

Building an Extensive Cobalt Resource in Namibia

AGM Presentation November 13, 2018



ASX:CLA

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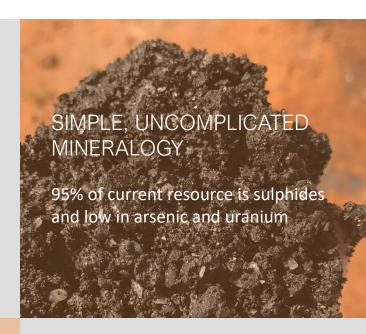
## Investment Highlights

Strategic Asset



#### LARGE-SCALE RESOURCE

Potential for high production rate and economies of scale. Additional Exploration Target released October, 2018.



#### **VERTICAL INTEGRATION**

Project to produce refined cobalt products (sulphate, hydroxide or metal) with copper and zinc byproducts



# STRONG DEMAND FUNDAMENTALS

Future demand for cobalt, led by the looming electric vehicle and battery storage revolutions, driving prices higher. Supply disruption - DRC

# Corporate Overview



Capital Structure

722.5M

34.8M

49.5M

**52.4M** 

CTA \$0.065 (fully diluted)

\$10.7M

Shares (CLA)

Listed options: CLAO-AUD 0.01 strike

Unlisted options

Market cap (AUD)

Cash (September 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?

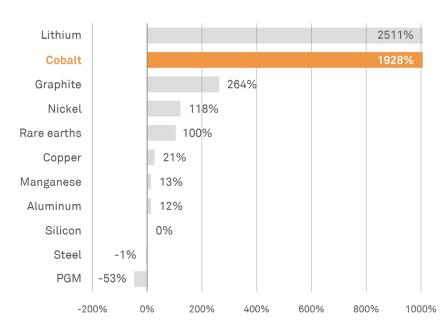
- Substantial price appreciation over the past two years
- Exposure to booming electric vehicle and battery storage markets
- Chinese EV manufacturers shifting towards cobalt-based lithium ion batteries
- Security and supply concerns in DRC means more diverse sources of cobalt needed
- Supply disruption Katanga off-line until late 2019
- Near term oversupply to become deficit

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# Cobalt – Best Exposure to Battery Boom?

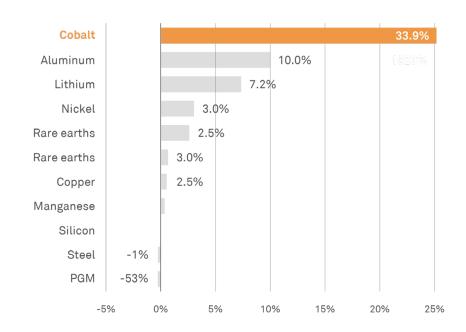
In a 100% EV world ...

demand for commodities would change by ...\*



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

incremental annual commodity demand would deplete reserves by ...

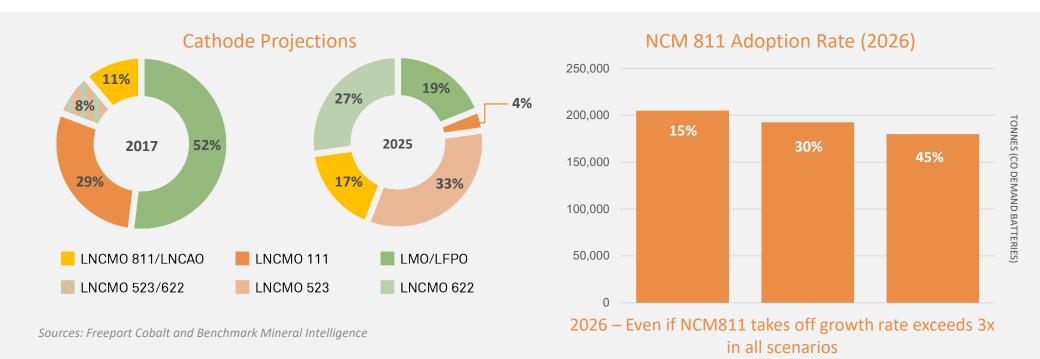


Source: UBS

#### 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



# 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

#### Mining Culture:

- Numerous operating mines strong contributor to national GDP
- Gecko Namibia Miner and Mining Services Group



