



**TARUGA**

September 2018

# Investor Presentation

# Investment Highlights

## A high grade cobalt-copper play in the DRC

**Favourable technical due diligence completed at Kamilombe and Mwilu in the Kolwezi Mining District**

**High grades included 50.87m at 0.5% Co including 13.68m at 1.2% Co & 42.85m at 0.4% Co including 6.40m at 1.11% Co & 8.40m at 2.7% Cu**

**A strong, highly credentialed Management team and Board, with an extensive network and significant experience operating in the DRC**

**Growing demand for electric vehicles (EVs) expected to drive demand for battery metals, particularly cobalt**

**On track to becoming a high grade cobalt producer in the DRC**

# Corporate Overview



Well positioned to become a substantial cobalt-copper player

## Capitalisation Data<sup>(1)</sup>

|                          |             |             |
|--------------------------|-------------|-------------|
| Share Price              | A\$         | 0.08        |
| Basic S/O <sup>(2)</sup> | M           | 138.8       |
| <b>Market Cap</b>        | <b>A\$M</b> | <b>11.1</b> |
| Net Cash <sup>(3)</sup>  | A\$M        | (1.5)       |
| <b>Enterprise Value</b>  | <b>A\$M</b> | <b>9.6</b>  |

## Management and Board

|                  |                        |
|------------------|------------------------|
| Mark Gasson      | Executive Director     |
| Jamie Anderson   | Exploration Manager    |
| Gary Steinepreis | Non-Executive Director |
| Sheena Eckhof    | Non-Executive Director |
| Bernard Aylward  | Non-Executive Director |

## LTM Share Price and Volume<sup>(1)</sup>



## Top Shareholders

|                      |     |
|----------------------|-----|
| Board and Management | 14% |
| Top 20               | 70% |

1. As at market close 19 Sep 2018  
 2. Does not including remaining 4.1M shares from tranche 2 placement  
 3. 30 Jun 2018 cash of A\$2.5M adjusted for estimated cash outflows of A\$1.5M and proceeds of A\$0.5M from capital raising as per 13 Sep 2018 ASX announcement

# Project Overview

Excellent grades at Kamilombe – **50.87m at 0.49% Co** from **5.8m** including **13.68m at 1.21% Co** from **30.47m**

|                      |   |
|----------------------|---|
| Kamilombe            | <ul style="list-style-type: none"> <li>• Located in the Kolwezi “Klippe” in the DRC with access to excellent infrastructure</li> <li>• Completed technical due diligence at Kamilombe and Mwilu supports further drilling</li> <li>• High grade cobalt and copper mineralisation over 1km strike at Kamilombe <ul style="list-style-type: none"> <li>– <b>50.87m at 0.49% Co</b> from <b>5.8m</b> including <b>13.68m at 1.21% Co</b> from <b>30.47m</b> (KMDD005)</li> <li>– <b>31.21m at 0.52% Co</b> from <b>33.1m</b> including <b>3.04m at 1.45% Co</b> (KMDD001)</li> </ul> </li> </ul>                         |
| Mwilu                | <ul style="list-style-type: none"> <li>• Mineralisation defined at Mwilu over a width of 700m and a potential strike length of 2km <ul style="list-style-type: none"> <li>– <b>6.40m at 1.11% Co</b> from <b>282.45m</b> and <b>8.40m at 2.7% Cu</b> from <b>269.15m</b> within <b>42.85m at 0.39% Co</b> from <b>256.55m</b> (MWDD008)</li> </ul> </li> <li>• Following completion of successful due diligence on 30<sup>th</sup> September 2018, Taruga will enter into an agreement with the Government of Lualaba Province and Mint Master<sup>(1)</sup> to earn a 60% interest in Mwilu and Kamilombe</li> </ul> |
| Regional Exploration | <ul style="list-style-type: none"> <li>• Area of 28.35km<sup>2</sup> of prospective Roan sediments and 8km SSE of Kolwezi</li> <li>• Cobalt and copper artisanal mining on the eastern boundary</li> <li>• Good potential for discovery of blind deposits under recent soil cover</li> </ul>  |

1. Mint Master: local construction and development company

# Management Overview

A strong, diversified and qualified team with extensive experience in the DRC

## Executive Management & Advisors

**Mark Gasson**  
*Executive Director*

- Geologist with 33 years of experience
- Active in the DRC since 2004 in gold and base metals exploration and resource development
- Discovered Tiger Resources 1 million tonne Kipoi copper deposit, Alphamin's 250k tonne tin deposit & Amani's 3moz Giro gold deposit

**Jamie Anderson**  
*Exploration Manager*

- Appointed as DRC Exploration Manager
- Geologist with 14 years experience, 10 in DRC
- Exploration and Resource Management at Kipoi (Tiger), Chemaf (Kolwezi) and Bisie (Alphamin)

**Klaus Eckhof**  
*Advisor*

- Geologist with 25+ years experience sourcing and developing exploration projects, DRC since early 2000
- Founder of Moto Goldmines, Spinifex Gold Ltd, and Lafayette Mining Ltd, Amani Gold Ltd
- Previously Chairman of AVZ Minerals

## Board of Directors

**Gary Steinepreis**  
*Non-Executive Director*

- Chartered Accountant with over 20 years' experience with ASX-listing rules, corporate governance and equity capital raisings

**Sheena Eckhof**  
*Non-Executive Director*

- Extensive experience gained from previous positions with two globally renowned Investment Banks, with a specific focus on the resources sector
- Currently Investor Relations Officer at Independence Group, a West Australian mid-cap resources company

**Bernard Aylward**  
*Non-Executive Director*

- Geologist with over 20 years experience as Manager & Exploration Geologist across West Africa, Australia and Europe

