ARGUS METALS WEEK:

Copper/Cobalt and the Battery Market Disruptor

27 February 2019

IMPORTANT INFORMATION

This document has been prepared by Aeon Metals Limited (Aeon) for the purpose of providing a comprehensive company and technical overview to interested analysts and investors. This document is not a prospectus and should not be considered an offer or an invitation to acquire shares in Aeon or any other financial product.

Any statements, opinions, projections, forecasts or other material contained in this document (Information) is presented by Aeon for use only by the company or person to whom it is presented and do not constitute any commitments, representations or warranties by Aeon or its officers, agents, employees or associates. Except as required by law, no responsibility or liability is accepted by Aeon or any of its officers, employees, agents or associates, nor any other person, for the Information or for any action taken by the recipient or any of the recipient's officers, employees, agents or associates on the basis of the Information.

Forward-looking statement, opinions and estimates provided in this Information 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 include projections, guidance on future earnings and estimates and are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance. Past performance information given in this Information is given for illustrative purposes and should not be relied upon as (and is not) an indication of future performance. Aeon undertakes no obligation to revise the forward-looking statements included in this Information to reflect any future events or circumstances.

The Information does not constitute investment, legal, accounting, regulatory, taxation or other advice and does not take into account your investment objectives or legal, accounting, regulatory, taxation or financial situation or particular needs. Recipients of this document must make their own independent investigations, consideration and evaluation. By accepting this document, the recipient agrees that if it proceeds further with its investigations, consideration or investment evaluation , it shall make and rely solely upon its own investigations and enquiries, and will not in any way rely upon this document.

COMPETENT PERSONS STATEMENT

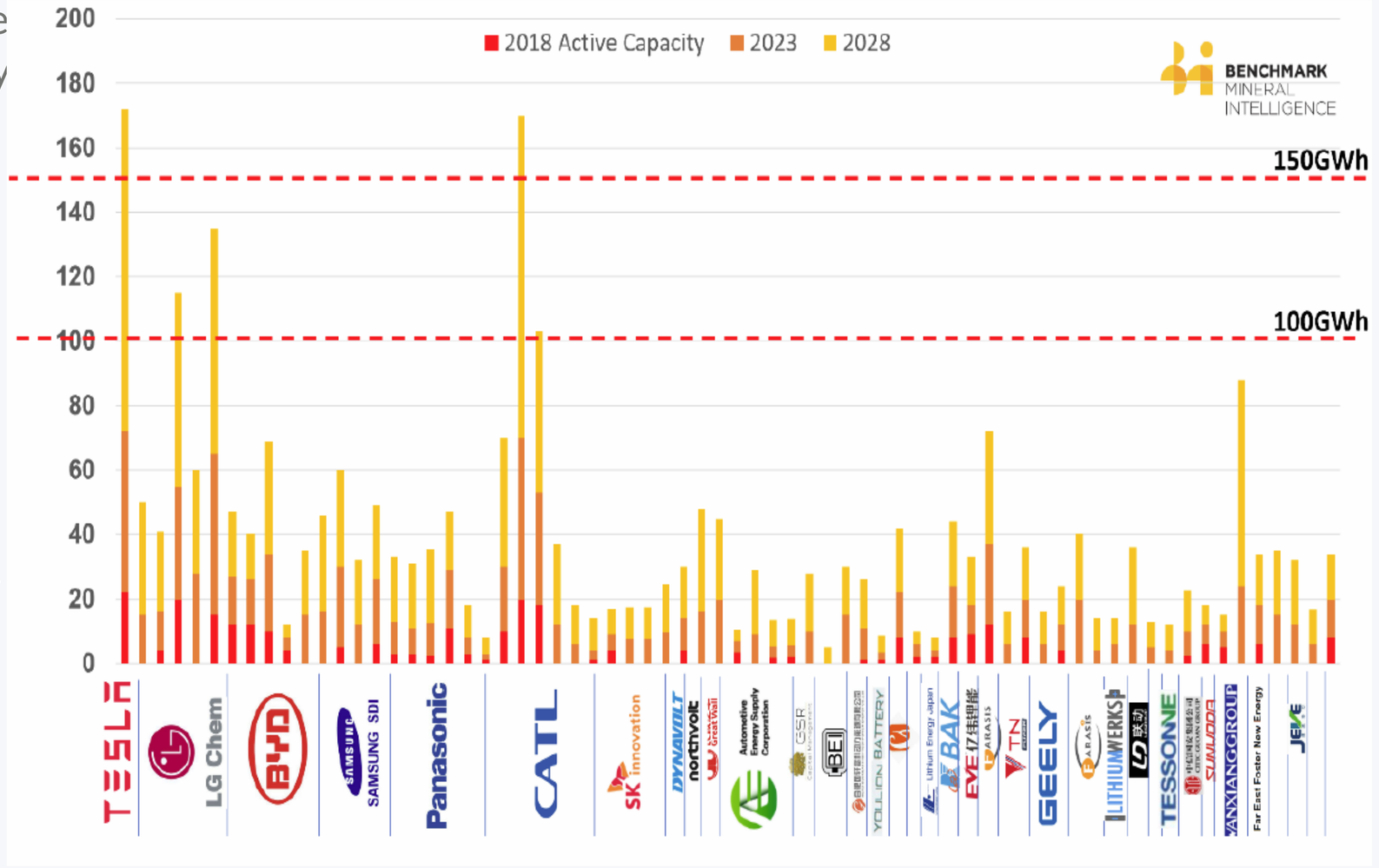
The data in this report that relates to Mineral Resource Estimates for the Walford Creek Deposit and Vardy Zone Deposit is based on information evaluated by Mr Simon Tear who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the “JORC Code”). Mr Tear is a Director of H&S Consultants Pty Ltd and he consents to the inclusion in the presentation of the Mineral Resources in the form and context in which they appear.

The information in this report that relates to Exploration Targets and Exploration Results for the Walford Creek Deposit and Vardy Zone Deposit is based on information compiled Mr Dan Johnson who is a Member of the Australian Institute of Geoscientists and who 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 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the “JORC Code”). Mr Dan Johnson is a full-time employee of Aeon Metals and consents to the inclusion in the presentation of the Exploration Targets and Exploration Results in the form and context in which they appear.

LITHIUM ION BATTERY INDUSTRY IS PREPARING FOR MASSIVE GROWTH

- The advent of electric vehicles (EVs) and the emergence of battery energy storage has sparked a wave of lithium ion battery megafactories being built.
- ~70 lithium-ion battery megafactories under construction across four continents, 46 of which are based in China[1].
- Planned lithium ion battery capacity in the pipeline for the period 2019- 2028 has risen from 289GWh to 1,549GW (~23-24m sedan sized electric vehicles)[1].
- Almost exclusively, these megafactories are being built to make lithium ion battery cells using two chemistries:
  - nickel-cobalt-manganese (NCM); and
  - nickel-cobalt-aluminium (NCA).

