.41% Cu
     and 0.46% Zn
- Key feature of Opuwo: +95% of the Mineral Resource is comprised of the fresh sulphide ore type
- Mineralised zones are open in all directions with excellent scope for expansion with further drilling
- Mineralisation hosted in Neoproterozoic sediments of the Kaoko Belt (the western extension of the Copper Belt in DRC and Zambia)



#### Maiden JORC Mineral Resource Tables

12

Reported in April, 2018

JORC Compliant
Indicated and Inferred
Mineral Resource

CATEGORY	ORE TYPE	COBALT CUT- OFF (PPM)	TONNAGE (MT)	COBALT (%)	COPPER (%)	ZINC (%)	CONTAINED COBALT (T)
Indicated	Oxide	600	3.8	0.10	0.39	0.36	3,900
	Transition - Sulphide	600	1.6	0.10	0.42	0.38	1,700
	Fresh - Sulphide	600	66.5	0.11	0.42	0.41	73,700
TOTAL INDICATED		600	72.0	0.11	0.42	0.41	79,300
Inferred	Fresh - Sulphide	600	40.5	0.12	0.41	0.46	46,900
TOTAL		600	112.4	0.11	0.41	0.43	126,100

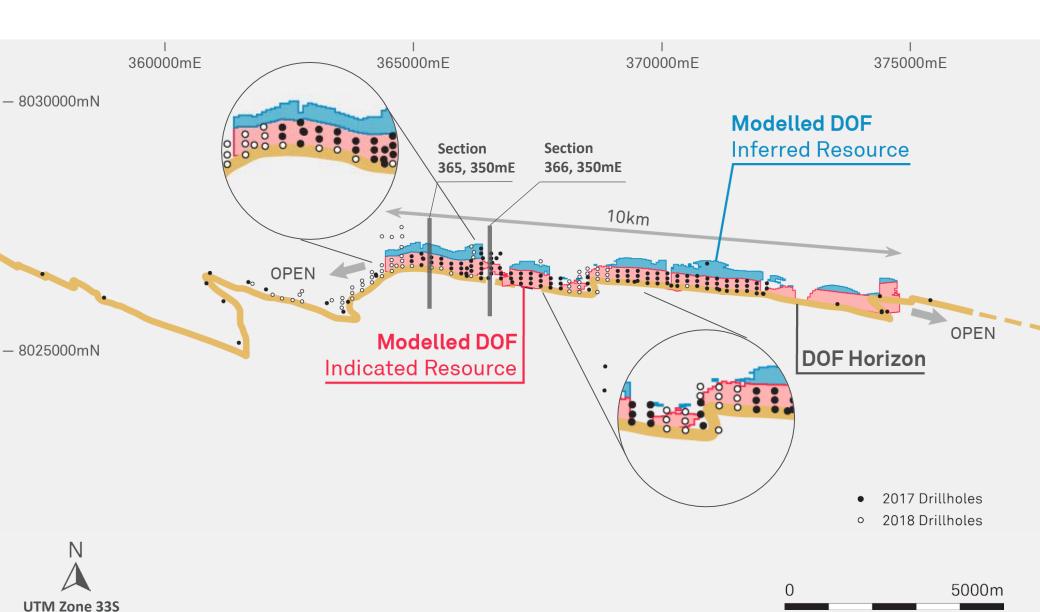
JORC Compliant
Indicated and Inferred
Mineral Resources at
Various Cobalt Cut-off
Grades

COBALT CUT-OFF (PPM)	TONNAGE (MT)	COBALT (%)	COPPER (%)	ZINC (%)	CONTAINED COBALT (T)
0	294.4	0.06	0.24	0.33	177,100
200	238.7	0.07	0.28	0.37	169,100
400	146.7	0.10	0.37	0.41	142,800
600	112.4	0.11	0.41	0.43	126,100
800	87.9	0.12	0.44	0.44	109,100
1000	66.4	0.14	0.46	0.45	89,700
1200	44.7	0.15	0.49	0.46	66,000
1400	24.6	0.16	0.50	0.47	40,000
1600	9.6	0.19	0.46	0.45	17,900
1800	5.5	0.20	0.45	0.42	10,900
2000	3.1	0.21	0.45	0.34	6,300

<sup>\*</sup> Note that minor rounding errors occur in these tables.