**Daniel Smith**  
*Company Secretary*

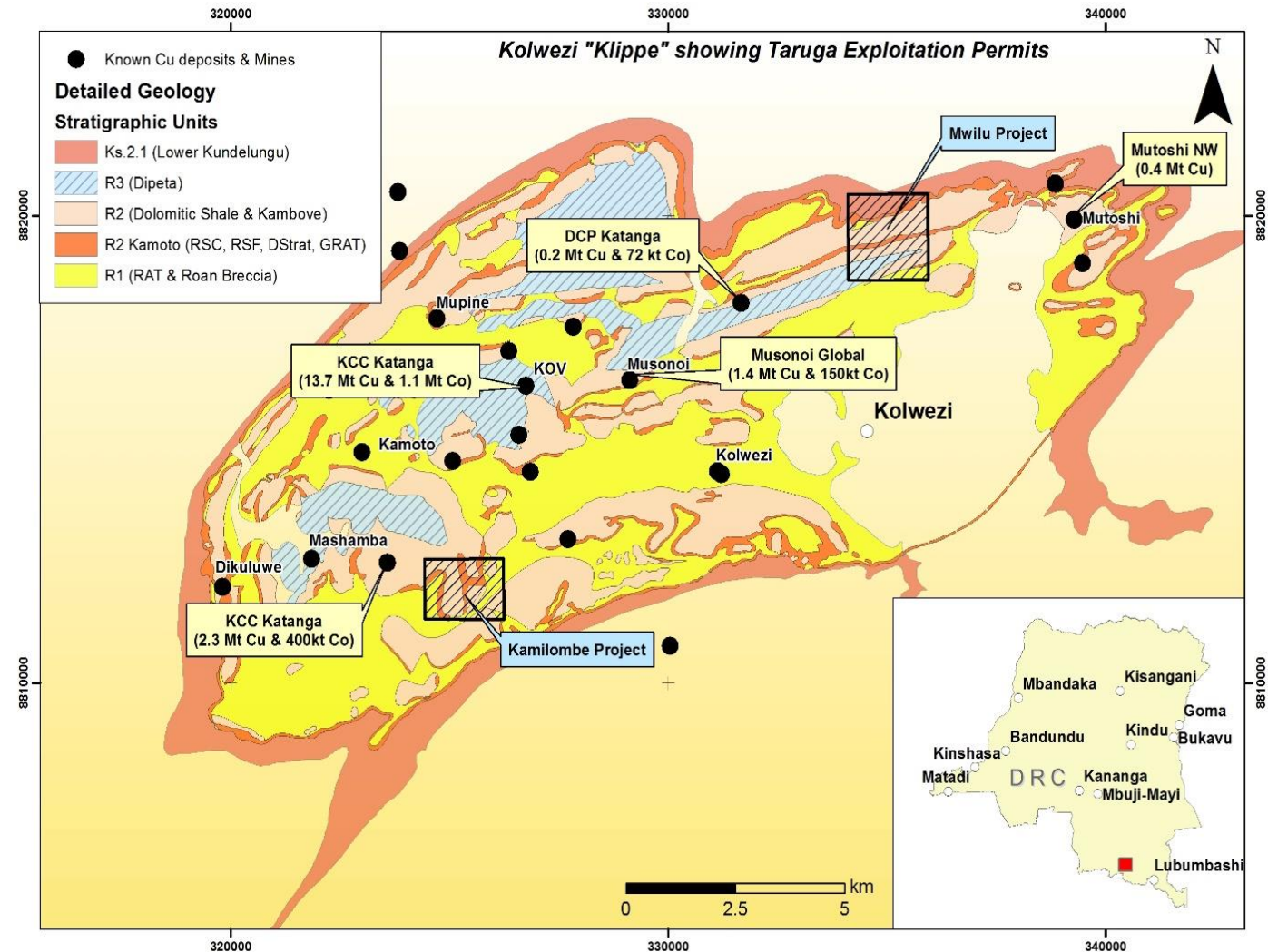
- Director of Minerva Corporate, a boutique corporate advisory firm
- Has advised on and been involved in over a dozen IPOs, RTOs and capital raisings on the ASX and NSX



# Kolwezi “Klippe” – Includes Mwilu and Kamilombe Projects

## Host to 50% of Katanga deposits

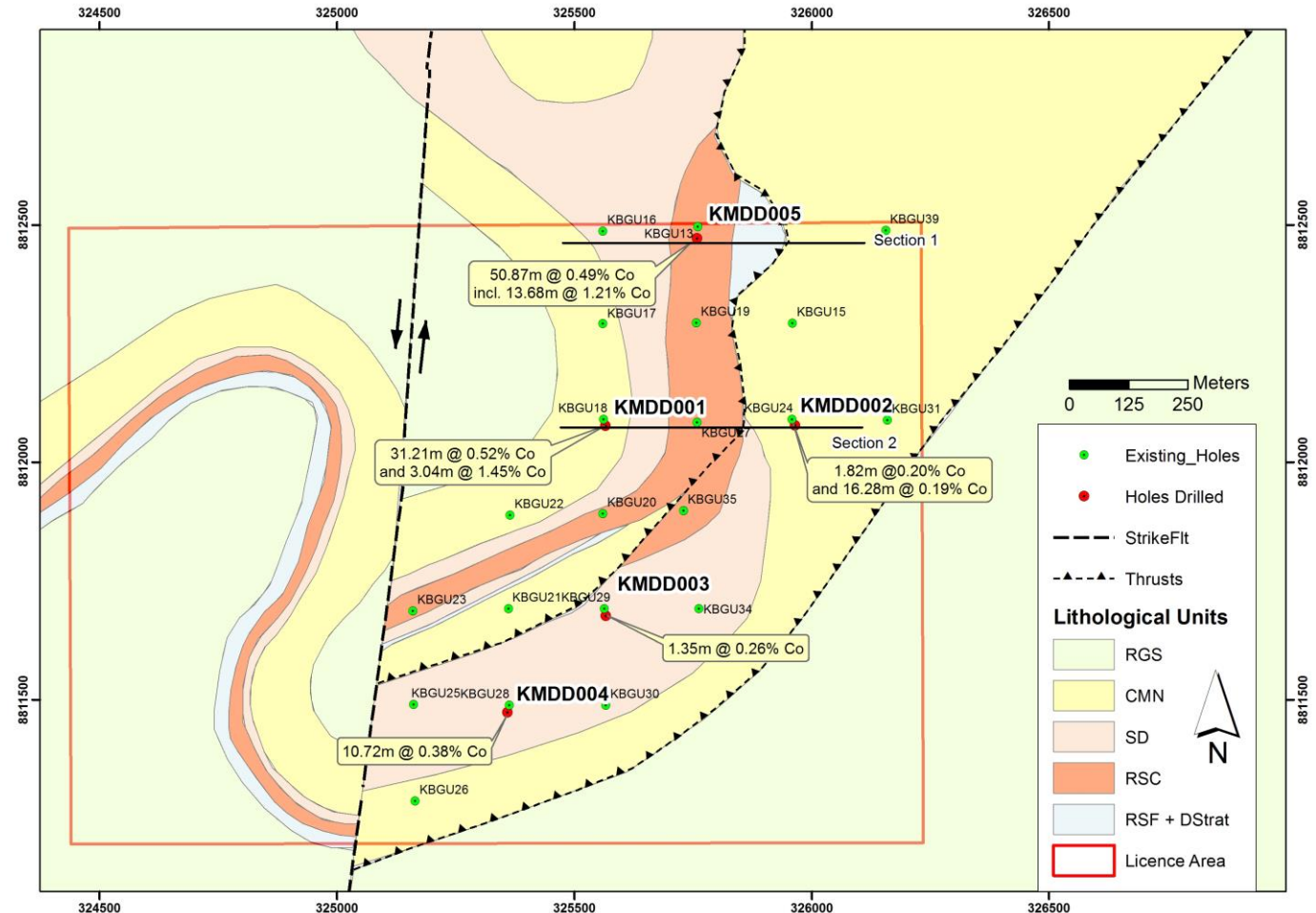
- Covers an area of over 20km x 8km centered on Kolwezi
- Includes Glencore’s Kamoto deposit (~1.6M tonnes contained cobalt)
- High grade cobalt mineralization from surface
- Largest cluster of deposits within the Copperbelt - host to approximately 50% of the known Roan deposits
- Excellent infrastructure



