



ARDEA RESOURCES LIMITED

Advancing our Flagship, Multi-Decade
Goongarrie Nickel Cobalt Project
Towards Production

RUI Sydney Resources Round Up
8-10 May 2018

Disclaimer

Important notice

This presentation contains general information only and is, or is based upon, information which has been released to ASX or is contained in the Company's prospectus dated 9 November 2016 (including supplementary prospectuses dated 18 November 2016 and 6 January 2017) and the Goongarrie Nickel Cobalt Project Pre-Feasibility Study (dated 28 March 2018). This presentation is not an invitation, offer or recommendation (express or implied) to apply for or purchase or take any other action in respect of securities and is not a prospectus, product disclosure statement or disclosure document for the purposes of the Corporations Act 2001 (Cth) and has not been lodged with ASIC. None of Ardea Resources Limited (Ardea or the Company) or its representatives are providing or offering investment advice or services by making this presentation.

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The Goongarrie Project has completed the Pre-Feasibility Study phase and has commenced programs that are part of the Definitive Feasibility Study. Though reasonable care has been taken to ensure that the facts are accurate and/or that the opinions expressed are fair and reasonable, no reliance can be placed for any purpose whatsoever on the information contained in this document or on its completeness. Actual results and developments of projects and the market development may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. A key conclusion of the Pre-Feasibility Study, which is based on forward looking statements, is that the Goongarrie Project is considered to have positive economic potential.

No stock exchange, regulation services provider, securities commission or other regulatory authority has approved or disapproved the information contained in this news release.

Application for securities under the Company's public offer can only be made under the prospectus, a copy of which is available from the Company. Investors should consider the prospectus in deciding whether to acquire Ardea shares and will need to complete the application form that accompanies the prospectus.



The Ardea Proposition



*Cobalt sulphate
produced from
Goongarrie ore,
December 2017*

- **Largest Cobalt Resource in the Developed World*** with significant **scandium** optionality
- **Safe, secure supply** – non-conflict alternative to DRC
- Kalgoorlie, Western Australia offers **world-class infrastructure in an established mining hub**
- Recently completed Pre-Feasibility Study outlines a **highly-scalable, long-life production of Cobalt & Nickel**
- PFS conducted on a base-case scenario of 1.0 Mtpa over a 25-year mine life
 - 5,500 tpa cobalt sulphate, 41,500 tpa nickel sulphate
 - Commence production ~2021-2022
- Scoping Studies exploring the potential of an **upside 2.25 Mtpa throughput scenario** are nearing completion
 - Over 8,000 tpa cobalt sulphate, over 70,000 tpa nickel sulphate
- **Definitive Feasibility Study (DFS) programs underway** including >16,000 m infill drilling completed, sampling for metallurgical variability and cobalt and nickel sulphate marketing samples
- **Experienced management team with global experience** with corporate fundraising, processing and engineering for laterite nickel-cobalt deposits, laterite geology and geometallurgy, ensures the right mix to make Goongarrie succeed.
- Strong interest from potential strategic and offtake partners



** Source – SNL Metals and Mining (snl.com)*

Corporate Snapshot

Capital Structure

Shares on Issue (April 30, 2018)	93,146,021
Share Price (9 May 2018)	\$0.89
52 week high / low	\$2.20 / \$0.42
Cash	\$15 million
Market Cap (12 April 2018)	\$95 million
Unlisted Stock	
\$0.25 options (IPO)	12.31 million
\$0.77 options (Loyalty)	15.55 million
Staff performance rights	4.48 million

Citicorp Nominees	13.1%
Josco Pty Ltd	5.6%
Hazurn Pty Ltd	5.5%
BNP Paribas Nominees	4.6%
JP Morgan Nominees	3.4%

Katina Law	Chair
Brett Clark	Managing Director
Ian Buchhorn	Executive Director
Wayne Bramwell	Non-Executive Director
Sam Middlemas	Chief Financial Officer

Sarah Mitchell	GM Technical Services
Matt Painter	GM Gold



Share Price Performance



Share price performance and volume since listing (9 February 2017)