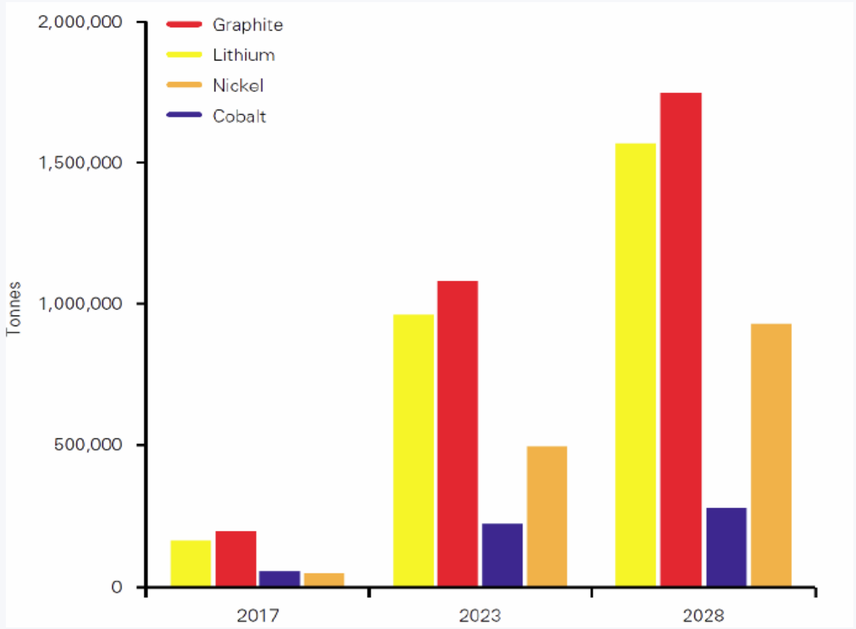
Build out of lithium ion battery capacity from 2018 to 2028[1]:



1. BMI - Written testimony from BMI to US Senate Committee on Energy and Natural Resources Committee (5 Feb 2019).

COBALT DEMAND 4 FOLD

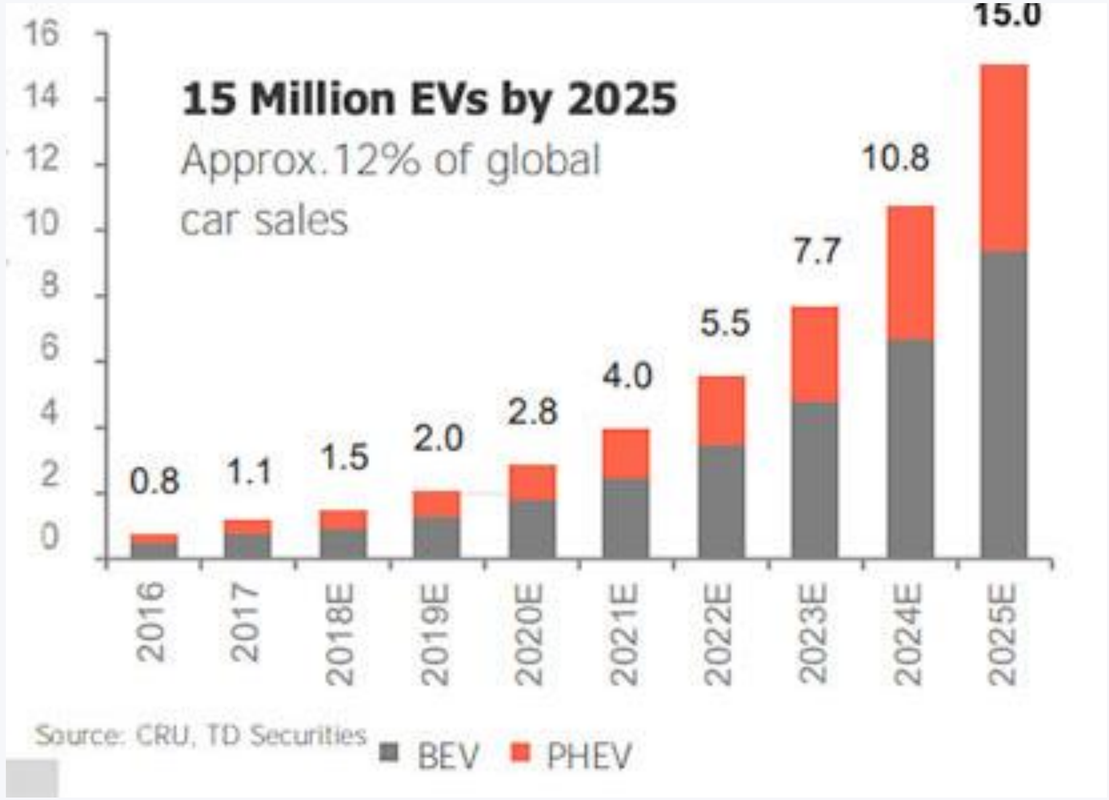
Lithium-ion Battery Megafactory Raw Demand at 100% utilisation rate



MATERIAL	2017	2023	2028
LITHIUM	162,752	961,351	1,570,020
GRAPHITE ANODE	194,160	1,080,360	1,747,800
COBALT	54,354	219,679	276,401
NICKEL	48,584	494,774	928,018

Source: USGS, BMO Capital Markets

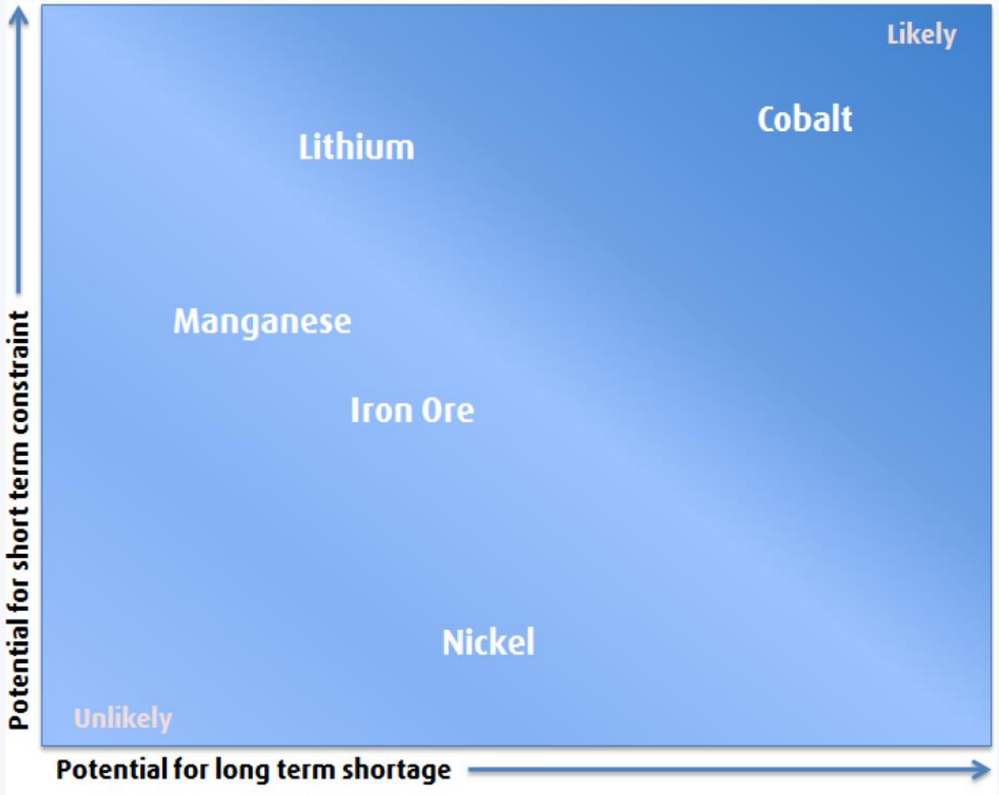
Electric Vehicle Sales



- Tit bits:
  - Even without EV demand, cobalt is a tight market
  - Largest single use of cobalt is in smartphones (not EV's)
  - Only 10% of cobalt is currently consumed in EV's
  - Market timeline for commercialisation of battery materials is approx. 5yrs.