### 2017-18 Drilling

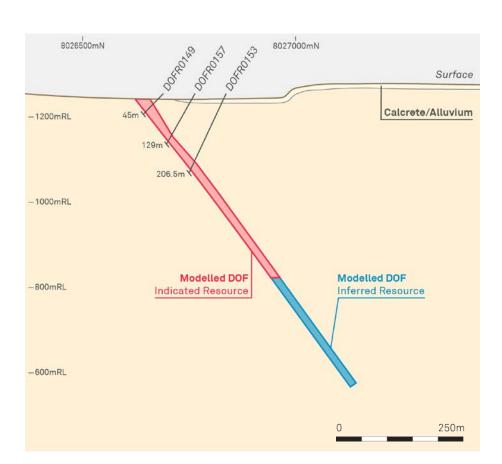




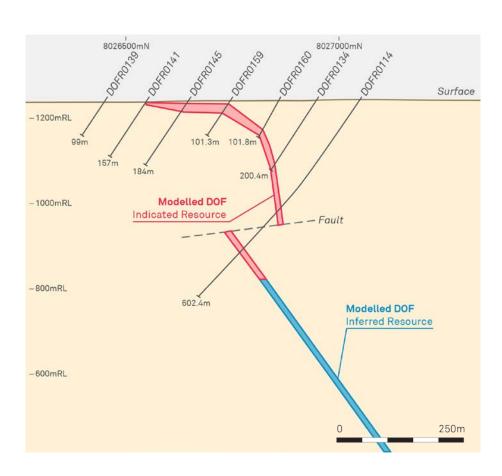
#### **Cross Sections**



Cross Sectional View – Section 365,350mE

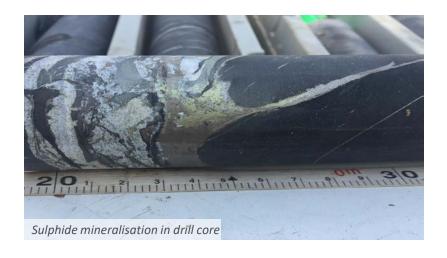


Cross Sectional View – Section 366,350mE



# Simple, Sulphide-Hosted Mineralogy

- Mineralisation is predominantly linnaeite (cobalt), chalcopyrite (copper) and sphalerite (zinc) plus iron sulphides (pyrite/pyrrhotite)
- Flotation testing showed up to 88% of cobalt recoverable into sulphide concentrate
- Closed circuit flotation recoveries of 80% at a concentrate grade of up to 1.5% cobalt
- Further optimisation work planned to improve recoveries and grades, and therefore the feed to the planned integrated downstream refinery