GOONGARRIE NICKEL COBALT PROJECT

WESTERN AUSTRALIA

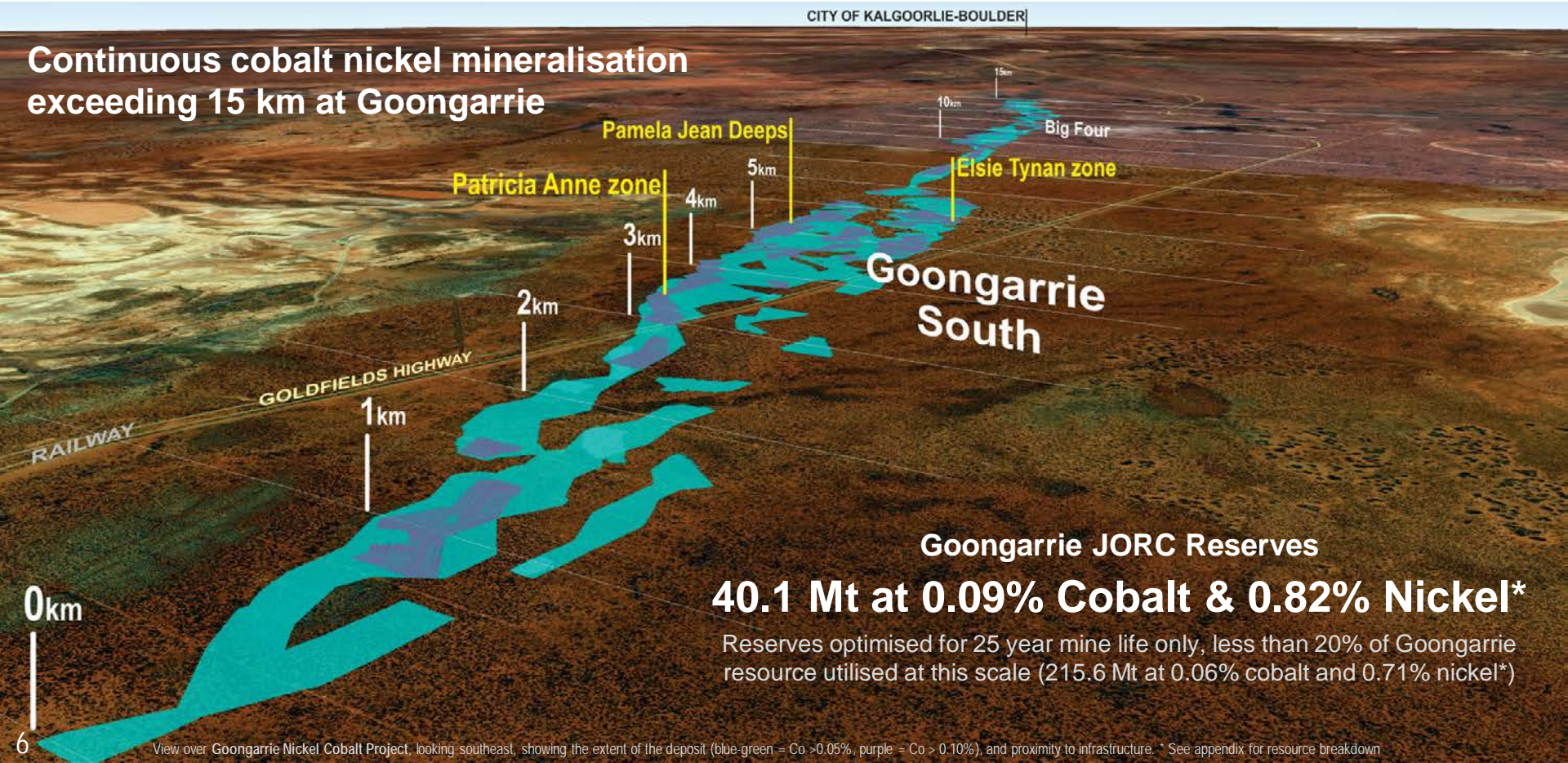
Ardea's flagship is Australia's premier nickel cobalt project



Looking towards the plant site at Goongarrie adjacent to The Goldfields Highway, looking NE

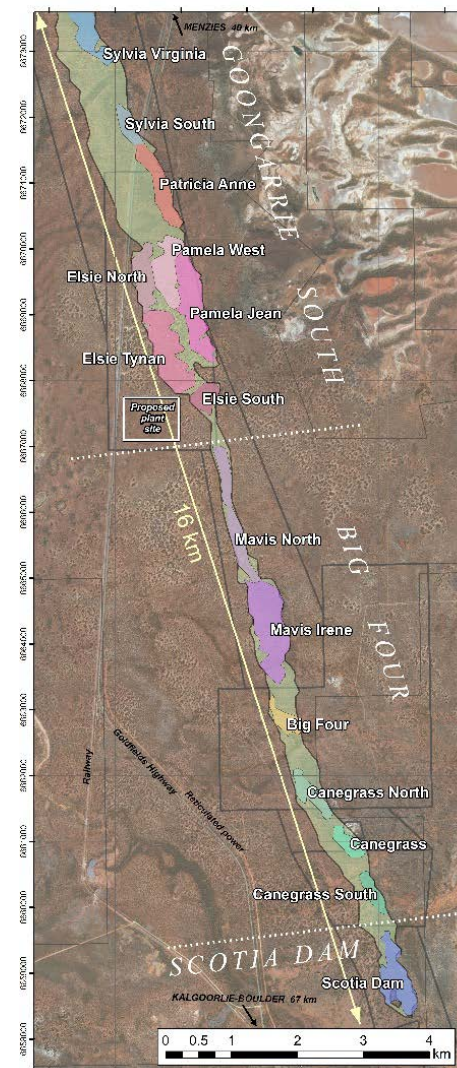
The Flagship Goongarrie Nickel Cobalt Project

Continuous cobalt nickel mineralisation
exceeding 15 km at Goongarrie



The Flagship Goongarrie Nickel Cobalt Project

- The Goongarrie Nickel Cobalt Project is a globally significant, readily scalable project
- Significant potential to provide exceptional returns over a minimum of 25 years
- Ardea holds nickel-cobalt laterite projects covering 1,738 km² near Kalgoorlie, Western Australia
 - Goongarrie makes up 142 km² of this total area
- Prime location on the main highway and railway line 80 km north of Kalgoorlie, adjacent to gas pipelines and power transmission lines
- PFS has been based on only 5% of the Company's total resources – providing significant potential upside future scalability
- Ardea advancing Goongarrie to become a long-term producer of high-quality cobalt and nickel sulphate



* See Appendix for full resource breakdown

Goongarrie - Highly-Scalable, Multi-Decade Project

Outstanding results delivered from recently completed Pre-Feasibility Study*

- 1.0 Mtpa base case over a 25-year mine life
- 95.5% cobalt and 94.5% nickel recovery – life of mine
- Pre-cobalt C1 costs in line with current worldwide operators
- PAL** 5th generation plant, proven design, successfully operated in other laterite projects globally

Upside potential

- Scoping study on 2.25 Mtpa case which can be achieved with a single processing train
- Goongarrie exhibits significant potential for expansion via multiple parallel modular trains
- Additional upside options are currently being assessed and include the following
 - Higher throughput / shorter autoclave residence time
 - Mineralised neutraliser optimisation
 - Scandium by-product optimisation