COBALT GEOLOGY & PROCESSING

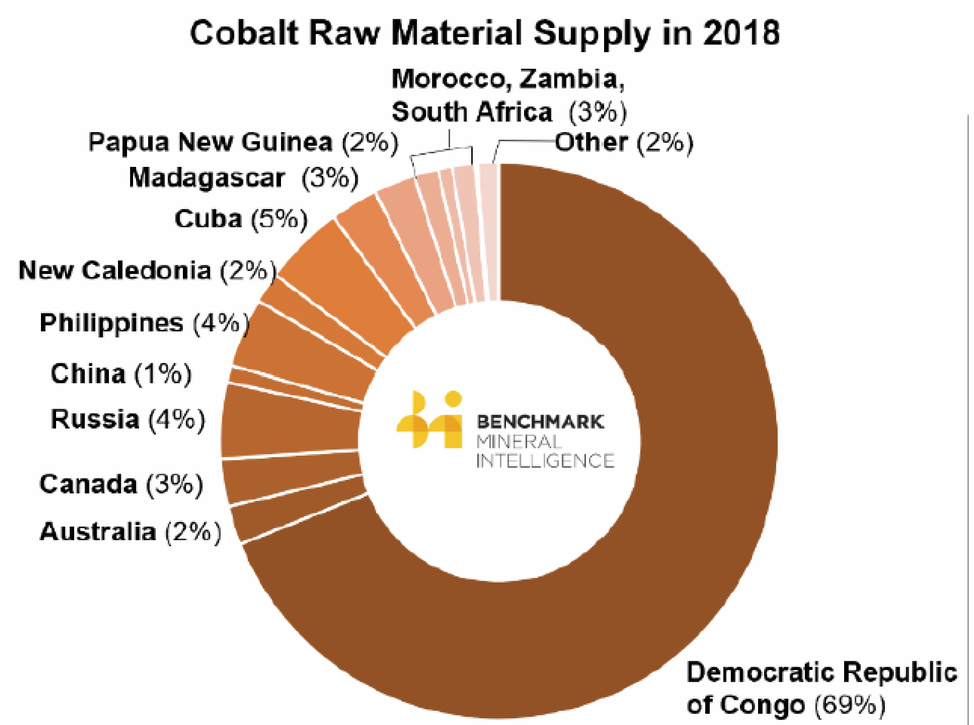
- Cobalt is relatively common in the Earth's crust BUT it is not found in its 'native' form in nature, and it is relatively rare to find in economically exploitable concentrations.
- Difficult to find
- Difficult to extract (process) and hence grade an influence:
  - lower recoveries
  - high operating costs
- Geological conditions influence how cobalt is processed from cobalt-containing ore.
- Over 95% of the world's mined cobalt is produced as a **by-product of copper (60%) and nickel (35%)**. Cobalt expansion projects dependent on copper and nickel dynamics.
- Cobalt is found economically in 2 main deposit types: **SULPHIDES AND LATERITES**
- Sulphides: ~75% of global production. Lower capital cost for processing
- Laterites: ~25% of global production. Higher capital cost. Long lead time