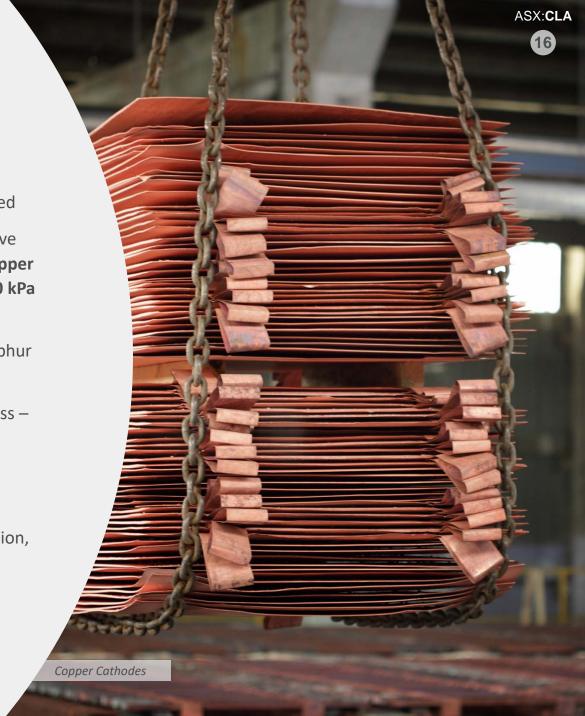




# High Leach Extraction of Cobalt, Copper & Zinc

#### Cobalt, Copper and Zinc Extraction:

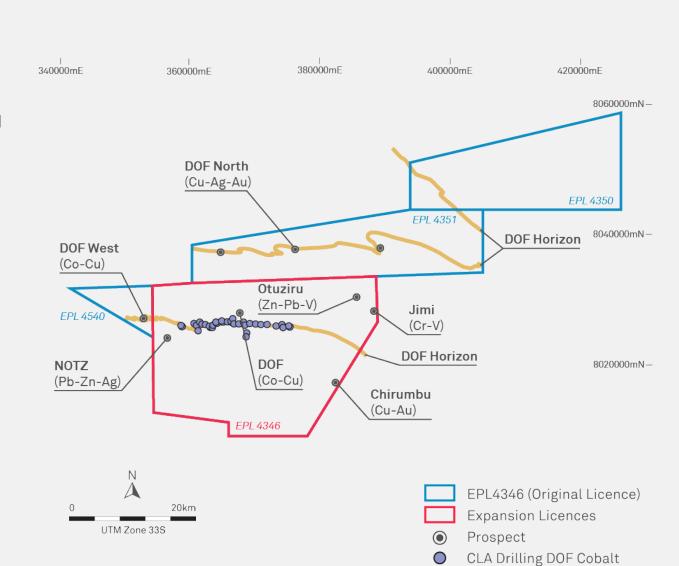
- Employing an ~1% 1.58% cobalt grade flotation concentrate, 19 different leach regimes were explored
- Extraction in the current preferred autoclave oxidative leach was approximately 93% for cobalt, 92% for copper and 100% for zinc, at a temperature of 95°C and 300 kPa oxygen pressure
- Relatively low leach extraction of iron (26%) and sulphur (41%)
- Patent application has been submitted for the process targets preferential leaching of value metals (cobalt, copper and zinc) over iron sulphides
- Process optimisation is ongoing
- Classical processes of copper SX-EW (Solvent extraction, electrowinning) and cobalt sulphate crystallisation expected to be employed to produce downstream products



## Large-Scale Cobalt-Copper Targets

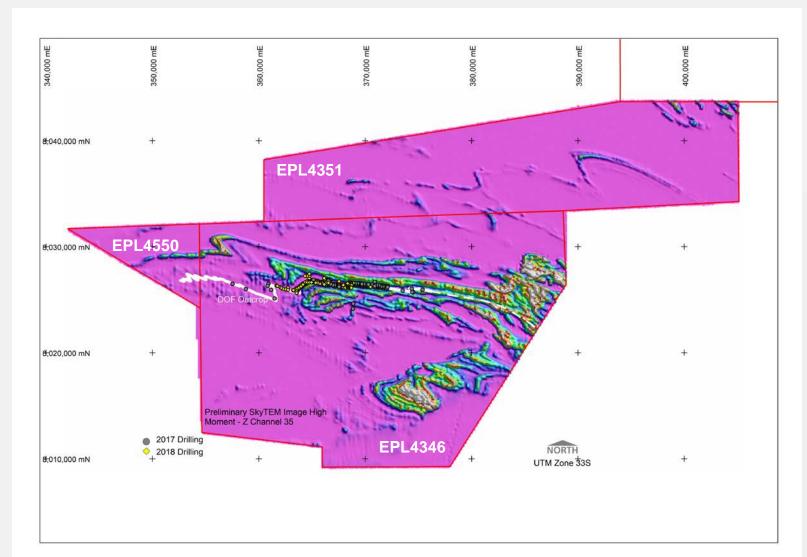
17

- Aim of broader exploration in licence package is to find the potential source sulphide zone feeding the system within the project area
- Maiden JORC Mineral Resource defined over 10 km strike
- Mineralisation intersected over a 15 km zone in initial Celsius drilling, confirmed by assays
- Over 100 km of prospective strike
- Potential for additional mineralised zones adjacent and parallel to known mineralisation
- Outcrops at surface
- Low in deleterious elements (As, Cd, U)
- Cobalt present as linnaeite (Co sulphide)
- Other targets: Zn-Pb-V, Cu-Au, Cr-V, Pb-Zn-Ag



# SkyTEM Survey Completed





- Prospects at Opuwo, including DOF resource area, DOF North targets, and potential source zones for the extensive sulphide mineralisation
- **200 metre** line spacing
- **6,090 line km** total
- Flying complete final data and target report due in September.