# Opuwo Project Overview

100km+ of Co-Cu prospective horizon

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

5.13% owned by Gecko Namibia (significant 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

- JORC Compliant Mineral Resource estimate: 112.4 Mt at 0.11% Co, 0.41% Cu and 0.43% Zn cutoff grade of 0.06% (or 600 ppm) Co
- 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)



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## Maiden JORC Mineral Resource Tables

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

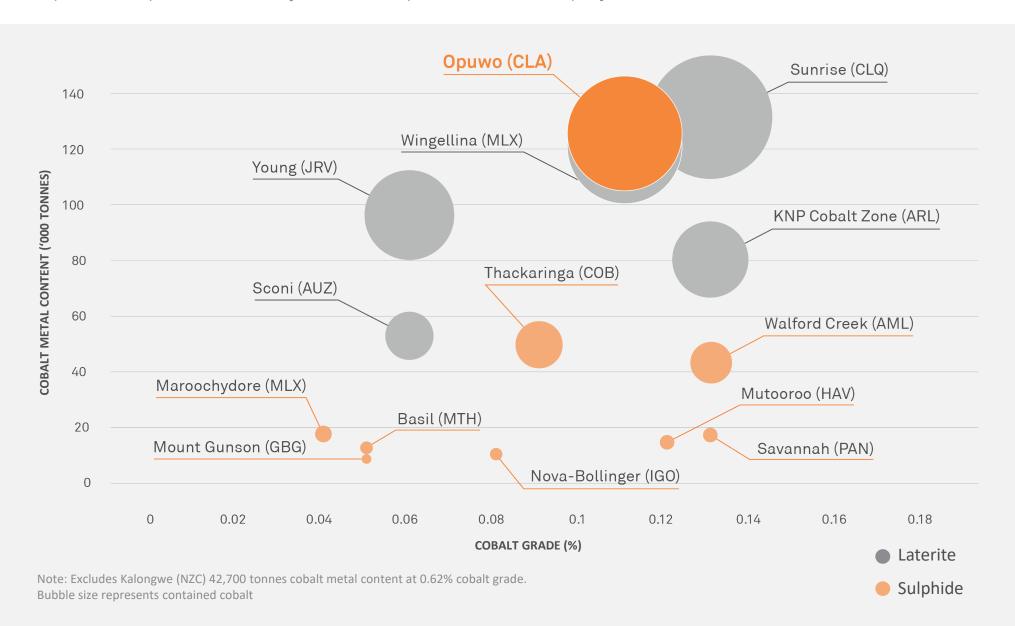
JORC Compliant
Indicated and Inferred
Mineral Resources at
Various Cobalt Cut-off
Grades

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.

# Peer Comparison

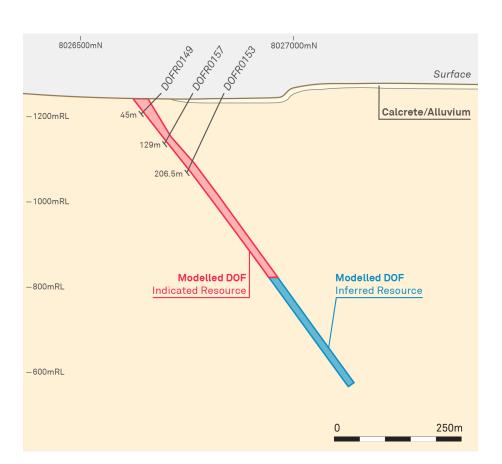
Opuwo compares favourably to other sulphide and laterite projects