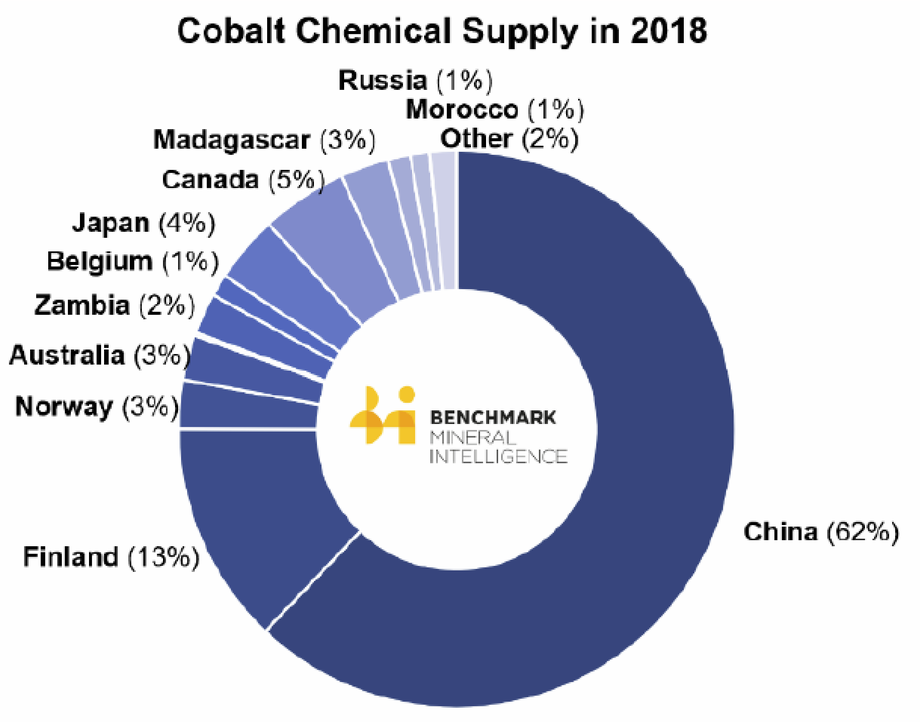


Source: BMO Capital Markets

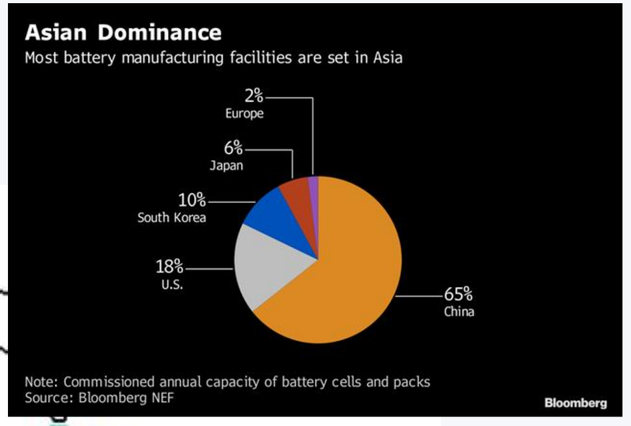
COBALT SUPPLY

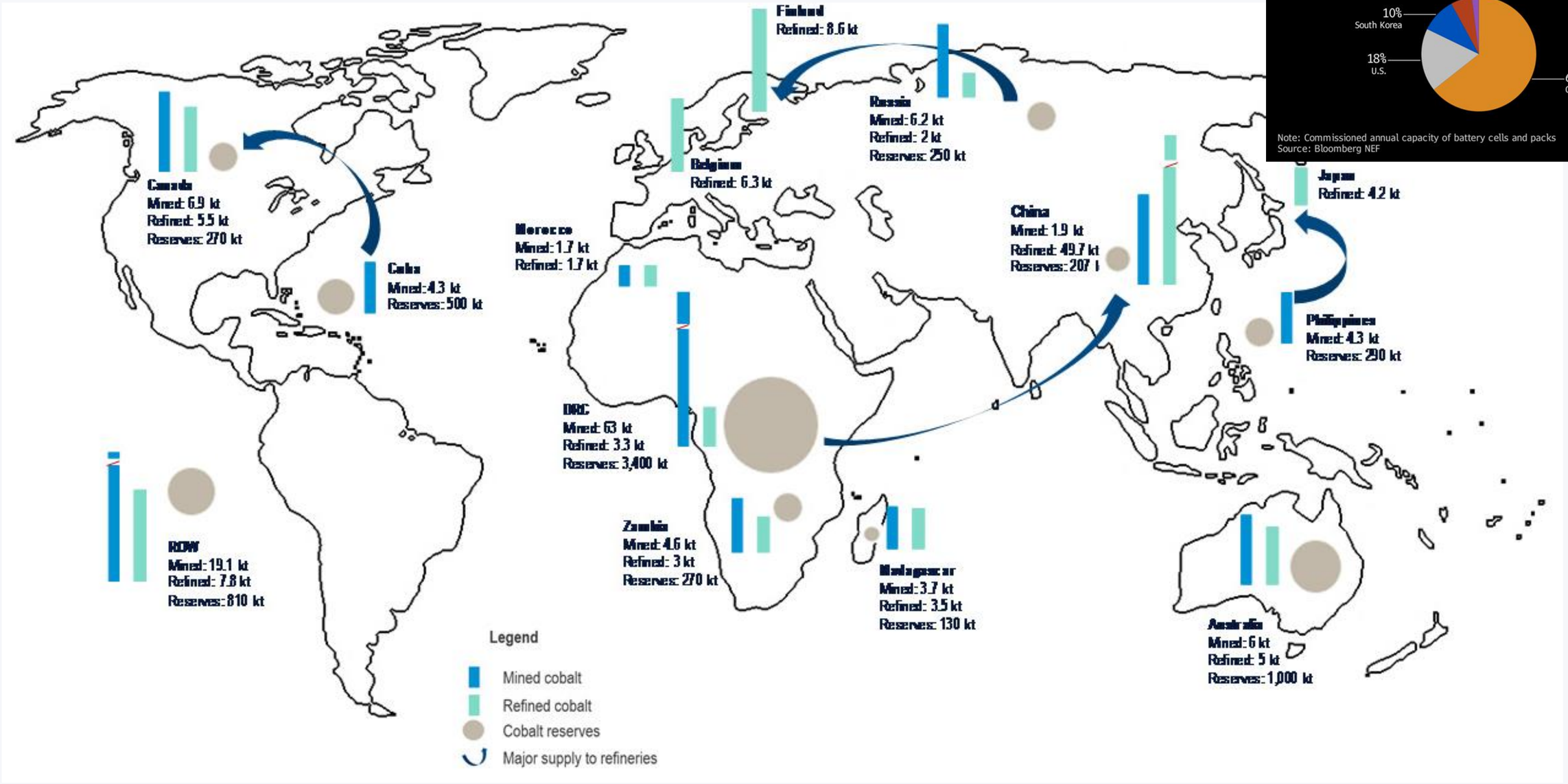
- **Cobalt's supply side is unique.**
- Overreliance on the Democratic Republic of Congo (DRC) on the supply side cannot be avoided.
- Currently, the DRC is responsible for ~70% of mined cobalt units. Given this is one of the few supply regions across the world where existing mines can creep capacity, DRC dependence is only going to grow - +75% by 2025.
- Pressure mounting on battery manufacturers to source cobalt from suppliers with **strong corporate social responsibility** commitments – WHERE??





WORLD COBALT PRODUCTION





Source: USGS, CDI, SNL, RFC Ambrian

COBALT PROJECTS

- Producers dominated by DRC.
  - Sulphides
  - High grades
- No new discoveries.

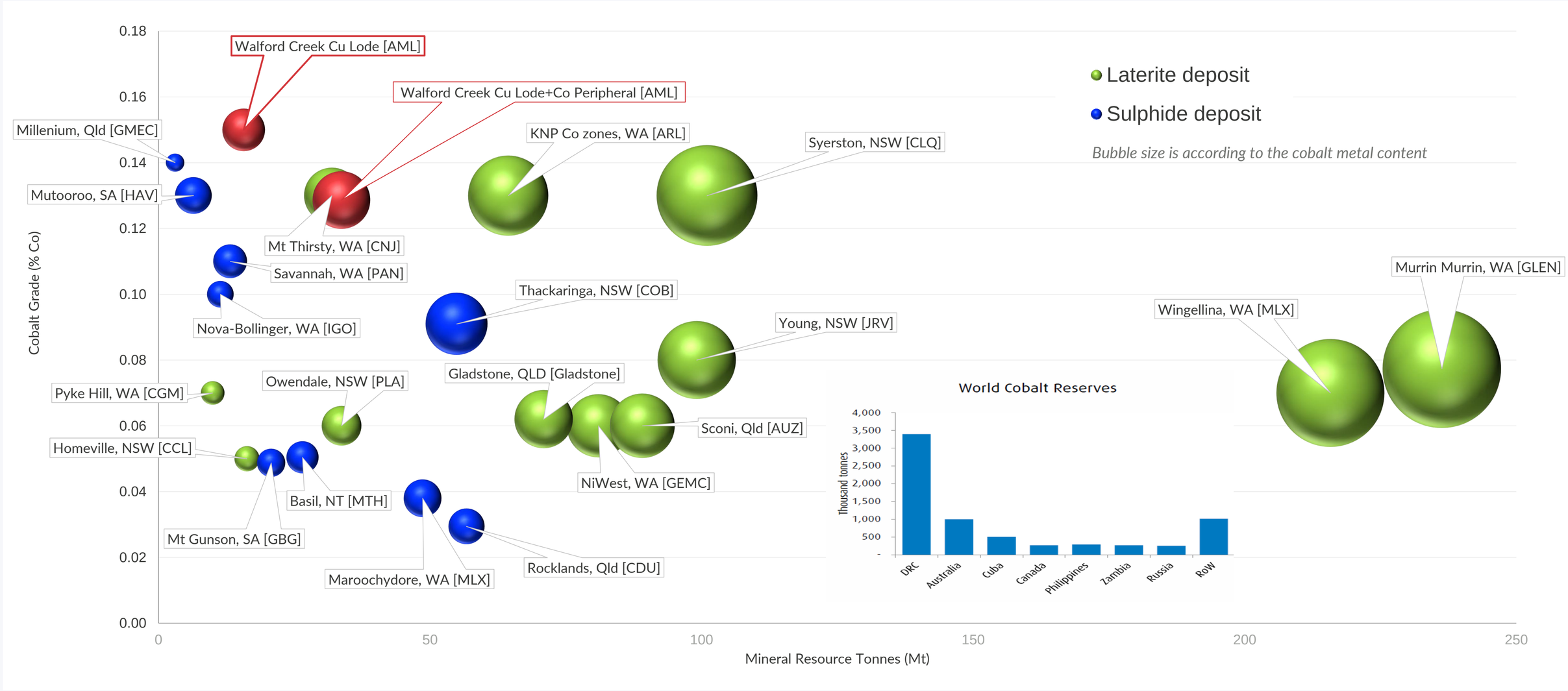
- Developers short list
  - long lead times.
  - Low grades
- No new discoveries.