# Kamilombe Project – High Grade Drill Intersections

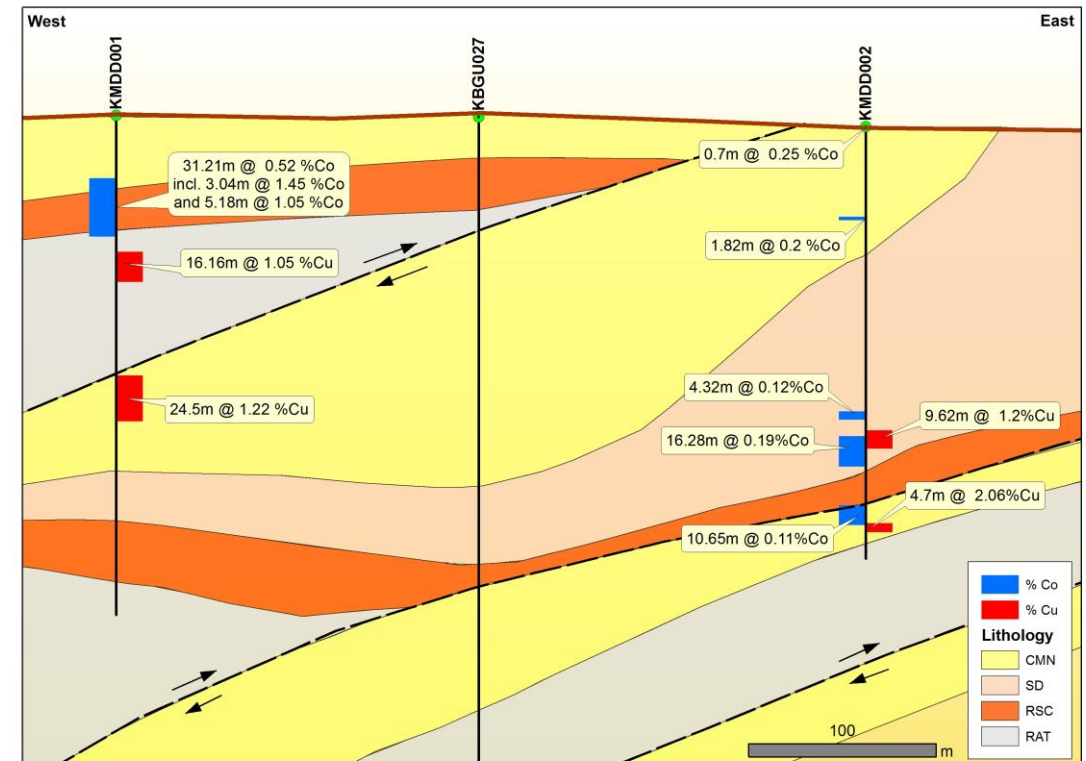
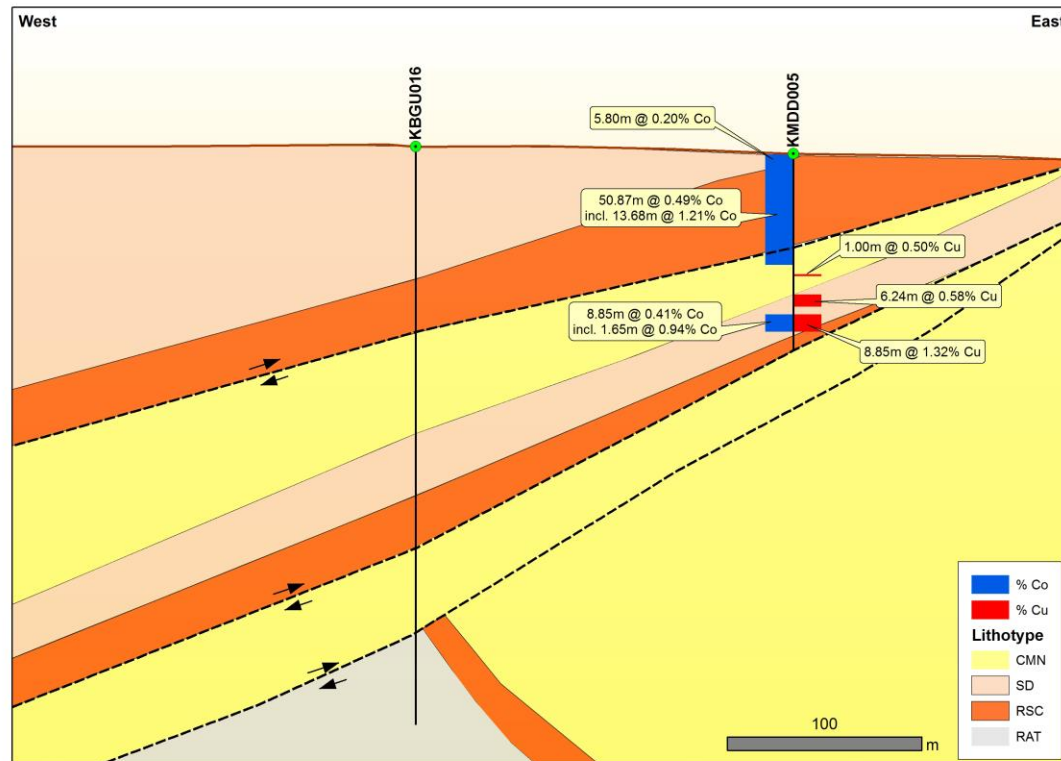
## Borders on KCC's Mashamba deposit (400,000 tonnes of contained cobalt)

- High grade cobalt intersected in due diligence drilling
- Best cobalt results included:<sup>(1)</sup>
  - **50.87m at 0.49% Co** from **5.8m** including **13.68m at 1.21% Co** from **30.47m**
  - **31.21m at 0.52% Co** from **33.1m** including **3.04m at 1.45% Co** from **36.4m** and **5.18m at 1.05% Co** from **57.7m**
- Best copper results included:
  - **24.5m at 1.22% Cu** from **138.3m**
- Cobalt mineralisation defined over 1km, open at depth
- Metallurgical samples submitted to test viability of early shallow production