	1.0 Mtpa (base case)	1.5 Mtpa
Status	PFS	PFS
No. Trains	1	1
Pre Tax NPV₈	US\$ 1.13 billion	US\$ 1.52 billion
Pre Tax IRR	29 %	29 %
CAPEX	US\$ 472 million	US\$ 588 million
C1 cash cost	US\$ 0.42 / lb	US\$ 0.45 / lb
Payback	5.3 years	5.6 years
Cobalt sulphate	5,500 tpa	6,900 tpa
Nickel sulphate	41,500 tpa	55,300 tpa



* Goongarrie Nickel Cobalt Project, PFS study, 28 March 2018, ** PAL = Pressure Acid Leach

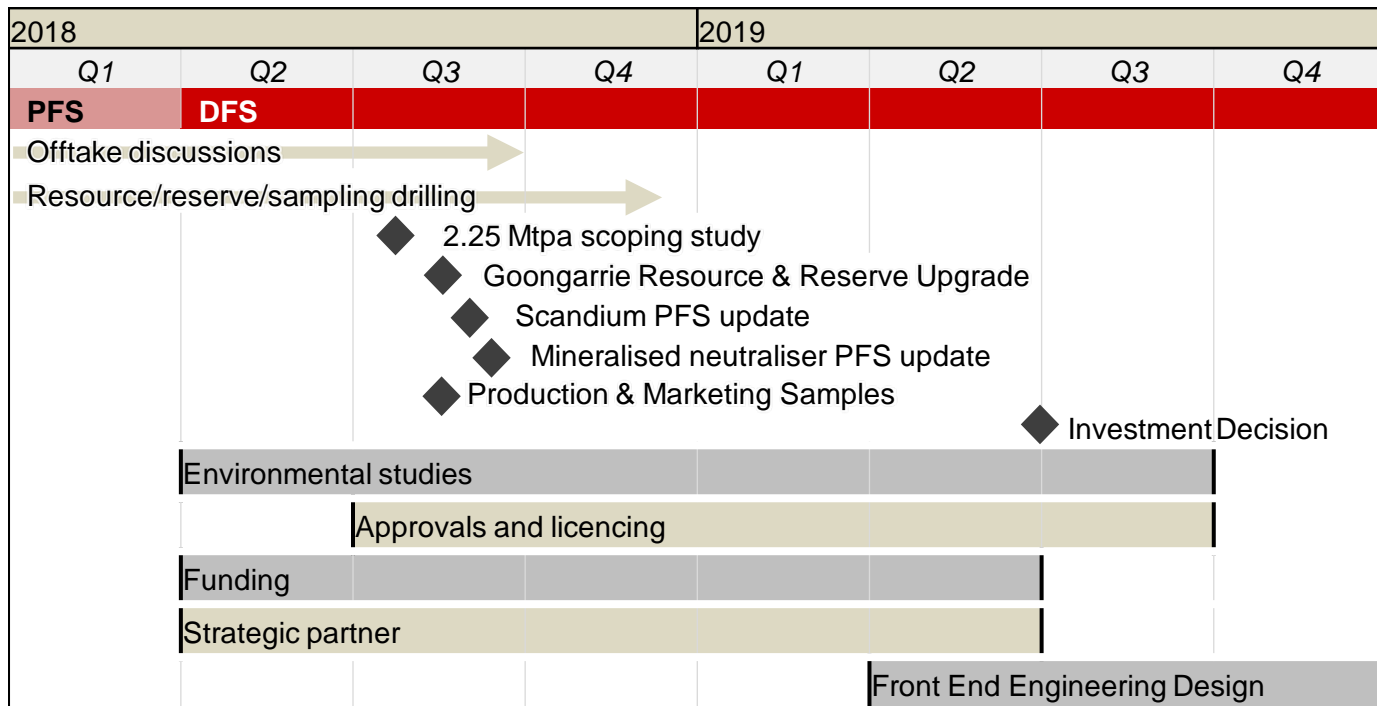
Goongarrie – a Premium Australian Cobalt Project

Investment criteria		ARDEA RESOURCES Goongarrie, WA	AUSTRALIAN MINES Sconi, QLD	CLEANTEQ Sunrise, NSW
<i>Final products</i>		Cobalt sulphate , nickel sulphate , possible scandium oxide		
<i>Mineral Resource</i>	<i>Size</i>	215.6 million tonnes	89 million tonnes	101 million tonnes
	<i>Grade</i>	0.06 % cobalt 0.71 % nickel	0.07 % cobalt 0.58 % nickel	0.13 % cobalt 0.59 % nickel
<i>Expected feed grade (first 20yrs mine life)</i>		0.12% cobalt 1.00% nickel	0.11 % cobalt 0.81 % nickel	0.14 % cobalt 0.80 % nickel
<i>Processing efficiency</i>		95.5 % cobalt 94.5 % nickel	93 % cobalt 93 % nickel	93 % cobalt 94 % nickel
<i>Contained metal</i>		130,700 t cobalt 1,522,700 t nickel	54,000 t cobalt 514,000 t nickel	131,300 t cobalt 595,900 t nickel
<i>Royalties + encumbrances (non-state)</i>		Nil	Nil	2.5% gross revenue (to Ivanhoe Mines)