Project	Location	Owner	Primary Metal	Cobalt Production (tonnes)	Cobalt grade (%)
Mutanda	DRC	Glencore	Copper	23900	0.41%
Tenke Fungurume	DRC	CMOC	Copper	16419	0.28%
Boss	DRC	ERG	Copper	6210	0.20%
Ruashi	DRC	Jinchuan	Copper	4638	0.30%
Moa Bay	Cuba	Sherrit	Nickel	3601	0.12%
Sudbury	Canada	Glencore	Nickel	3500	0.08%
Ramu	Papua New Guinea	MCC	Nickel	3308	0.10%
Ambatovy	Madagascar	Sherrit	Nickel	3053	0.08%
Murrin Murrin	Australia	Glencore	Nickel	3000	0.08%
Bou-Azzer	Morocco	Managem	Cobalt	2081	1.00%
Voisey's Bay	Canada	Vale	Nickel	1829	0.13%
Vale Sudbury	Canada	Vale	Nickel	840	0.04%

Development Companies	Main Listing
Aeon Metals Ltd	Australia
Ardea Resources Ltd	Australia
Clean TeQ	Australia
Cobalt Blue Holdings Ltd	Australia
Corazon Mining Ltd	Australia
Castle Silver Resources Inc.	Canada
Cblt Inc.	Canada
Cruz Cobalt Corp.	Canada
Ecobalt	Canada
First Cobalt	Canada
Fortune Minerals Ltd	Canada
Global Energy Metals	Canada
Kings Bay Resources Corp.	Canada
LiCo Energy Metals	Canada

Source: BMO Capital Markets

AUSTRALIAN COBALT COMPARABLES



Source: Terra Studio (2018)

COPPER SUPPLY & DEMAND

- Copper a ~23mtpa market.
- Historical copper demand linked to power and urban growth. EV demand (and infrastructure – recharging poles) and potential supply kick up?
  - A current internal combustion vehicle uses about 22kg of copper in average. A battery EV may use ~83kg, with plug-in hybrids and hybrids substantially less. So for a battery EV, the incremental copper increase over a cinternal combustion vehicle ~61kg.

Global Supply and Demand Summary

	2014	2015	2016	2017	2018f	2019f	2020f	2021f	2022f
World mine supply (kt)	18,568	19,178	20,157	20,210	20,532	20,951	21,418	21,827	21,702
Chg YoY	*2.7%*	*3.3%*	*5.1%*	*0.3%*	*1.6%*	*2.0%*	*2.2%*	*1.9%*	*-0.6%*
after disruption of (kt)				-	*(617)*	*(1,103)*	*(1,127)*	*(1,149)*	*(1,142)*
Concentrate supply (kt)	14,772	15,329	16,272	16,386	16,670	17,058	17,580	18,256	18,258
SX/EW copper (kt)	3,774	3,827	3,870	3,809	3,848	3,878	3,823	3,556	3,431
Smelter production (kt)	16,549	17,103	17,961	18,332	18,637	19,146	19,785	20,495	20,547
smelting scrap supply (kt)	2250	2253	2101	2202	2489	2624	2684	2736	2786
Demand for concentrate (kt)	14,854	15,412	16,372	16,644	16,670	17,058	17,580	18,256	18,258
Concentrate surplus/(deficit) (kt)	**(82)**	**(82)**	**(100)**	**(258)**	-	-	-	-	-
refining scrap supply (kt)	1,530	1,350	1,314	1,399	1,338	1,201	1,252	1,352	1,451
Electro-refined copper production (kt)	17,908	18,165	18,901	19,232	19,975	20,347	21,037	21,847	21,998
Total refined copper supply (kt)	21,682	21,992	22,771	23,042	23,823	24,225	24,860	25,403	25,429
World Copper consumption (kt)	21,519	21,830	22,552	23,143	23,688	24,196	24,640	25,076	25,508
Chg YoY	*4.4%*	*1.4%*	*3.3%*	*2.6%*	*2.4%*	*2.1%*	*1.8%*	*1.8%*	*1.7%*
China consumption Chg YoY	*6.9%*	*3.5%*	*6.3%*	*4.5%*	*2.7%*	*2.3%*	*1.6%*	*1.4%*	*1.3%*
Copper balance (kt)	**163**	**162**	**219**	**(101)**	**135**	**29**	**221**	**328**	**(79)**

Source: Wood Mackenzie, Credit Suisse

COPPER SUPPLY

Reserve Levels of Operating Mines

	Mine	Country	Company	Reserves Mt Cu
1	Escondida	Chile	BHP Billiton/Rio Tinto	47.21
2	Andina Division	Chile	Codelco	7.24
3	El Teniente	Chile	Codelco	14.09
4	Olympic Dam	Australia	BHP Billiton	10.53
5	Collahuasi	Chile	Anglo Am/Glencore	29.95
6	Chuquicamata	Chile	Codelco	9.73
7	Grasberg	Indonesia	Freeport-McMoRan	20.35
8	KGHM Polska Miedz	Poland	KGHM	17.47
9	Oyu Tolgoi	Mongolia	Turquoise Hill	11.65
10	Radomiro Tomic	Chile	Codelco	10.63
11	Los Pelambres	Chile	Antofagasta	7.16
12	Los Bronces	Chile	Anglo Am/Codelco	7.82
13	Buenavista	Mexico	Southern Copper	24.95
14	Antamina	Peru	BHP Billiton/Glencore	4.93
15	Quebrada Blanca	Chile	Teck Resources	6.44

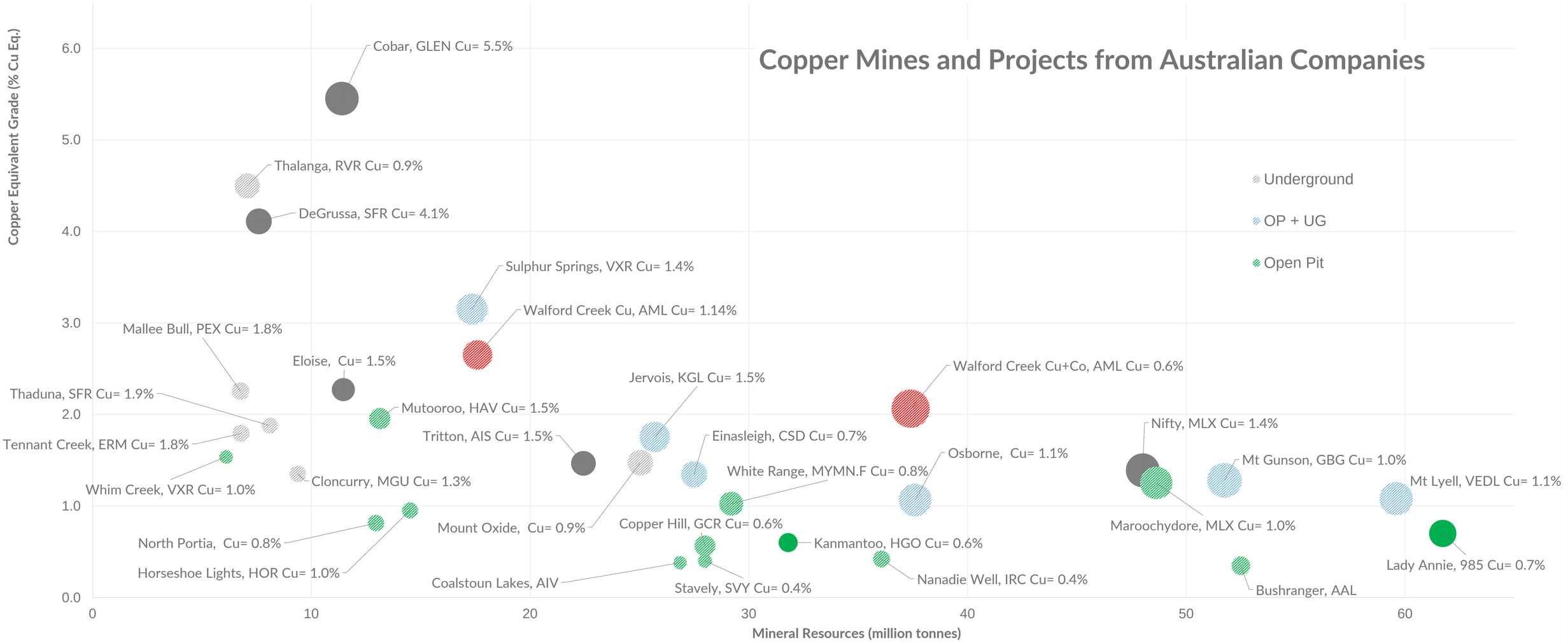
- Top 15 mines = 223Mt Reserves = 9yrs
- Las Bambas only new large development since 2007 cutbacks
- No new large discoveries since???????

