

### **Cautionary statement**



Certain statements in this presentation constitute "forward-looking statements" or "forward-looking information" within the meaning of applicable securities laws. Such statements involve known and unknown risks, uncertainties and other factors, which may cause actual results, performance or achievements of Clean TeQ Holdings Limited (the "Company" or "Clean TeQ"), the Clean TeQ Sunrise Project ("Sunrise", the "Project" or the "Sunrise Project"), or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Such statements can be identified by the use of words such as "may", "would", "wull", "intend", "expect", "believe", "plan", "anticipate", "estimate", "scheduled", "forecast", "predict" and other similar terminology, or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. These statements reflect the Company's current expectations regarding future events, performance and results, and speak only as of the date of this presentation.

Statements in this presentation that constitute forward-looking statements or information include, but are not limited to: statements regarding the negotiation and conclusion of further offtake agreements; the settlement of completion of a term sheet from the MLA group prior to the FID; the potential investment by a strategic investor and/or additional financing; completing of final design and detailed engineering work; making a Final Investment Decision; statements relating to the timing of commencement and/or completion of construction of the Clean TeQ Sunrise Project, commissioning, first production and ramp up; and the potential for a scandium market to develop and increase.

In addition, all disclosure in this presentation related to the results of the Sunrise Project's Definitive Feasibility Study (the "DFS") announced on June 25, 2018, constitute forward-looking statements and forward-looking information. The forward-looking statements includes metal price assumptions, cash flow forecasts, projected capital and operating costs, metal recoveries, mine life and production rates, and the financial results of the DFS. These include statements regarding the Sunrise Project IRR; the Project's NPV (as well as all other before and after taxation NPV calculations); life of mine revenue; average annual EBITDA; capital cost; average C1 operating cash costs before and after by-product credits; proposed mining plans and methods, the negotiation and execution of offtake agreements, a mine life estimate; project payback period; the expected number of people to be employed at the Project during both construction and operations and the availability and development of water, electricity and other infrastructure for the Sunrise Project, as well as the indicative project schedule.

Readers are cautioned that actual results may vary from those presented.

All such forward-looking information and statements are based on certain assumptions and analyses made by Clean TeQ's management in light of their experience and perception of historical trends, current conditions and expected future developments, as well as other factors management believe are appropriate in the circumstances. These statements, however, are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information or statements including, but not limited to, unexpected changes in laws, rules or regulations, or their enforcement by applicable authorities; changes in investor demand; the results of negotiations with project financiers; the failure of parties to contracts to perform as agreed; changes in commodity prices; unexpected failure or inadequacy of infrastructure, or delays in the development of infrastructure, and the failure of exploration programs or other studies to deliver anticipated results or results that would justify and support continued studies, development or operations. Other important factors that could cause actual results to differ from these forward-looking statements also include those described under the heading "Risk Factors" in the Company's most recently filed Annual Information Form available under its profile on SEDAR at <a href="https://www.sedar.com">www.sedar.com</a>.

Readers are cautioned not to place undue reliance on forward-looking information or statements.

Although the forward-looking statements contained in this presentation are based upon what management of the Company believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as of the date of this presentation and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the Company does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this presentation.

### Our vision is to empower the clean revolution



### Critical raw materials for electric vehicles and energy storage

- Advancing development of the Clean TeQ Sunrise nickel, cobalt and scandium project in NSW, Australia
- Clean TeQ Sunrise will produce critical raw materials for the rapidly growing lithium-ion battery industry
- One of the largest nickel and cobalt deposits outside of Africa
- Definitive Feasibility Study completed, demonstrates a highly economic project with outstanding technical foundations
- Engineering and design underway with construction expected to commence in 2019





### Electric vehicles around the corner



China's CATL, Honda plan to cooperate on EV battery

John Deere premiers electric tractor in action

12 Dec 2018, Electrive

development

BYD all-electric trucks and vans coming to Europe

After Major VW Order 9 Jan 2019, Bloomberg

5 Feb 2019, Reuters

31 Jan 2019. Electrive

Panasonic eyes upstream investments to secure battery raw materials

5 Feb 2019, S&P Global

Škoda preparing for electric launch with €2 billion

7 Feb 2019, Electrive

Shell snaps up Greenlots to accelerate electric vehicle charging networks across North America 31 Jan 2019. VentureBeat

Ford says carmakers may need to invest in cobalt mines soon

SK Innovation Eyes \$10 Billion Battery Bet

5 Feb 2019, Mining.com

Volvo Trucks teases upcoming new allelectric semi truck

12 Dec 2018, Electrek

China's CATL plans battery cell production of 60 GWh from 2026 at German plant

23 Jan 2019. Reuters

# An All-Electric Ford F-150 Pickup Truck Is Happening

17 Jan 2019, Car and Driver

Toyota, Panasonic announce battery venture to expand electric vehicle push

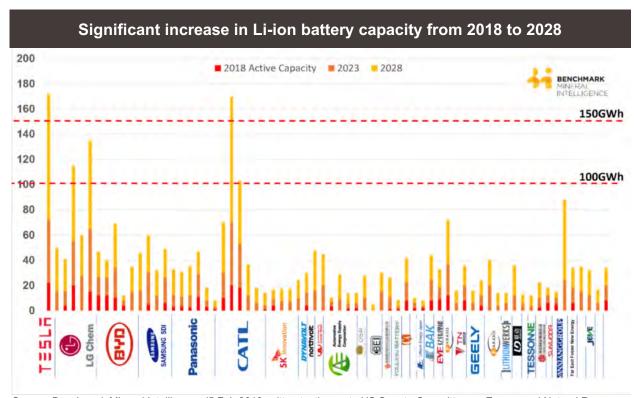
Daimler is buying over \$20 billion in battery cells to support electric vehicle plans