Rapidly Accelerating the Goongarrie Project

Indicative timeline to move Goongarrie towards production



2020 – commence construction

2021/2022 – mining, commissioning, production

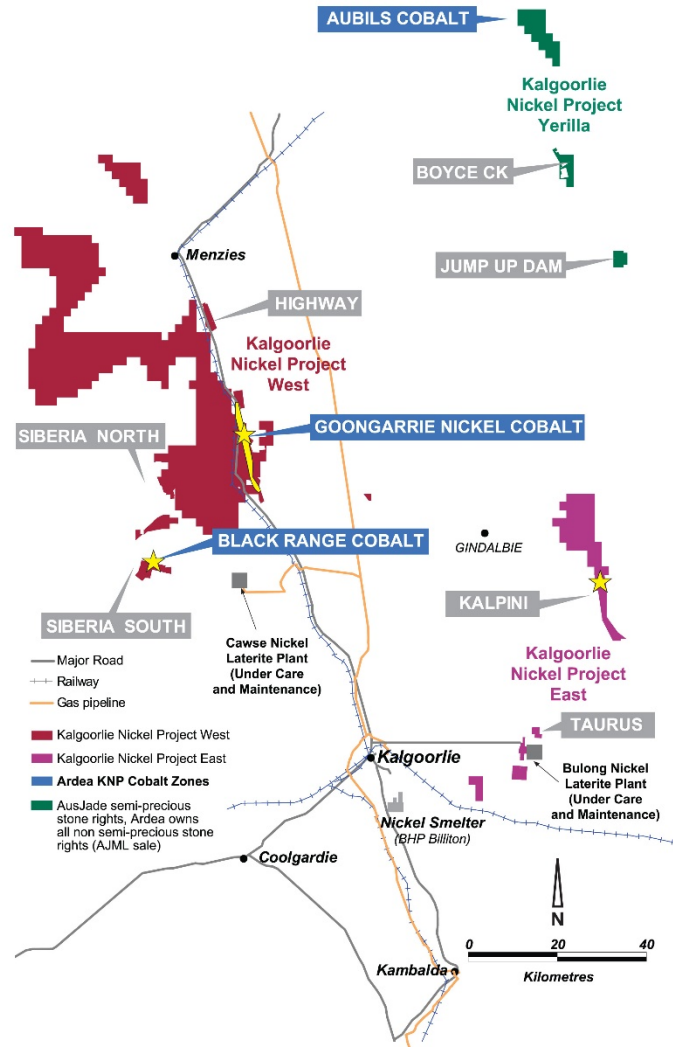
THE BIGGER PICTURE

Ardea's portfolio includes Australia's largest cobalt resource, as well as significant gold and base metal projects



The Bigger Picture

- The Goongarrie Nickel Cobalt Project is part of the broader Kalgoorlie Nickel Project (KNP) which is the **largest cobalt resource in Australia**
- **Goongarrie's PFS reserve represents less than 5% of the Company's nickel-cobalt resources**
 - **773 Mt at 0.05 % Cobalt and 0.70 % Nickel***
- Ardea is adopting a conservative staged development, but significant larger project potential remains
- Ardea will focus on a targeted plan to conduct ongoing work, to prove up the resources at the following deposits:
 - Siberia/Highway/Ghost Rocks
 - Black Range
 - Aubils/Boyce Creek
 - Kalpini
- Other deposits to provide potential feed options for the Goongarrie plant or an additional processing hub
- Other deposits to provide potential feed for 3rd party operators



* See appendix for resource breakdown

Upside Potential of Ardea's Nickel-Cobalt Assets

Investment criteria	Ardea Resources	Australian Mines	CleanTeQ
<i>Company resources</i>	Over 700 million tonnes of cobalt and nickel resources, WA Goongarrie, Black Range, Kalpini, Yerilla, Boyce Creek, Aubils, Siberia, Highway, Ghost Rocks (all within 100km radius)	Sconi QLD (89 Mt), Flemington NSW (2.7 Mt) Thackaringa NSW (nil)	Sunrise NSW (101 Mt)
<i>Metal contained in resources</i>	>400,000 t cobalt >5,600,000 t nickel	57,000 t cobalt 520,000 t nickel	131,300 t cobalt 595,900 t nickel
<i>Market capitalisation</i>	\$95 million	\$230 million	\$772 million
<i>Market cap per cobalt tonne (in resources)</i>	A\$243 / t cobalt	A\$4,035 / t cobalt	A\$5,880 / t cobalt
<i>Market cap per nickel tonne (in resources)</i>	A\$17 / t nickel	A\$442 / t nickel	A\$1,296 / t nickel

Contained cobalt metal in resources



Contained nickel metal in resources



Ardea's Project Portfolio

Nickel-Cobalt Laterites, WA

Goongarrie Nickel Cobalt Project

Other deposits also under assessment:
Black Range, Kalpini, Yerilla, Boyce Creek,
Aubils, Siberia, Highway, Ghost Rocks

Nickel Sulphide Projects, WA

Includes Perrinvale project
(strike extension of St George's
Mt Alexander project)

Bulk Tonnage Gold Projects, WA

Mt Zephyr Greenstone Belt, high-grade
anomalies along Celia Lineament,
Taurus gold project

Porphyry & Epithermal Copper-Gold Projects, NSW

Lachlan Fold Belt, NSW is
Australia's premier address for
porphyry and epithermal
copper-gold projects

Lewis Ponds Zinc-Silver-Gold, NSW

Historic silver-gold-base
metal mine
High-grade resources
Bulk mining option

Bulk Tonnage Gold Projects, NSW

Includes Ophir, Australia's first goldfield

A close-up photograph of a bright green electric vehicle (EV) being charged. A blue and yellow charging cable is plugged into the car's charging port. The background shows a blurred industrial setting, likely a factory or assembly line, with other vehicles and workers visible.