Top 20 Mines By Production

	Mine	Country	Main owners	Prod'n 2017 kt	Cash cost US¢/lb	AISC US¢/lb
1	Escondida	Chile	BHP Billiton/Rio Tinto	902,700	108	185
2	Collahuasi	Chile	Anglo Am/Glencore	524,000	118	170
3	Cerro Verde	Peru	Freeport-McMoRan	481,810	171	216
4	El Teniente	Chile	Codelco	464,000	99	135
5	Morenci	US	Freeport-McMoRan	462,664	169	229
6	Las Bambas	Peru	MMG	453,749	121	182
7	Grasberg	Indonesia	Freeport-McMoRan	451,778	9	80
8	Buenavista	Mexico	Southern Copper	430,685	118	144
9	Antamina	Peru	BHP Billiton/Glencore	422,500	4	89
10	KGHM Polska Miedz	Poland	KGHM	419,300	152	182
11	Los Pelambres	Chile	Antofagasta	343,800	115	142
12	Chuquicamata	Chile	Codelco	331,000	117	181
13	Radomiro Tomic	Chile	Codelco	319,000	121	175
14	Los Bronces	Chile	Anglo Am/Codelco	308,300	181	259
15	Kansanshi	Zambia	First Quantum	250,801	143	193
16	Mt Isa Copper	Australia	Glencore	239,900	163	201
17	Andina Division	Chile	Codelco	220,000	121	165
18	Ministro Hales	Chile	Codelco	215,086	123	206
19	Tenke Fungurume	DRC	China Molybdenum	213,800	15	107
20	Antapaccay	Peru	Glencore	206,500	113	151

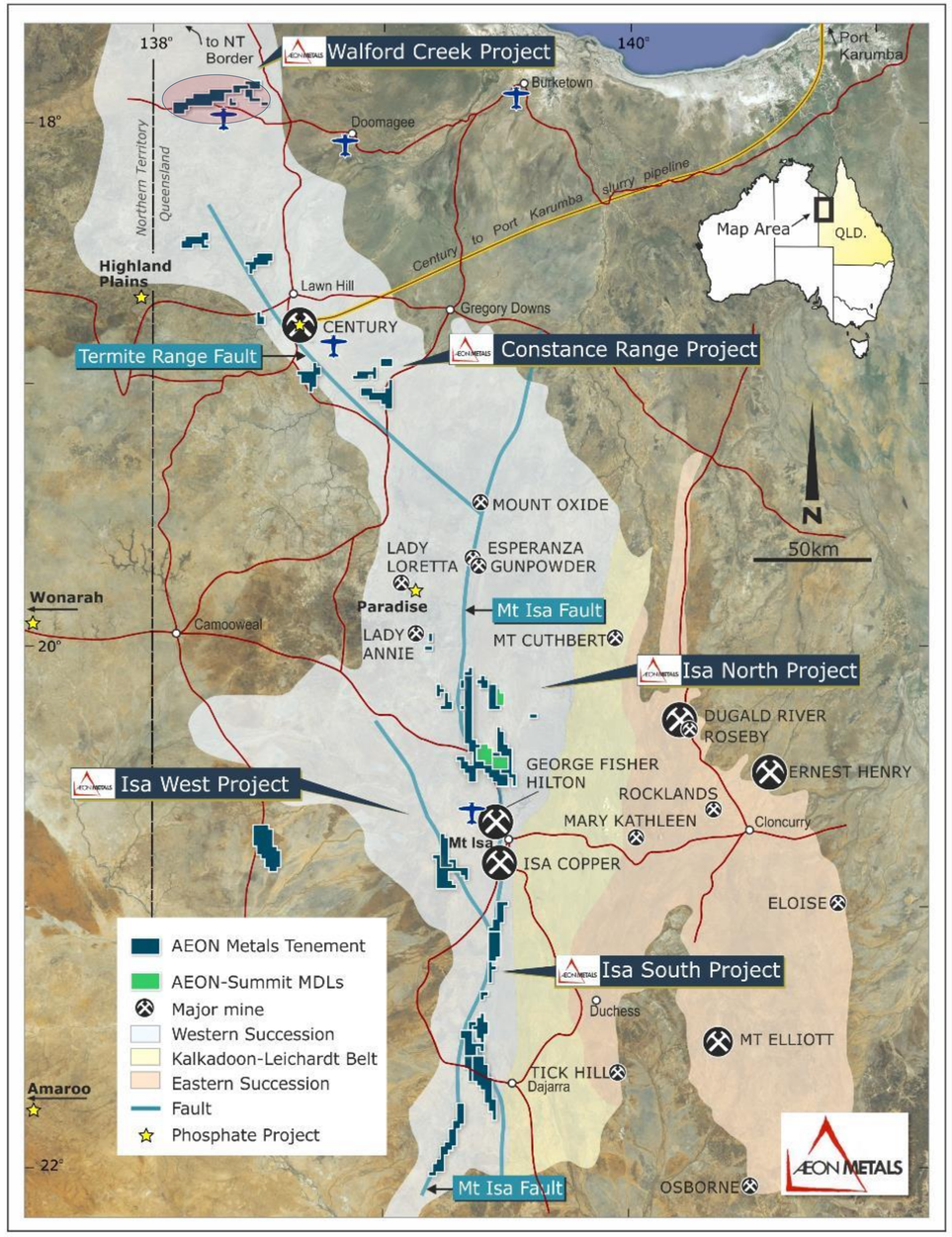
Source: RFC Ambrian, S&P Global Market Intelligence

AUSTRALIAN COPPER COMPARABLES



Source: Terra Studio. Bubble size is according to the copper equivalent metal content and filled bubbles indicate operating mines.
Copper equivalent grade calculations assume the following metal prices: Cu $3/lb, Co $20/lb, Au $1,300/oz, Ag $16/oz, Pb $1.00/lb, Zn $1.25/lb . No metallurgical recoveries have been applied.

A WORLD-CLASS COPPER-COBALT PROJECT



- 100% AML owned Walford Creek Project
- The highest grade significant cobalt deposit in Australia
- Material upside along +20km strike

HISTORICAL DRILLING ~88,420m

1989-1996: WMC	93 holes (DD/RC)	= **16,100m**
2004-2006: Copper Strike	30 holes (RC)	= **3,500m**
2010-2012: Aston Metals	92 holes (DD/RC)	= **15,000m**
2014-2018: Aeon Metals	245 holes (DD/RC)	= **53,820m**

- The **2019 Resource[1] estimates underpin Walford Creek economic development:**
  - **Copper Lode Resource** containing:
    - **17.6Mt @ 1.14% Copper and 0.13% Cobalt** (also 0.87% Pb, 0.74% Zn and 28g/t Ag)