# Kamilombe Project – Sections

Near surface, shallow dipping, mineralised Mines R2 Series lithologies



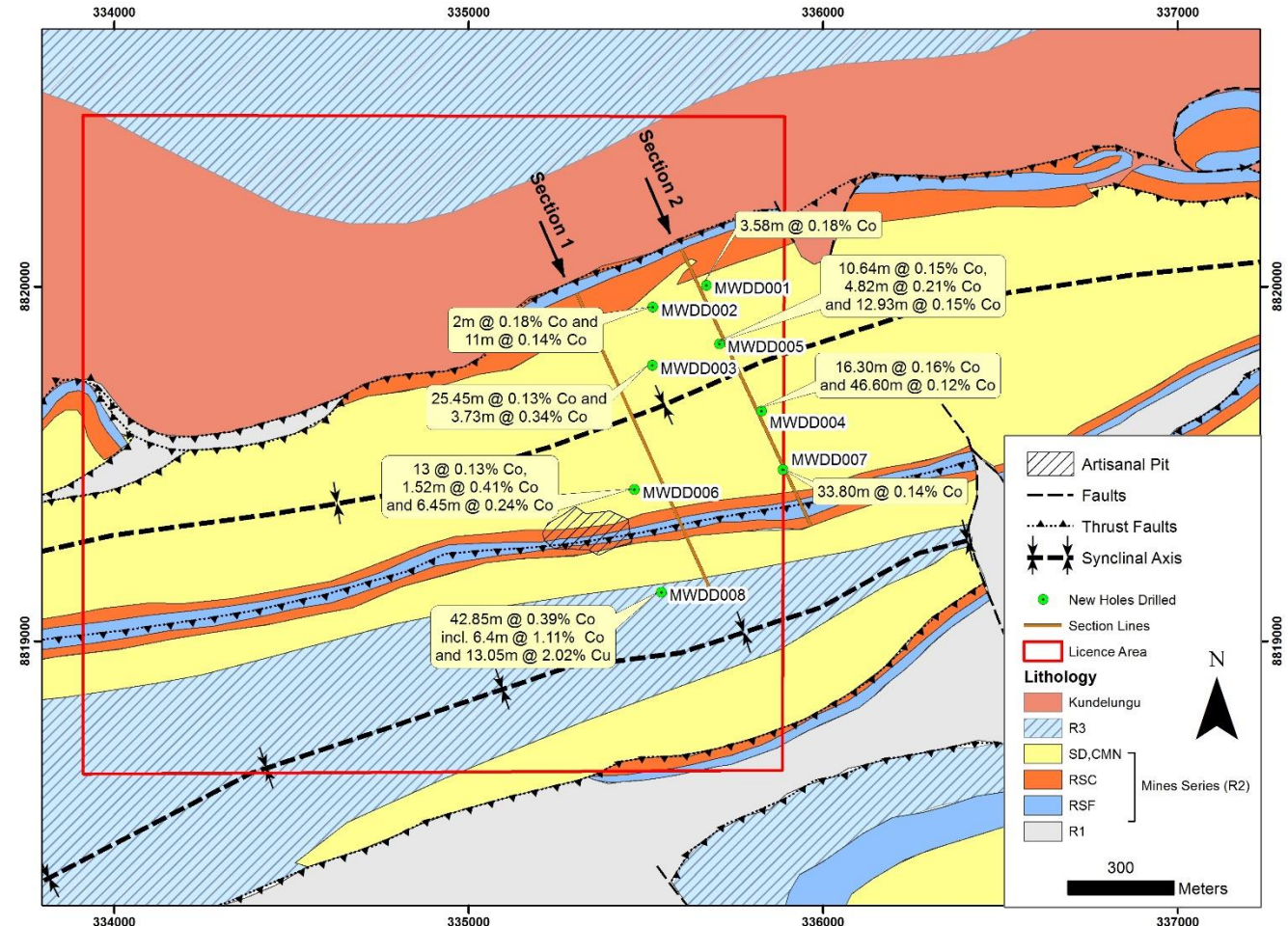


# Mwilu Project – Multiple Mineralised Zones at Surface



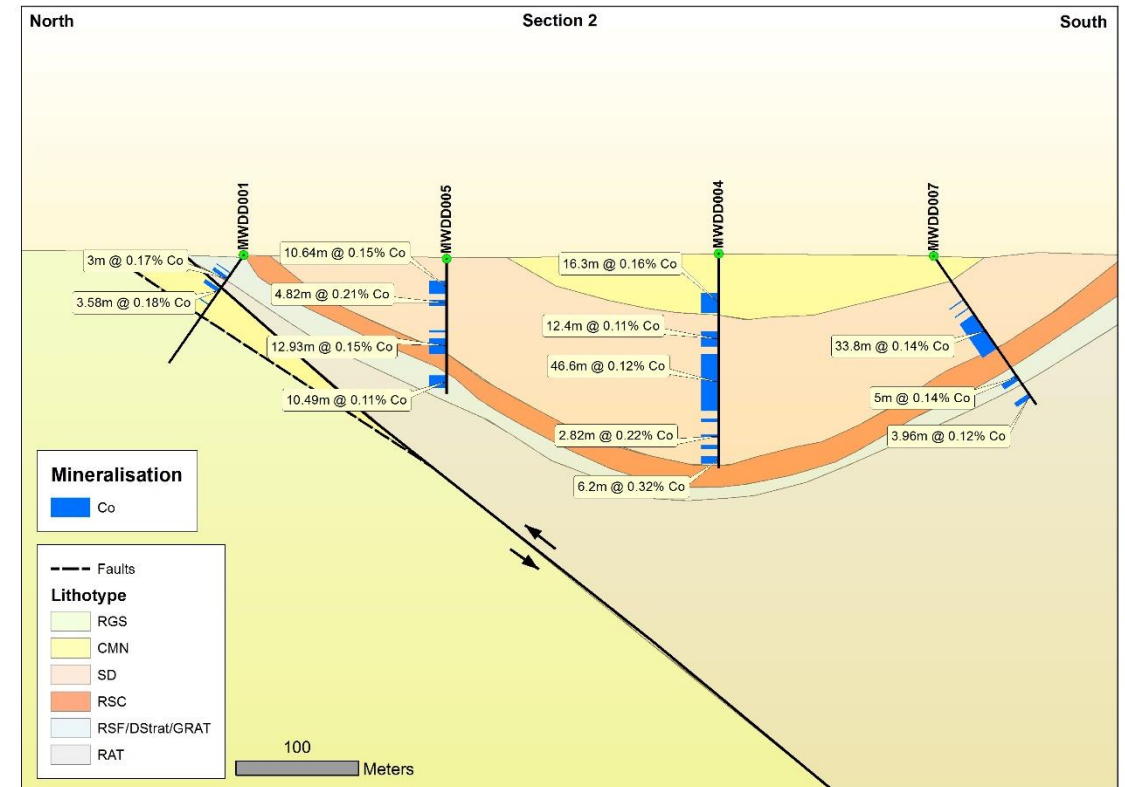
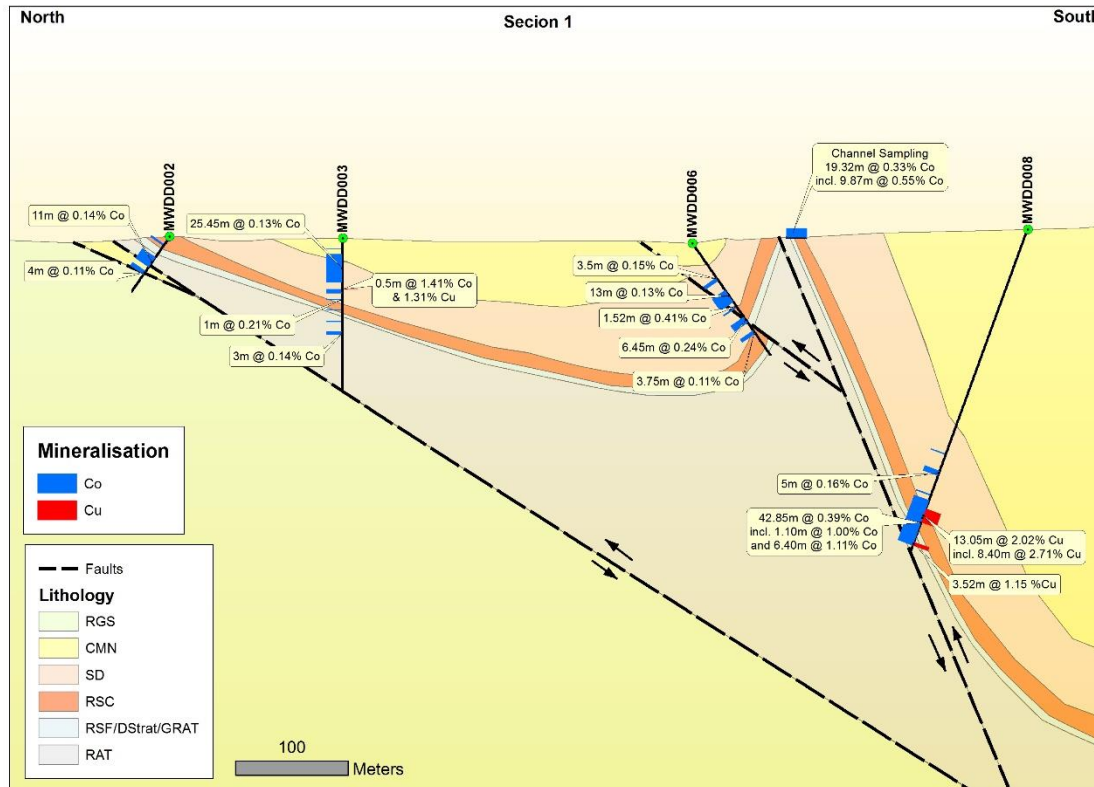
## Mineralisation defined over 700m width down to 280m below surface

- Best cobalt & copper results included:<sup>(1)</sup>
  - **42.85m at 0.39% Co** from **256.55m** including **6.40m at 1.11% Co** from **282.45m** & **8.40m at 2.7% Cu** from **269.15m**