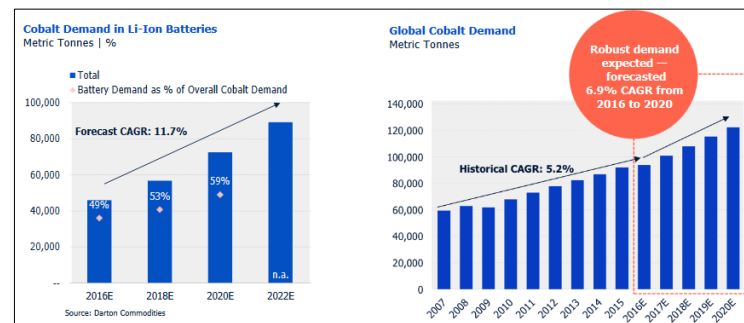
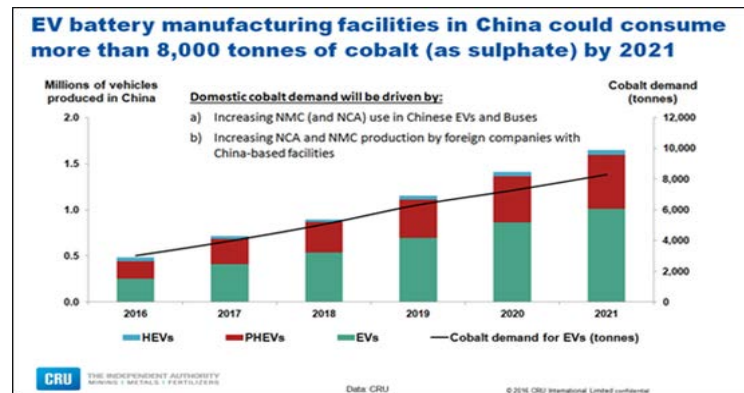
TARGETING THE SULPHATE MARKET

Ardea is positioning itself to supply the lithium ion battery market as the Automotive Electrification Revolution gathers pace



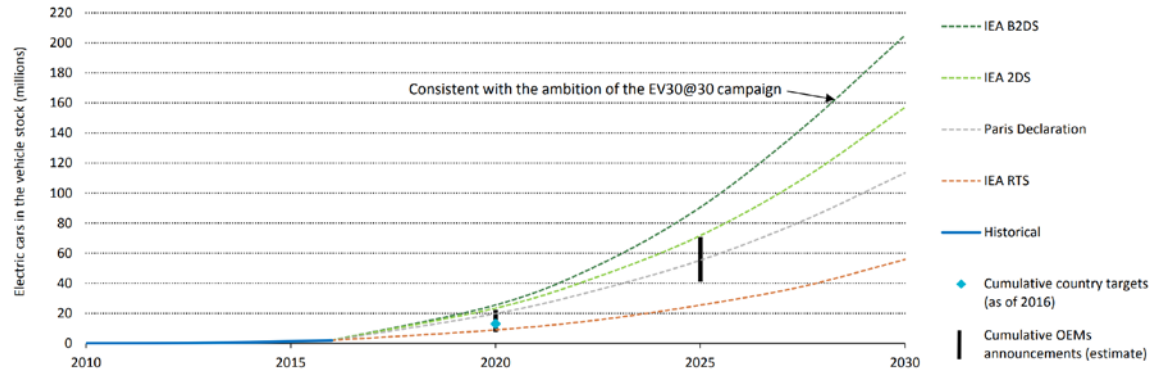
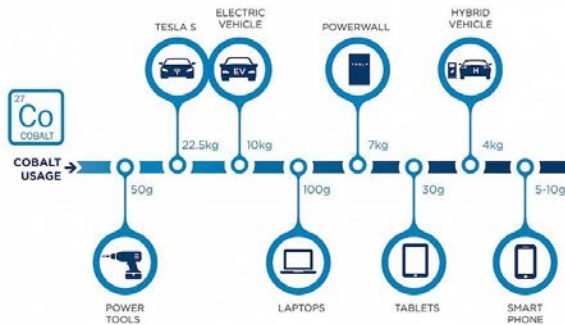
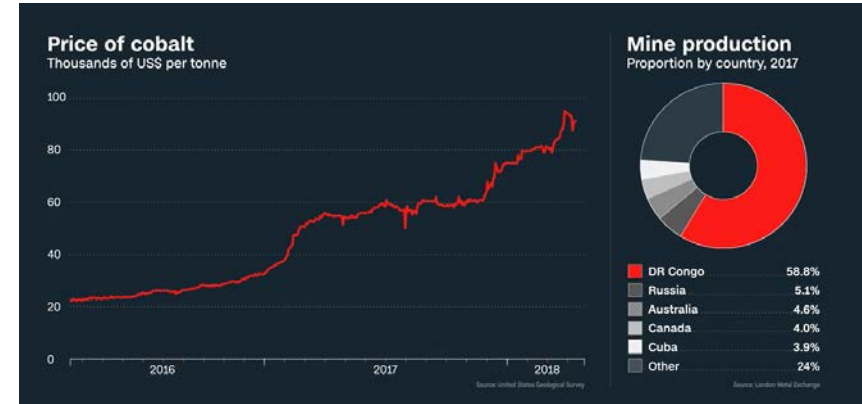
The Growing Momentum in Cobalt

- Cobalt demand continues to grow on the back of the Electric Vehicle and Electric Static Storage battery markets
- Electric Vehicles predicted to account for 14% of all new car sales by 2025
- Cobalt sulphate market forecast to reach US\$9.5 billion by 2025
- Anticipated cobalt sulphate market CAGR of 8% from 2017-2025
- Increased demand for Cobalt sulphate driven by the higher energy density it provides to EV and ESS batteries



The Growing Momentum in Cobalt

- Increasing ethical concerns over supply of cobalt from DRC (~60% of global supply)
- Apple has stopped sourcing cobalt from DRC and has opted to pay a premium for cobalt from regulated industrial mines
- More global manufacturers anticipated to follow Apple in sourcing alternative supply
- Demand for alternative cobalt supplies will drive new mine development and product pricing