# Scoping Study Underway – Key consultants appointed

19

Project Development Manager: Edward Legg



Metallurgy



Metallurgy, CAPEX/OPEX Estimates



Mining Studies



Resource Modelling and Estimation



Environmental, water and social studies

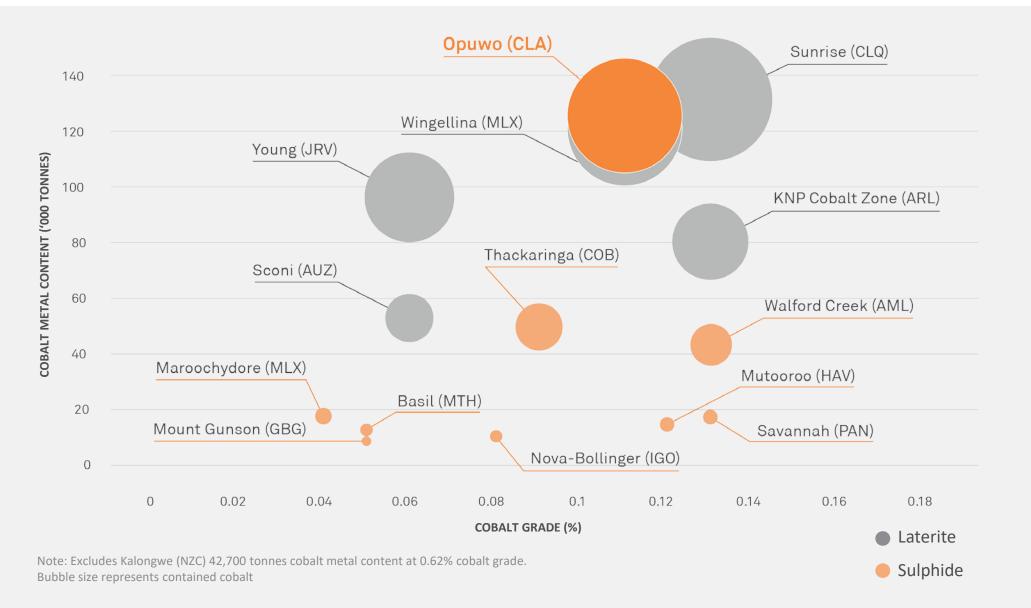
Scoping Study targeted for early Q4 2018

PFS to follow

## Peer Comparison

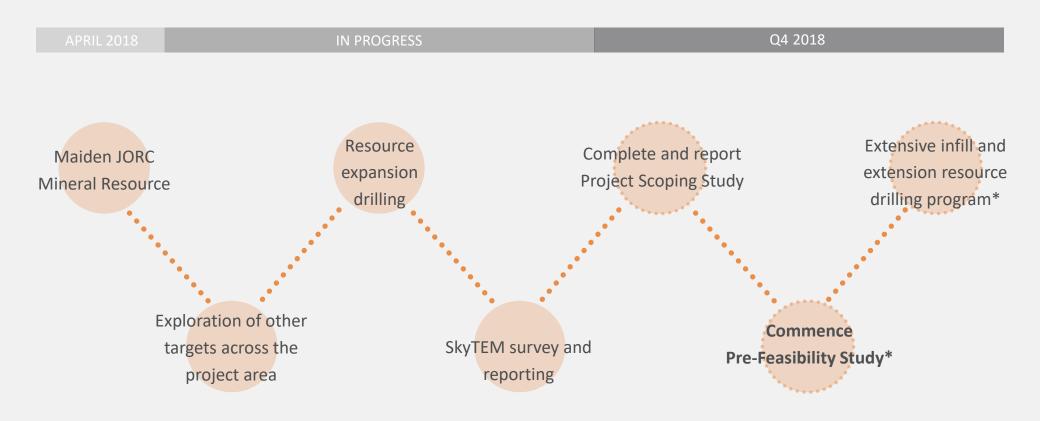
Opuwo compares favourably to other sulphide and laterite projects





## Timeline and Upcoming Catalysts





<sup>\*</sup> Assuming positive Scoping Study outcome

### Competent Persons Statement

Information in this report relating to Exploration Results is based on information reviewed by Mr. Brendan Borg, who is a Member of the Australasian Institute of Mining and Metallurgy and Managing Director of Celsius Resources.

Mr. Borg has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Borg consents to the inclusion of the data in the form and context in which it appears. The Exploration Results are based on standard industry practices for drilling, logging, sampling, assay methods including quality assurance and quality control measure as detailed in the ASX announcements referred to in this presentation.

Information in this report relating to Mineral Resource Estimates is based on information prepared by Mr. Dexter Ferreira, who is a Member of the South African Council for Natural Scientific Professions, which is a Recognised Professional Organisation (RPO).

Mr. Ferreira is a Contract Resource Specialist for DMT Kai Batla Pty. Ltd., who act as Resource Consultants to Celsius. Mr. Ferreira has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Ferreira consents to the inclusion of the data in the form and context in which it appears.





celsiusresources.com.au info@celsiusresources.com.au +61 8 6188 8181