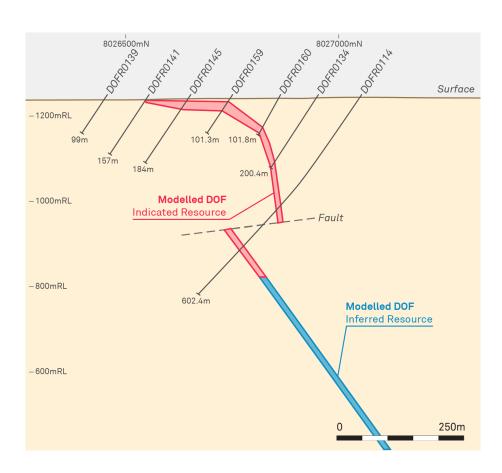
## **Cross Sections**



Cross Sectional View – Section 365,350mE

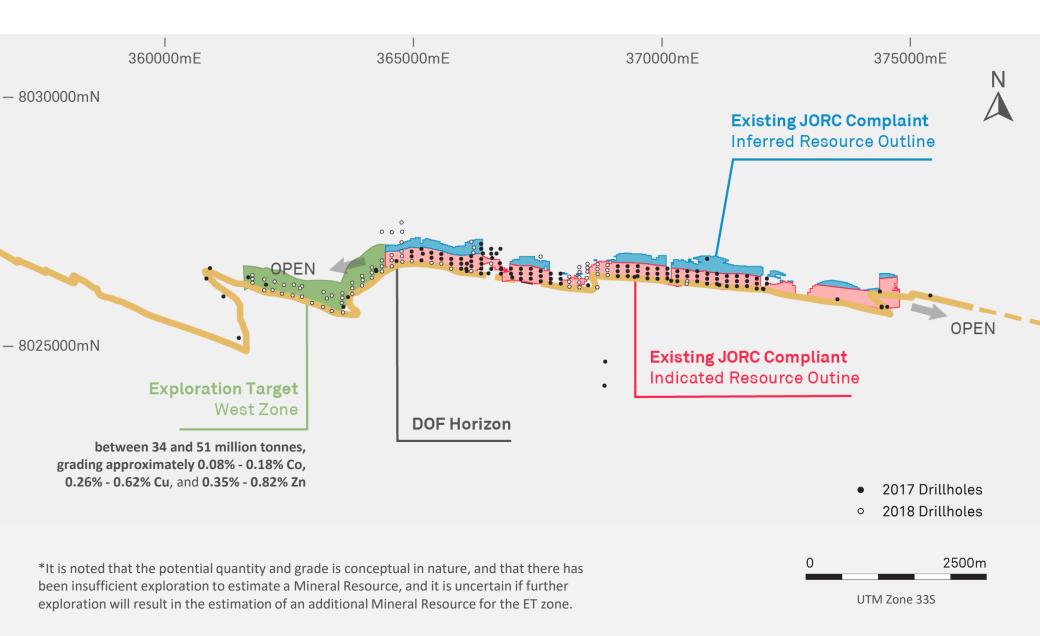


Cross Sectional View – Section 366,350mE



# Exploration Target – West Zone





# Positive Scoping Study

- Confirms potential for a large scale and long-life operation.
- Preliminary mine planning completed, examining various open pit and underground mining scenarios.
- Sulphide concentrate produced from standard flotation methods.
- Flowsheets and costing developed, cobalt sulphate, cobalt hydroxide or cobalt metal to be produced, along with copper metal and zinc sulphate.
- Moderate temperature and pressure autoclave process under development. To be evaluated further during PFS, along with the traditional sulphating roast/atmospheric water leach process.
- No significant deleterious elements such as uranium or arsenic.
- Infrastructure components to leverage off existing regional infrastructure, including hydroelectric power and network of sealed roads.
- Commenced high-level discussions with prospective offtake partners.



# Positive Scoping Study

#### Next Steps:

 Initial PFS study work to focus on components which are expected to allow an updated Scoping Study to be released in approximately March, 2019.

Updated Mineral Resource expected in December, 2018.

 Validation of assumptions made regarding the base case flowsheet – sulphating roast/atmospheric water leach.

Further metallurgical testwork on oxide mineralisation.

 Updated and optimised mine plan based on the above components.

Expected to allow publication of production targets and high level financial metrics of the Project (subject to board/ASX approval).

 PFS Study Manager to be appointed, PFS scheduled for delivery in Q3, 2019.