Source: International Energy Agency Global EV Outlook 2017

Ardea Will Produce Cobalt and Nickel Sulphates

- Cobalt and nickel are critical components of lithium ion batteries ensuring high energy density and chargeability. Higher cobalt and nickel levels in lithium ion batteries gives Electrified Vehicles greater range and faster recharge times.
 - The battery industry requires the metals specifically as soluble hydrated sulphates to be suitable for the cathode manufacturing process
 - Purity of the sulphate product is key to produce high-quality batteries. PFS bench-scale sulphate production confirms that Ardea has the flowsheet to deliver highest-purity cobalt and nickel sulphate products
 - Lithium ion battery usage expected to increase markedly as Electrified Vehicle demand takes off
- Goongarrie is a limonite laterite deposit. Efficient dissolution in acid, high metal recoveries, and low undesirable elements mean that Goongarrie is particularly amenable to high-purity sulphate production.
- At Goongarrie, an incremental capital cost increase for sulphate circuits is expected to realise substantial revenue benefits



Cobalt Sulphate
(20.97% cobalt)



Nickel Sulphate
(22.33% nickel)

ARDEA RESOURCES – A Compelling Cobalt Story

- The Goongarrie Nickel Cobalt Project is a long-life project, that can deliver high-quality nickel and cobalt sulphate to battery manufacturers, auto manufacturers & metals traders
- 1.0 Mtpa base case PFS demonstrates a low-capital expenditure start-up with robust project economics
- Project scale of Goongarrie is key, scoping study nearly completed for a 2.25 Mtpa throughput operation from a single processing train
- Substantial resource inventory supports multiple trains at Goongarrie, and potential additional hubs at Kalpini or Yerilla
- PFS has only accounted for 5% of the Company's nickel-cobalt laterite resources
- Goongarrie perfectly placed to leverage Electric Vehicle and Electric Static Storage demand growth
- Significant amount of news flow over the coming months





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APPENDICES

APPENDIX – Goongarrie Nickel Cobalt Project Resources

Summary of total mineral resources within the Goongarrie Nickel Cobalt Project area, comprising resources at Goongarrie Hill, Goongarrie South, Big Four, and Scotia Dam (14 March 2018).

Camp	Domains	Cut-off %	Resource category	Size (Mt)	Cobalt (%)	Nickel (%)	Contained metal	
							Co (t)	Ni (t)
Goongarrie Hill	Ni & Co	≥ 0.5% Ni or > 0.08% Co	Inferred	52.5	0.04	0.65	21,600	340,400
			Subtotal	52.5	0.04	0.65	21,600	340,400
Goongarrie South	Ni & Co	≥ 0.5%Ni or > 0.08% Co	Measured	10.3	0.10	0.98	10,200	101,200
			Indicated	56.2	0.07	0.72	37,200	407,000
			Inferred	32.2	0.06	0.69	20,300	221,200
			Subtotal	98.7	0.07	0.74	67,700	729,300
Big Four	Ni & Co	≥ 0.5%Ni or > 0.08% Co	Indicated	45.5	0.06	0.71	28,200	320,700
			Inferred	9.9	0.06	0.63	6,100	61,900
			Subtotal	55.4	0.06	0.69	34,300	382,700
Scotia Dam	Ni & Co	≥ 0.5% Ni or > 0.08% Co	Indicated	3.3	0.09	0.81	3,000	26,900
			Inferred	5.7	0.07	0.76	4,100	43,300
			Subtotal	9.0	0.08	0.78	7,100	70,200
Total	All	≥ 0.5% Ni or > 0.08% Co	Measured	10.3	0.10	0.98	10,200	101,200
			Indicated	105.0	0.07	0.72	68,400	754,600
			Inferred	100.3	0.05	0.67	52,100	666,900
Goongarrie Resource Global			TOTAL	215.6	0.06	0.71	130,700	1,522,700

Note: All nickel and cobalt domains are included, and are encapsulated by an envelope defined by nickel grades equal to or greater than 0.5%. Note that figures are rounded to reflect degree of certainty and may not tally.



APPENDIX – Reserves Defined for Goongarrie Nickel Cobalt Project

Goongarrie Nickel Cobalt Project, Ore Reserves based on 25 year mine life at 1.5 Mtpa.

Deposits	Class	Size (Mt)	Cobalt (%)	Nickel (%)
Goongarrie South	Proven	8.95	0.10%	0.96%
	Probable	17.26	0.09%	0.79%
	Total	26.22	0.10%	0.85%
Big Four	Proven	—	—	—
	Probable	13.92	0.09%	0.77%
	Total	13.92	0.09%	0.77%
TOTAL	Proven	8.95	0.10%	0.96%
	Probable	31.18	0.09%	0.78%
	Total	40.13	0.09%	0.82%

Using a nickel equivalent cut of >0.81 %, which used inputs of A\$18,900/t nickel and A\$120,750/t cobalt. (US\$15,120/t Ni and US\$96,600/t Co, 0.8 exchange rate). Nickel equivalent (Nieq %) = $Ni\ grade + \frac{Co\ grade \times Co\ price}{Ni\ price}$. Prices used are US\$15,120/t for nickel and US\$96,600/t for cobalt. No assumption about recovery is included here. Recoveries are addressed elsewhere throughout the mining schedule and financial model.

APPENDIX – KNP resource breakdown

KNP nickel-cobalt mineral resource (JORC 2012), Ardea Annual Report 2017

Resource Category	Quantity (Mt)	Cobalt (%)	Nickel (%)	Contained cobalt (t)	Contained nickel (t)
Measured	9.6	0.10	1.02	9,700	98,800
Indicated	232.9	0.06	0.75	141,200	1,759,700
Inferred	530.5	0.05	0.68	254,400	3,600,000
KNP Total Resources	773.0	0.05	0.70	405,400	5,458,400

In accordance with the Australian Securities Exchange Limited Listing Rules Appendix 5A:

The information in this report that relates to Mineral Resources for the Highway, Goongarrie Hill, Goongarrie South, Big Four, Aubils and Boyce Creek Prospects is based on information originally compiled in-house and validated by Steve Jones in 2013. Steve Jones is a member of the Australasian Institute of Mining and Metallurgy. Steve Jones is a full time employee of Heron Resources Limited and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the resource estimation activity that 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'. Steve Jones consents to the inclusion in this report of the matters based on his information in the form and context that it appears. Note that Mineral Resources that are not Ore Reserves do not have demonstrated viability.