  - Channel sampling of the same zone at surface reported **9.87m at 0.55% Co**
  - **16.30m at 0.16% Co** from **31.9m**, **46.60m at 0.12% Co** from **81.55m** & **6.20m at 0.32% Co** from **164.85m** from the northern zone
- Cobalt mineralisation defined over 2km, open at depth
- Metallurgical testwork will establish suitable simple concentration processes for early shallow production



# Mwilu Project – Sections

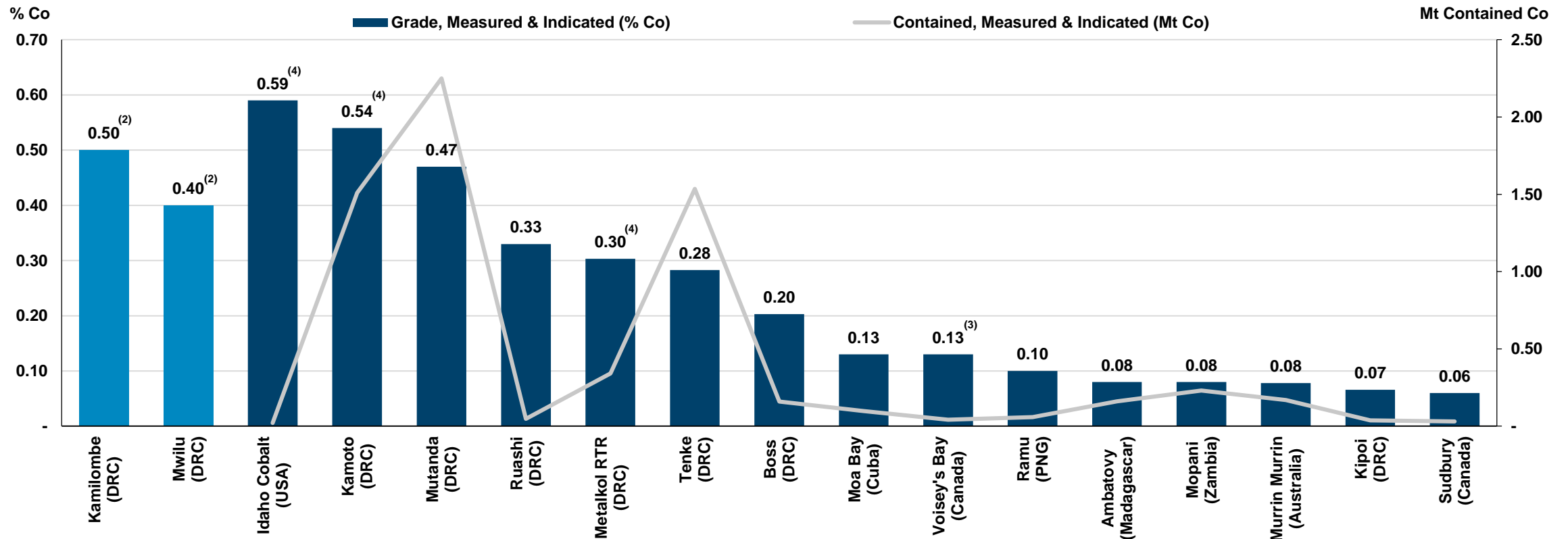
## Potential for open pit and underground mining operations