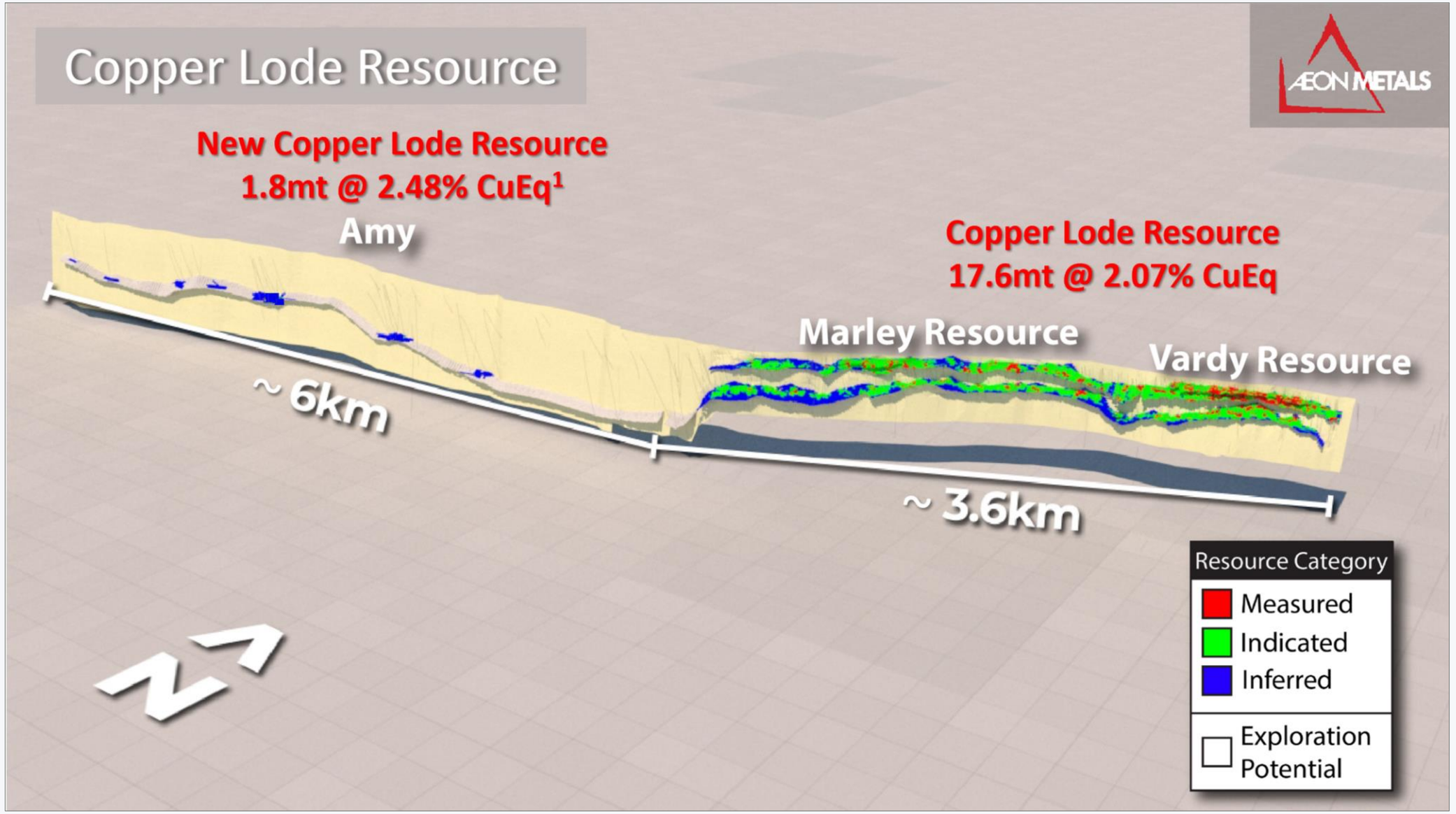
  PLUS

  - **Cobalt Peripheral Resource** containing:
    - **19.8Mt @ 0.10% Cobalt** (also 0.16% Cu, 0.99% Zn, 0.84% Pb and 22g/t Ag)

- Advanced copper and cobalt project:
  - Leading Australian copper development.
  - The highest grade significant cobalt deposit in Australia
- Leveraged to strong growth in cobalt and copper prices

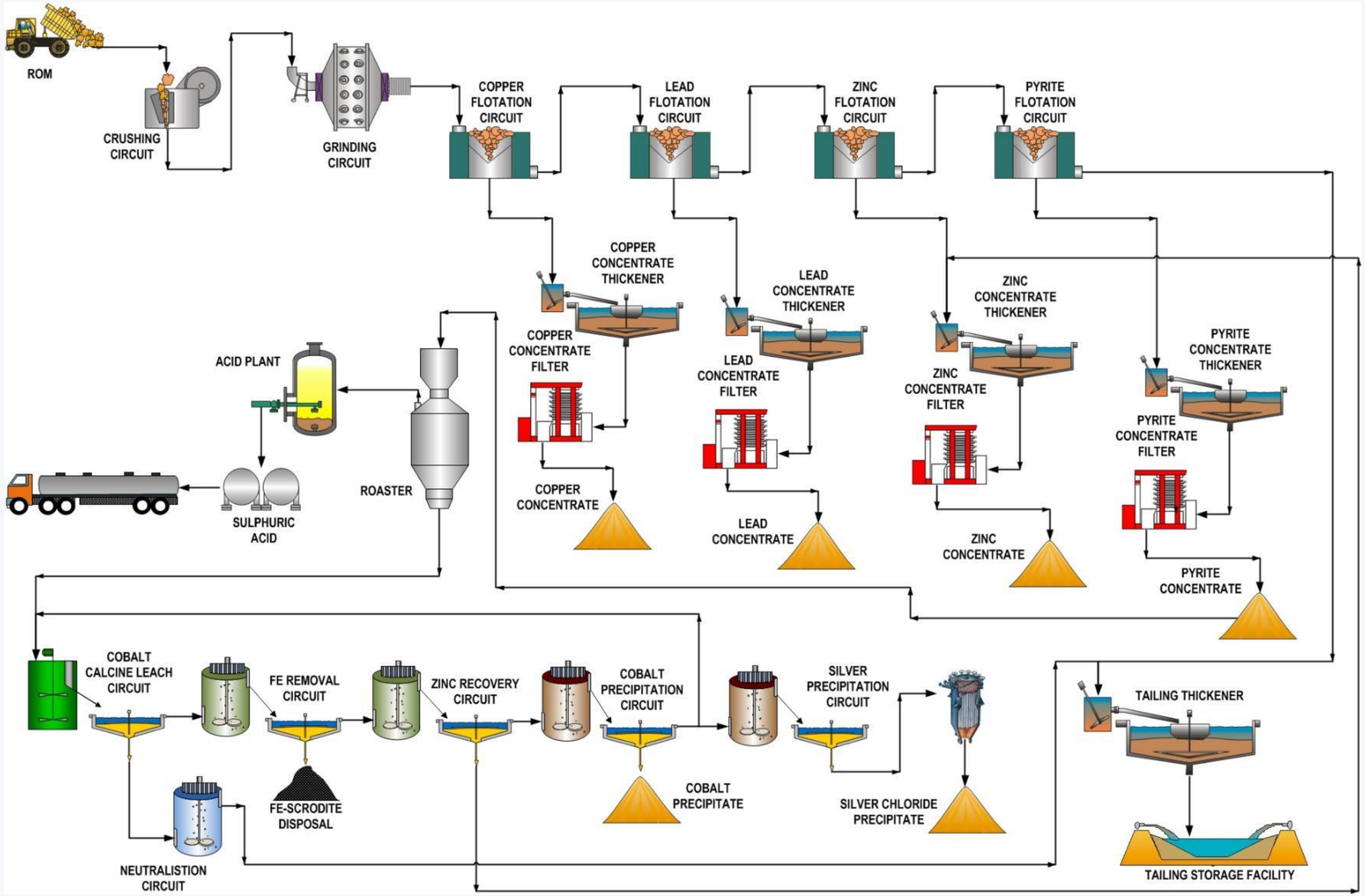
1. See 25 February 2019 ASX announcement for Resource details.