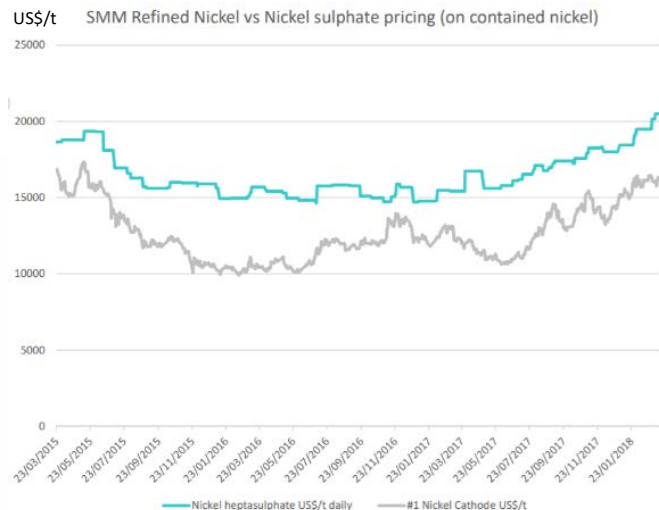
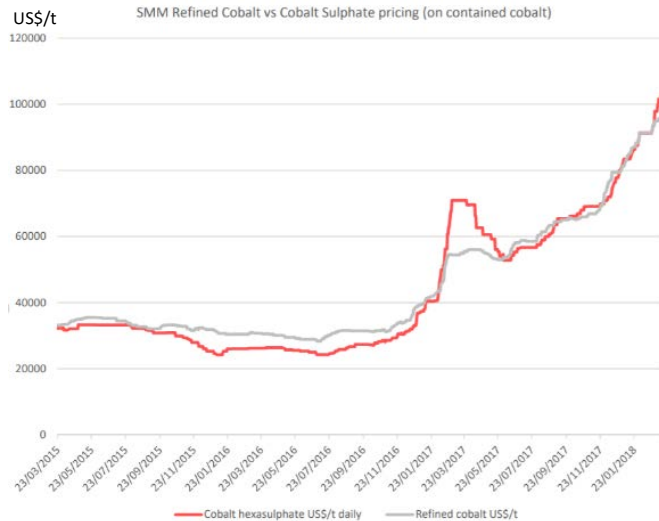
The information in this report that relates to Mineral Resources for the Siberia North, Bulong East, Siberia, Black Range, Taurus and Jump Up Dam Prospects is based on information compiled by Snowden Mining Industry Consultants by members of the Australian Institute of Mining and Metallurgy. Snowden Mining Industry Consultants had sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the resource estimation activity. All resources were internally audited by Snowden and signed off by a person of sufficient experience 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'. Steve Jones validated the Snowden Mining Siberia North estimate in 2013. Note that Mineral Resources that are not Ore Reserves do not have demonstrated viability.

APPENDIX – The Sulphate Markets

- Strong growth in sulphate pricing is expected with rapidly increasing demand for high-purity product from manufacturers globally. Increased battery production is required to power the Automotive Electrification Revolution
- Cobalt sulphate and nickel sulphate attract a price premium (based on contained metal)
 - Cobalt sulphate – 5% premium**
 - Nickel sulphate – 30% premium**
- East Asia is the major consumer, manufacturing most of the world's lithium ion batteries – ongoing discussions with a number of interested parties from this region.
- Sulphate market is strong with spot prices increasing substantially since PFS release

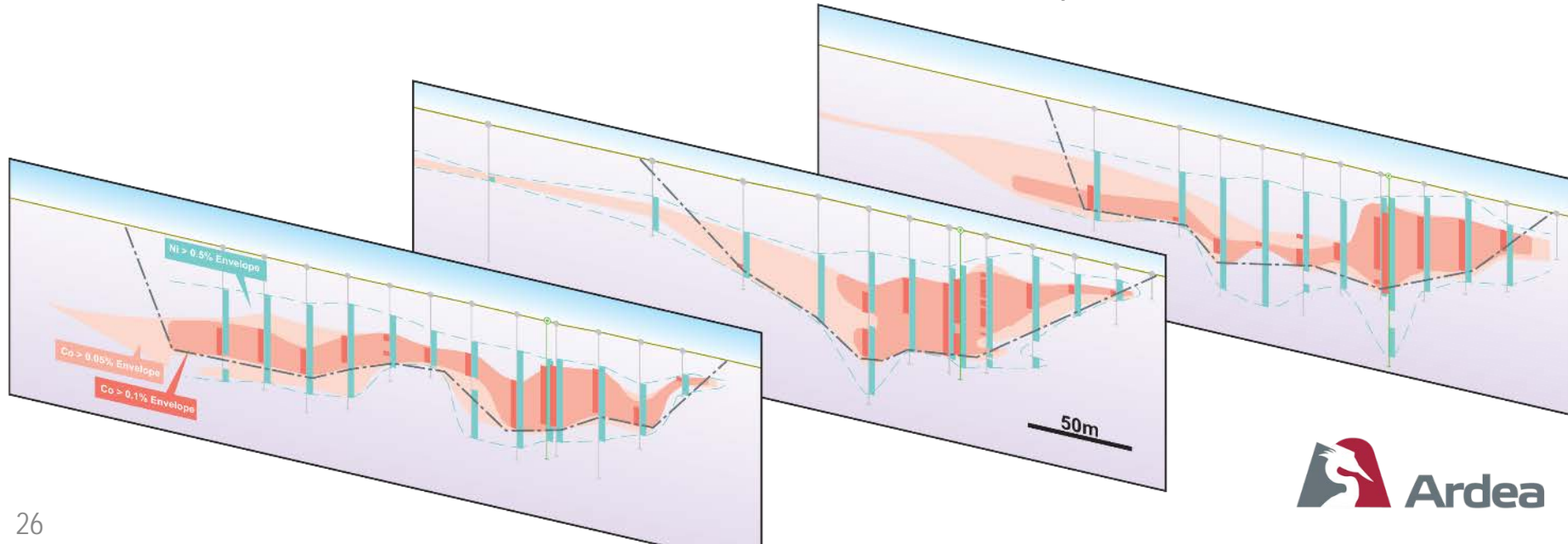
		Price date	Units	CNY / t	USD / t	USD / lb
Cobalt sulphate (contains 20.97% cobalt)	PFS	Feb 2018 (avg)	Sulphate	¥121,600	\$19,241	\$8.73
			Contained metal equiv.		\$91,771	\$41.63
	Spot	4 Apr 2018	Sulphate	¥142,000	\$22,469	\$10.19
			Contained metal equiv.		\$107,167	\$48.61
Nickel sulphate (contains 22.33% nickel)	PFS	Feb 2018 (avg)	Sulphate	¥27,500	\$4,351	\$1.97
			Contained metal equiv.		\$19,486	\$8.84
	Spot	4 Apr 2018	Sulphate	¥28,500	\$4,510	\$2.05
			Contained metal equiv.		\$21,509	\$9.76