# High Grade Cobalt Located in the DRC

Kamilombe and Mwilu compare favourably to global cobalt peers

## Total Measured and Indicated Resource<sup>(1)</sup>



1) Source: SNL

2) Kamilombe grade based off KMDD005 50.87m at 0.49% Co. Mwilu grade based off MWDD008 42.85m at 0.39% Co

3) Vale only disclose reserve grade

4) Idaho Cobalt, Kamoto and Metalkol not operating

# Cobalt DDH Drill Results Since 2016<sup>(1,2)</sup>

## Early drilling at Taruga highlights potential scale

- **UEX Corp – 858 tonnes of contained inferred cobalt resource<sup>(3)</sup>**
- **Azure Minerals – cobalt enrichment on surface, ~50m strike<sup>(4)</sup>**

| Date              | Hole or Sampling ID | Project          | Country                | Development Stage     | Reporting Company           | From (meters) | To (meters)   | Interval (meters) | Depth (meters) | Cobalt Grade (%) | Cobalt Grade x Interval (%-m) |
|-------------------|---------------------|------------------|------------------------|-----------------------|-----------------------------|---------------|---------------|-------------------|----------------|------------------|-------------------------------|
| 19/04/2018        | WBC-012             | Hidden Bay       | Canada                 | Prefeas/Scoping       | UEX Corp.                   | 73.50         | 96.00         | 22.50             | NA             | 1.780            | 40.050                        |
| 19/04/2018        | WBC-012             | Hidden Bay       | Canada                 | Prefeas/Scoping       | UEX Corp.                   | 77.00         | 85.00         | 8.00              | NA             | 4.900            | 39.200                        |
| 27/11/2017        | DSA-03              | Sara Alicia      | Mexico                 | Target Outline        | Azure Minerals Ltd.         | 0.60          | 26.80         | 26.20             | 0.52           | 1.260            | 33.012                        |
| <b>31/08/2018</b> | <b>KMDD005</b>      | <b>Kamilombe</b> | <b>Dem. Rep. Congo</b> | <b>Target Outline</b> | <b>Taruga Minerals Ltd.</b> | <b>5.80</b>   | <b>56.67</b>  | <b>50.87</b>      | <b>5.80</b>    | <b>0.490</b>     | <b>24.926</b>                 |
| 9/04/2018         | WBC-001             | Hidden Bay       | Canada                 | Prefeas/Scoping       | UEX Corp.                   | 27.10         | 58.00         | 30.90             | NA             | 0.780            | 24.102                        |
| 27/11/2017        | DSA-03              | Sara Alicia      | Mexico                 | Target Outline        | Azure Minerals Ltd.         | 15.50         | 21.85         | 6.35              | 13.42          | 3.570            | 22.670                        |
| 9/04/2018         | WBC-001             | Hidden Bay       | Canada                 | Prefeas/Scoping       | UEX Corp.                   | 46.00         | 56.50         | 10.50             | NA             | 2.000            | 21.000                        |
| <b>14/08/2018</b> | <b>MWDD008</b>      | <b>Mwilu</b>     | <b>Dem. Rep. Congo</b> | <b>Target Outline</b> | <b>Taruga Minerals Ltd</b>  | <b>256.55</b> | <b>299.40</b> | <b>42.85</b>      | <b>241.08</b>  | <b>0.390</b>     | <b>16.712</b>                 |
| <b>31/08/2018</b> | <b>KMDD005</b>      | <b>Kamilombe</b> | <b>Dem. Rep. Congo</b> | <b>Target Outline</b> | <b>Taruga Minerals Ltd.</b> | <b>30.47</b>  | <b>44.15</b>  | <b>13.68</b>      | <b>30.47</b>   | <b>1.210</b>     | <b>16.553</b>                 |
| <b>30/07/2018</b> | <b>KMDD001</b>      | <b>Kamilombe</b> | <b>Dem. Rep. Congo</b> | <b>Target Outline</b> | <b>Taruga Minerals Ltd.</b> | <b>33.10</b>  | <b>64.31</b>  | <b>31.21</b>      | <b>33.10</b>   | <b>0.520</b>     | <b>16.229</b>                 |
| 16/07/2018        | CZD0076B            | West Musgrave    | Australia              | Prefeas/Scoping       | Cassini Resources           | NA            | NA            | 77.80             | NA             | 0.200            | 15.560                        |
| 25/07/2018        | 18CCAD009           | Carlow Castle    | Australia              | Reserves Development  | Artemis Resources           | 47.00         | 53.50         | 6.50              | 40.70          | 2.320            | 15.080                        |
| 9/04/2018         | WBC-005             | Hidden Bay       | Canada                 | Prefeas/Scoping       | UEX Corp.                   | 31.50         | 52.00         | 20.50             | NA             | 0.730            | 14.965                        |

1) Source: SNL

2) Sorted by cobalt grade x interval

3) See UEX Corp Mineral Resource Statement, West Bear Cobalt-Nickel Project Saskatchewan 7 Aug 2018

4) See Azure Minerals ASX announcement dated 31 May 2018: 58.8g/t Gold and 2.82% Cobalt Drilled at Sara Alicia



# Mwilu & Kamilombe Projects – Next Steps

## Fast track drilling programmes for early resource definition

- **Conclude ongoing due diligence at both Kamilombe and Mwilu**
- **Infill drilling on a 100 x 100m grid at Kamilombe**
- **Drilling at 100 x 50m centers on the high grade, steeply dipping zone at Mwilu**
- **Complete metallurgical studies at Kamilombe**
- **Metallurgical testwork to produce a cobalt concentrate from low grade material at Mwilu**
- **Commence shallow mining on positive metallurgical results**
- **Target maiden resource on both projects within 6 to 8 months of commencement of drilling**