CURRENT RESOURCES (Feb 2019)



2. See Appendix 2 for assay results

METALLURGICAL TESTWORK IN PROGRESS



- Refining metallurgical process parameters set out in the 18 April 2017 Cobalt Roasting Scoping Study:
  - Concentrator – Cu, Pb, Zn conc
  - Roaster – Co & Ag product, Sulphuric Acid
- Metallurgical teswork program designed by engineering consultant Wood plc
- 1.6t material utilized for flotation circuit testwork – near completion:
  - Communition testwork
  - Locked cycle tests
  - Bulk tests
  - Variability tests
  - Thickening and filtration
- 373kg cobalt concentrate sample produced – pilot plant roast in progress at Outotec facility in Frankfurt.

INDICATIVE PROJECT PARAMETERS

- Feasibility items (Mining, Metallurgy, Environmental, Infrastructure/Logistics) in progress utilising first class, respected consultants.
- Indicative Project Parameters based on Roasting Scoping Study[1] utilising 1.25mtpa Run-of-Mine Ore and subject to future modular expansion.
  - Processing Facility – conventional components:
    - Crush/grind -> Float Circuit -> Roast -> Sulphuric Acid Plant
    - Producing (**indicative only** and subject to, amongst others, current testwork programs):
      - ~70ktpa Copper concentrate containing ~ 20kt Copper metal
      - ~3ktpa Cobalt product containing ~2kt Cobalt metal
      - Lead, Zinc and Silver product
      - ~500ktpa Sulphuric Acid
  - Environmental - all long lead items well underway with base line studies implemented over 3yrs ago.
    - On-site weather station
    - Flora & Fauna draft complete
    - Waste rock kinetics underway
    - Water bores currently testing groundwater and aquifer characteristics
    - Dust monitoring ongoing
  - Infrastructure/Logistics:
    - Self generation power (roast/solar)
    - On site water
    - Access – All government gazzeted roads

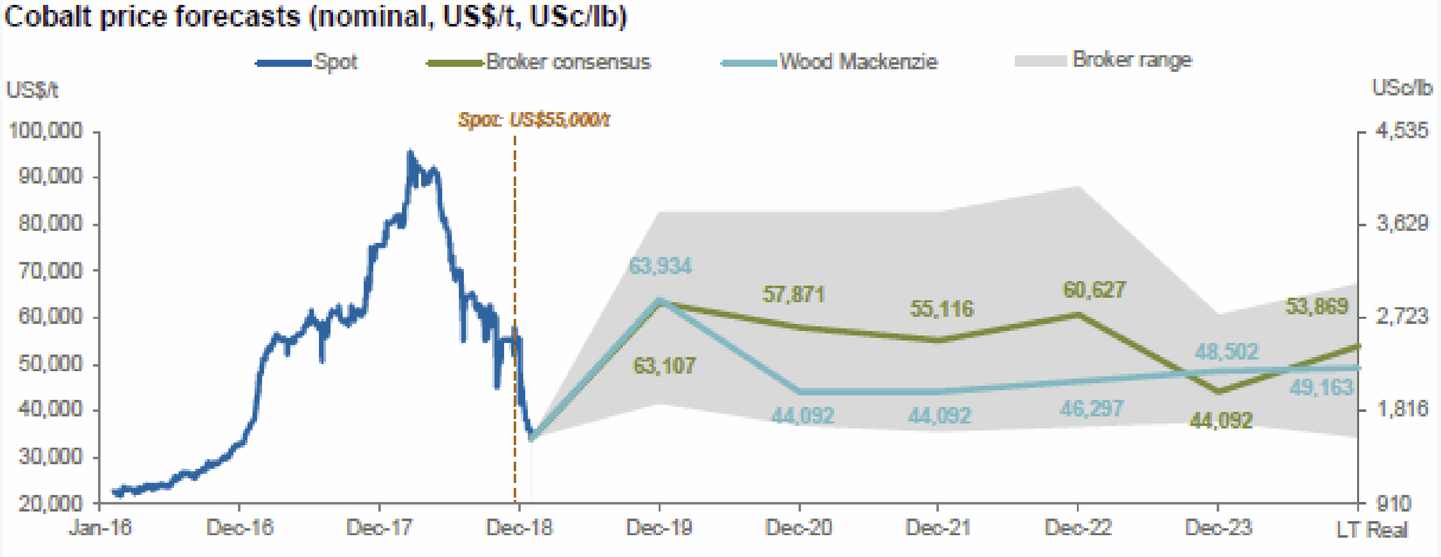
1. See announcement 18 April, 2017.

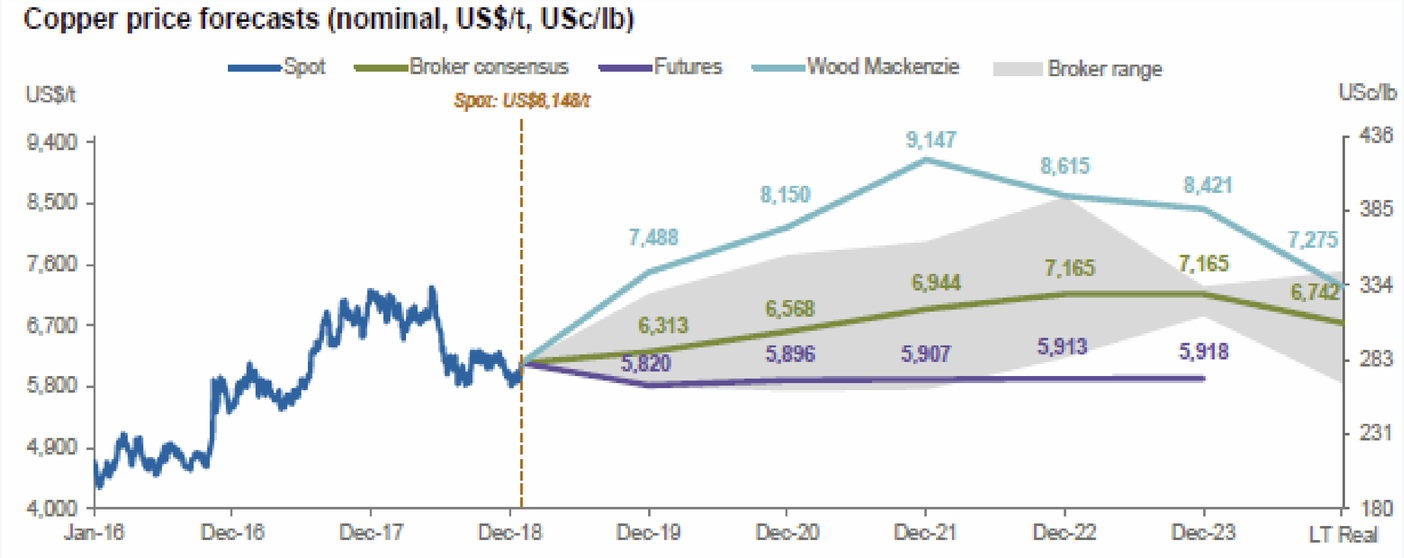
CONCLUSION

- Massive lithium-ion battery growth is here
- Lack of project discovery due to limited exploration expenditure for both copper and coablt. Exploration not working.
- Geology and processing of cobalt vs capital costs – HPAL vs sulphides
- Lack of cobalt projects outside DRC
- Ore to market chain “controlled”. DRC mining – China manufacturing
- EV and “ethical” cobalt to collide.
- Cobalt deficit 2023 - mid term strong and steady from here. Long term (+10yrs)???
- Copper supply/demand simple equation - long term strong.

THANKYOU

Hamish Collins, Managing Director
Email: info@aeonmetals.com.au





Source: JP Morgan