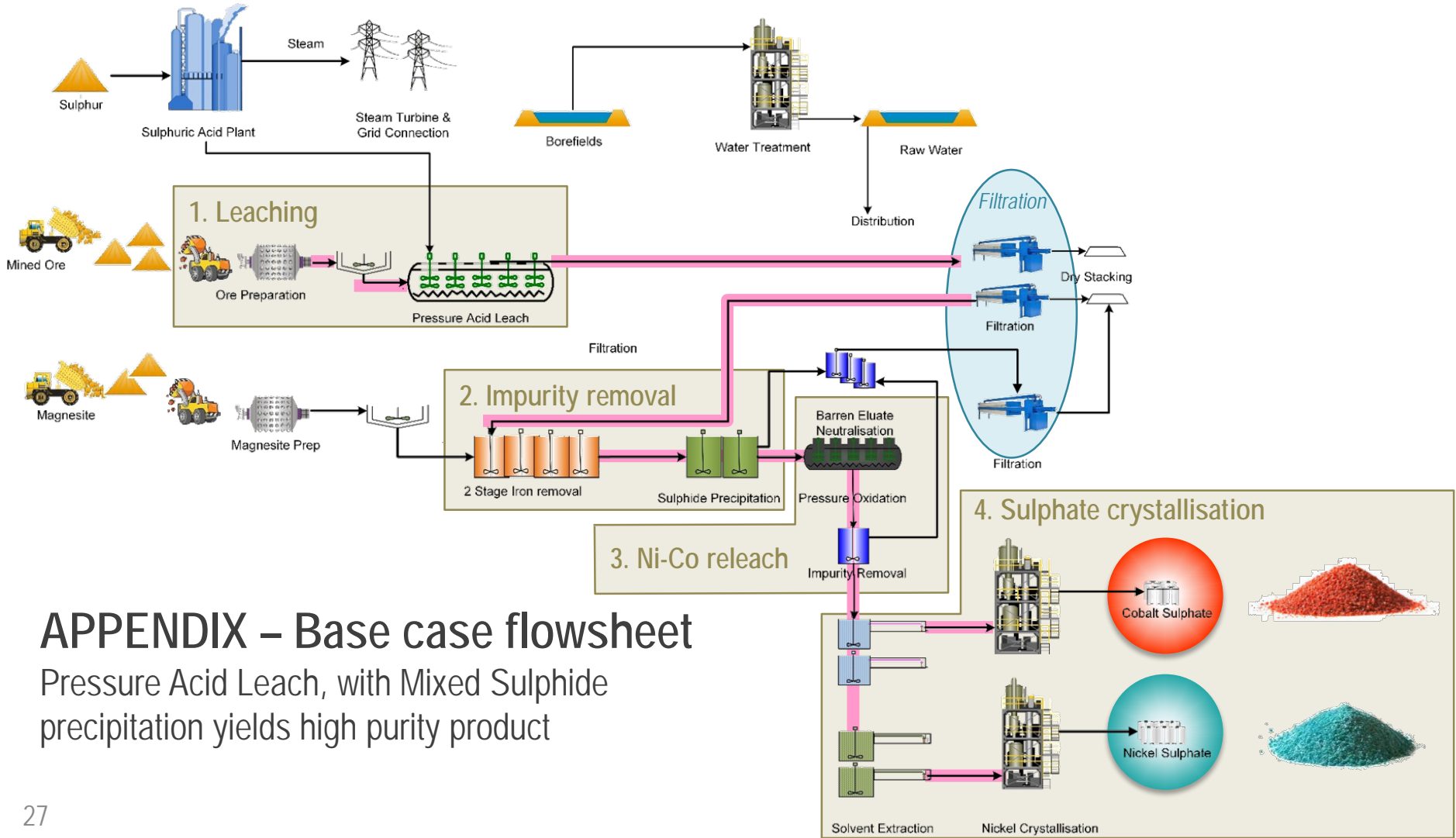
All pricing data sourced from SMM (Shanghai Metals Markets – metals.com)
CNY USD exchange rate USD:CNY \$1.00 equals ¥6.32



APPENDIX – Simple Open Pit Mining

- Very uniform mineralisation grades and mineralogy, well suited to open pit mining
- Scheduled pits within 60 m of surface
- Soft, free-digging open-pit mining
- Low strip ratio





APPENDIX – Base case flowsheet
 Pressure Acid Leach, with Mixed Sulphide precipitation yields high purity product



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