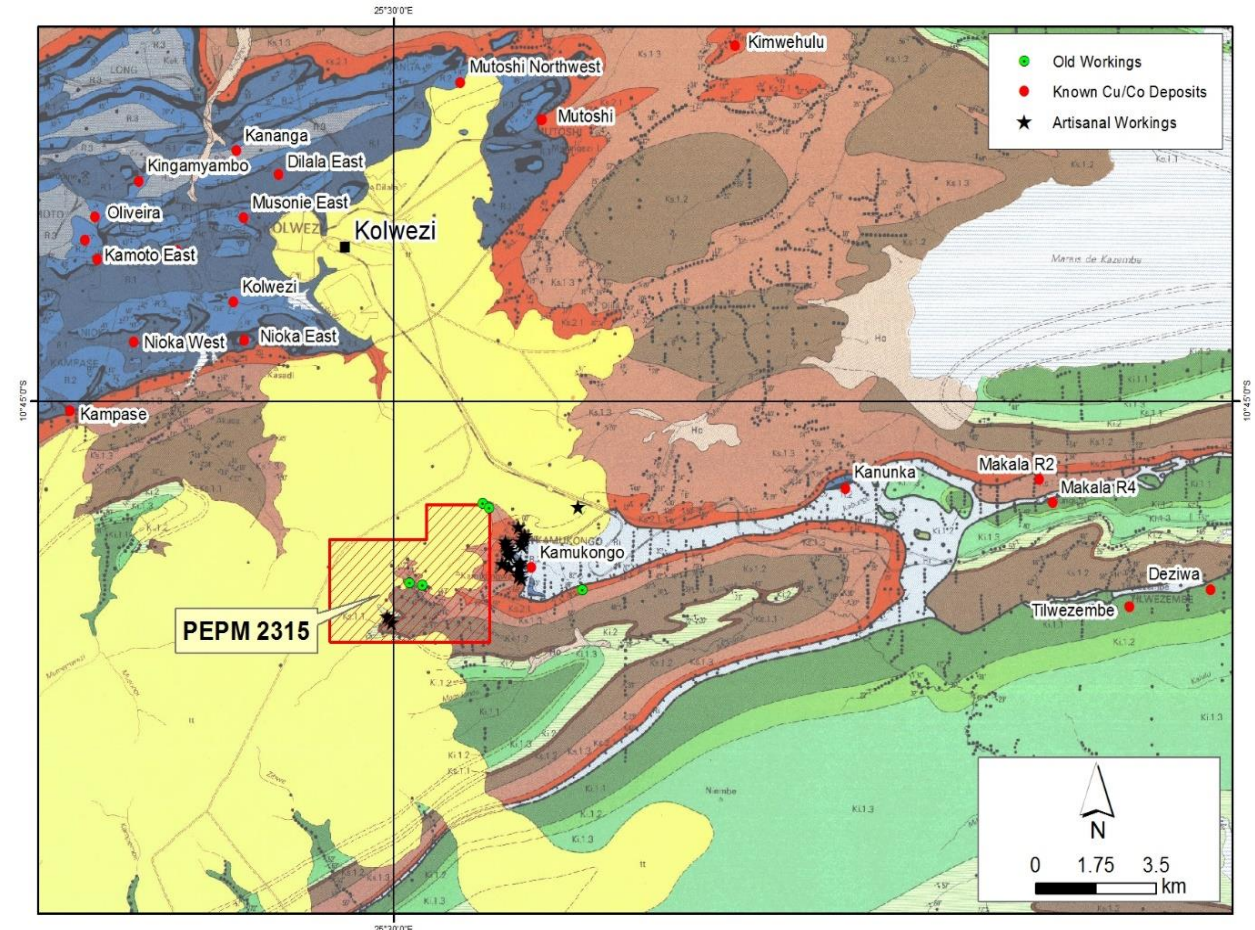




# PEPM2315 – Location and Geology

## Early stage cobalt-copper project in highly prospective Roan belt

- Permit covers an area of 28.35km<sup>2</sup> and lies roughly 8km SSE of Kolwezi
- 85% of the property is overlain by recent soil cover
- Good potential for discovery of blind deposits
- Roan sediments are being mined commercially and by artisanal miners immediately to the east of concessions
- Permit in process of being converted to an Exploitation Permit
- Taruga to conduct auger/soil sampling programmes with follow up Air-Core drilling on successful conclusion of permit conversion

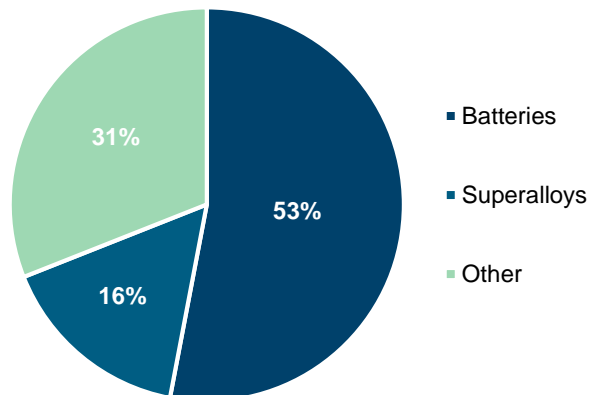


# EV Battery Thematic

## Cobalt expected to be a big winner

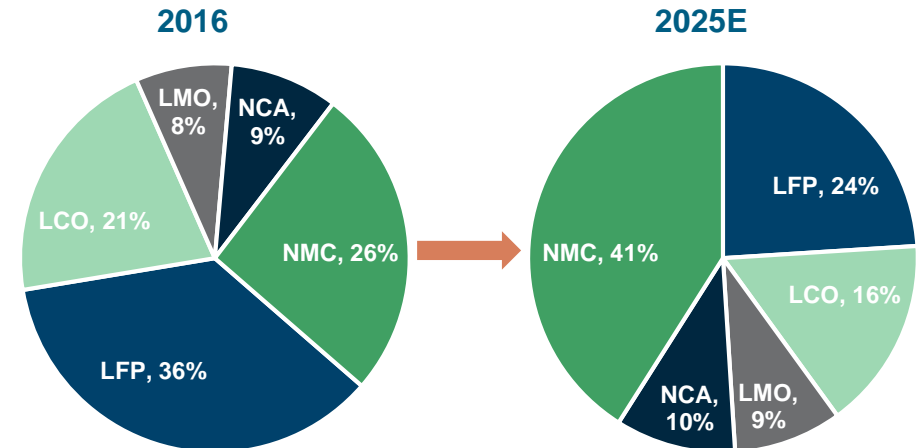
- NMC batteries favoured by the EV industry
- Cobalt concentrations need to be maintained in NMC batteries to stabilise nickel
  - High nickel concentration decreases thermal stability and lifespan of the battery
  - Suggested that c.20% of cobalt is needed for stabilisation

2017 Cobalt Usage<sup>(3)</sup>

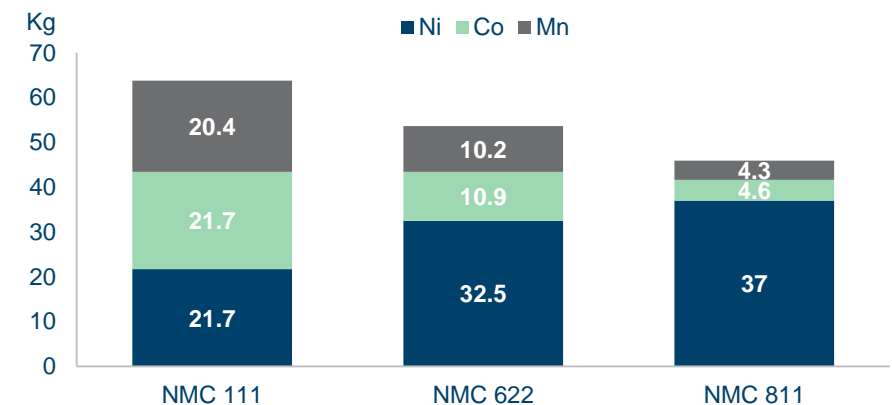


1. BMO Research: The Lithium Ion Battery and the EV Market, Feb 2018  
 2. UBS Research: UBS Nickel – How We Can Supply the Electric Vehicle Market, Nov 2017  
 3. Cobalt27 Investor Presentation