# ASX:CLA

# Scoping Study Team Project Director: Pine van Wyk



Metallurgy



Metallurgy, CAPEX/OPEX Estimates



Mining Studies



Resource Modelling and Estimation



Environmental, water and social studies

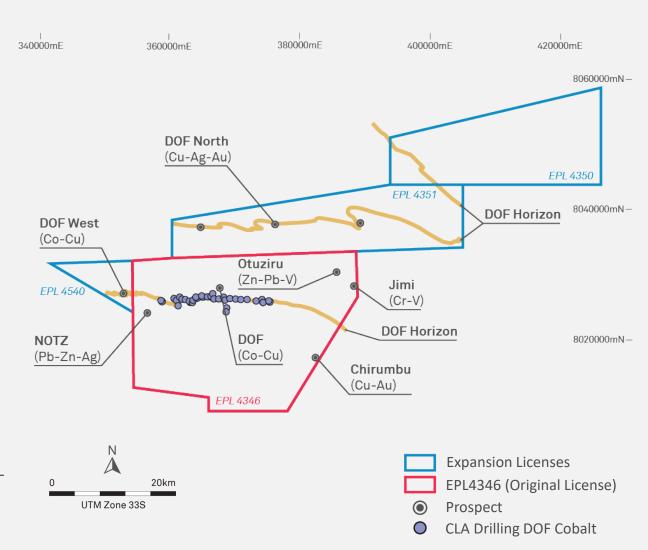
# PFS Team to be appointed

Including external group as overall manager

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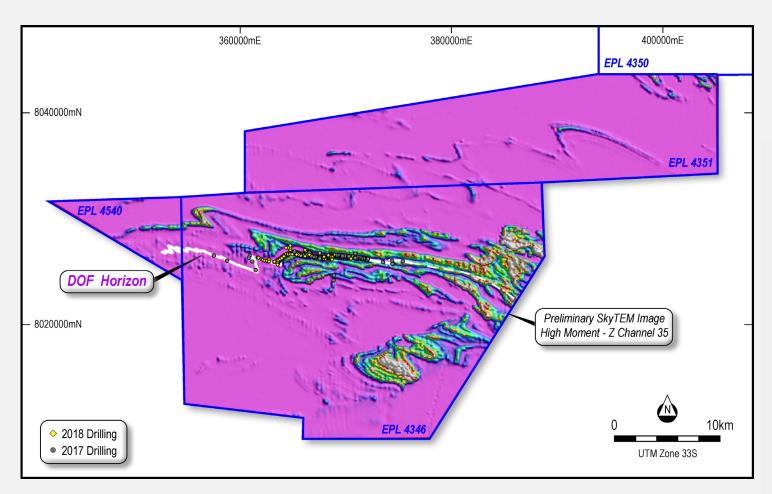
# Large-Scale Cobalt-Copper Targets

- 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
- Exploration Target covers a further ~4 km
- Mineralisation intersected over a 15 km zone
- 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)
- Other targets: Zn-Pb-V, Cu-Au, Cr-V, Pb-Zn-Ag



# SkyTEM Survey Completed

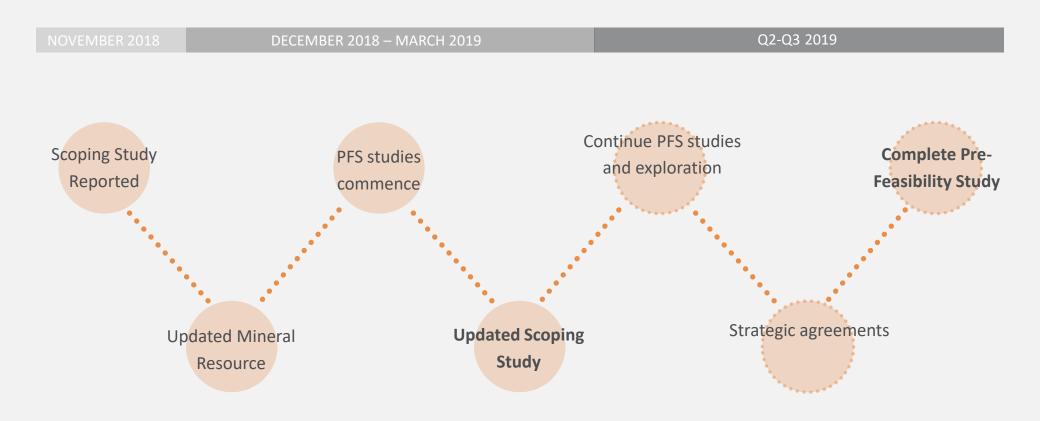




- Covering all known prospects at Opuwo, including DOF resource area, DOF North targets, and potential source zones for the extensive sulphide mineralisation
- 200-metre line spacing
- **6,090-line km** total
- Flying complete final data processing and targeting report in progress
- Drill testing of priority targets upcoming

# Timeline and Upcoming Catalysts





## 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.