Cathode Active Material Allocation<sup>(1)</sup>



Minimum Cathode Materials for NMC Batteries<sup>(2)</sup>

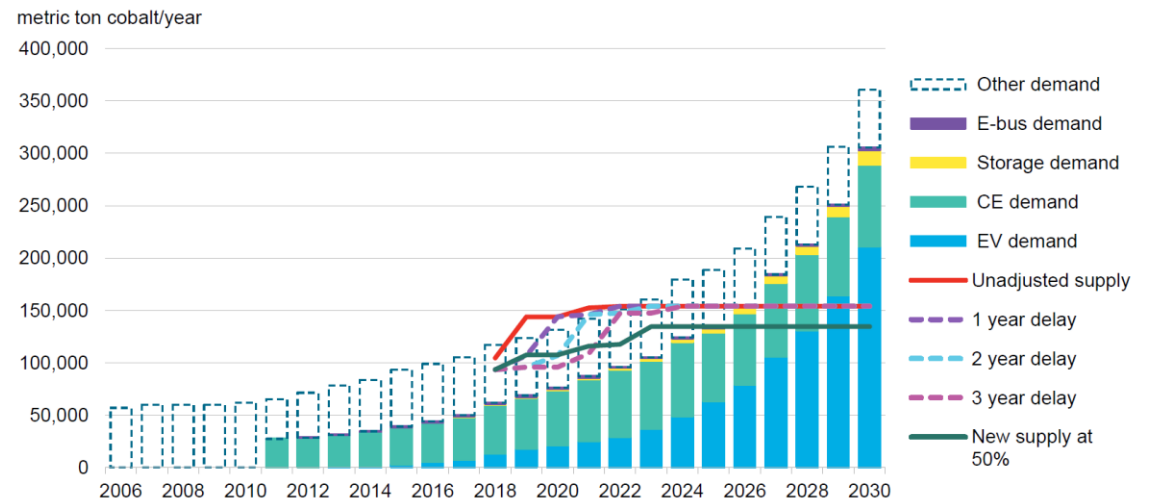


# DRC: The Answer to the Cobalt Supply Dilemma

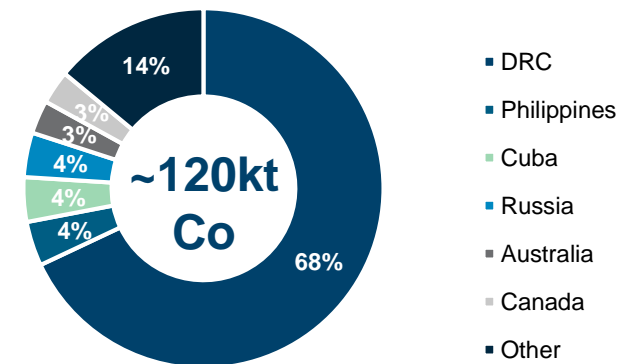
## Future cobalt shortages are all but inevitable

- High demand driven by EV batteries, however supply is challenged
  - Mainly produced as a by-product of copper and nickel, with only 1% from primary mines
- Demand for cobalt in batteries is expected to grow at 14.5% per year to 2027 to more than 240,000t (double the size of the total market in 2017)<sup>(3)</sup>
  - Supply deficit is expected beyond 2022<sup>(3)</sup>
- Recent cobalt price drop a reflection of negative sentiment in the Chinese market rather than any drop in demand
  - China's Huayou Cobalt<sup>(4)</sup> announced strong H1 shipments, with cobalt sales up 5% y/y and precursor material sales up 90% y/y

### Scenarios for Refined Cobalt Supply & Demand<sup>(1)</sup>



### 2017 Cobalt Production by Geography<sup>(2)</sup>



1. BNEF 15 Mar 2018. Unadjusted supply assumes that planned production capacity ramps up on schedule and at full capacity

2. Cobalt 27 investor presentation

3. Roskill

4. Huayou Cobalt accounts for 10% of global refined cobalt production





# Appendix

# Central African Copperbelt - Geology

## Roan Sequence - host to worlds largest stratiform cobalt and copper deposits

- DRC hosts 60% of the worlds cobalt resources
- Cobalt-copper mineralisation traditionally within the lower Roan, Mine Group (R-2) series
- Discovery of Kamoa (**>25M tonnes of contained copper, Ivanhoe Resources**) highlights potential for new discoveries in overlying Mwashya (R-4) and Nguba Groups
- Good potential for new “blind” under cover copper-cobalt discoveries
- Mining from open pit and underground sources

| Group      | Subgroup     | Member             | Mineralised Zones | Deposits                                       |
|------------|--------------|--------------------|-------------------|--|
| Kundulungu |              | Grand Conglomerate |                   |  |
| Roan (R)   | Mwashya (R4) | Upper Mwashya      |                   | Kipoi, Kamoa                                   |
|            |              | Lower Mwashya      |                   |  |
|            | Dipeta (R3)  |                    |                   |  |
|            | Mines (R2)   | CMN (Upper)        |                   | Kambove  |
|            |              | CMN (Lower)        | Third orebody     |  |
|            |              | S.D.S.             |                   |  |
|            |              | B.O.M.Z.           |                   | Kamoto, Mutoshi                                |
|            |              | S.D.B.             | Upper Orebody     |  |
|            |              | R.S.C.             |                   |  |
|            |              | R.S.F.             | Lower Orebody     | Kolwezi (KOV), Tenke-Fugurume, Kamoto, Mutoshi |
|            |              | D.Strat            |                   |  |
|            |              | Grey R.A.T.        |                   |  |
|            | R.A.T. (R1)  |                    |                   |  |



# Competent Person Statement & Disclaimer



The information contained in this presentation has been prepared by Taruga Minerals Limited (Company).

The information in this report that relates to exploration results is based on, and fairly represents information and supporting documentation prepared by Mr Mark Gasson, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Gasson is an Executive Director of Taruga Minerals Limited. Mr Gasson 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 Resource and Ore Reserves”. Mr Gasson consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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