11 Dec 2018, Electrek

22 Jan 2019, The Globe and Mail

## Megafactories being built now





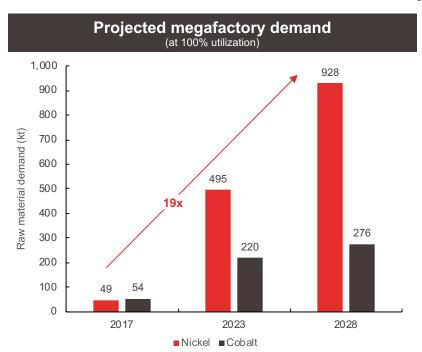
- Benchmark Mineral Intelligence is tracking 70 megafactories currently under construction
  - 46 based in China
  - In October 2017, only 17 under construction
- Megafactories will make Li-ion batteries with two specific chemistries
  - NCM (nickel-cobalt-manganese)
  - NCA (nickel-cobalt-aluminium)
- Significant impact for four critical raw materials: lithium, nickel, cobalt and graphite

Source: Benchmark Mineral Intelligence (5 Feb 2019 written testimony to US Senate Committee on Energy and Natural Resources Committee)

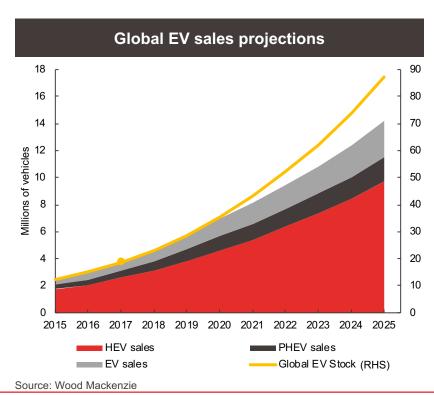
# Supply of battery raw materials will be challenged



#### New sources of nickel and cobalt are required



Source: Benchmark Mineral Intelligence (5 Feb 2019 written testimony to US Senate Committee on Energy and Natural Resources Committee)



# Largest demand pull from China



### Emissions controls legislation driving the agenda

- The shift to New Energy Vehicles (NEV) is here!
  - NEV mandate is effective in 2019
- Credit based system targeting: 10% EV (2019), 12% (2020)
- EV subsidies based on vehicle range:
  - ¥50,000 (~US\$7,400) for EV range ≥ 400 km

#### **BYD Yuan EV360**



Price

Battery Power Range

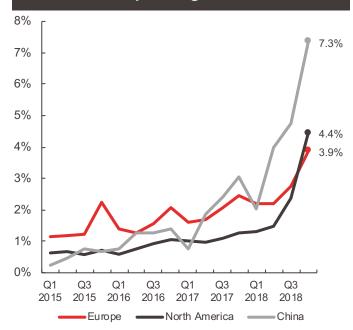
Features

42 kWh
160 kW
305 km
In-car wifi, auto air
conditioning, cruise
control, multi-function
steering wheel,
leather seats, smart
charging and
scheduled charging, 8
airbags, tire pressure

US\$12,500 (after subsidies)

detection, ESP

#### EV vs. total passenger vehicle sales



Source: China Association of Automotive Manufacturers, Bloomberg NEF

### Nickel sulphate capacity needs to grow



- Electric vehicles are heavy consumers of nickel sulphate irrespective of battery chemistry
- Next generation lithium ion batteries will be more nickel intensive
- Less than 50% of current global nickel production is suitable for battery applications (Class I nickel)
- Lack of new Class 1<sup>1</sup> sulphate developments are leading to a sustained sulphate premium over LME nickel price



<sup>\*</sup> Refer to endnotes.

#### Significant nickel supply growth needed – Vale

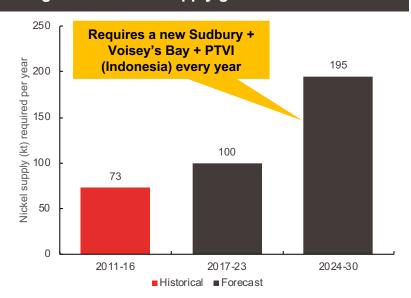


Chart source: Vale Day 2018 presentation (6 December 2018, slide 62). Historical data source: Wood Mackenzie.

Forecast data source: Vale analysis built on Wood Mackenzie, CRU, public announcements, academic papers and conversations with downstream producers.

# Cobalt supply is highly constrained



- Majority of global cobalt sourced from DRC presenting major supply risk for end users
  - Security of supply
  - Auditability of supply chain
- 95% of production comes as a by-product of copper or nickel production
  - Higher cobalt price doesn't necessarily incentivise new cobalt production
- Political, legal and regulatory challenges in DRC



#### **Cobalt Production – Global Rankings**

MINE	COUNTRY	2017 ESTIMATED TONNES
Mutanda	DRC	24,500
Tenke Fungurume	DRC	16,400
Katanga	DRC	11,000
Huayou Cobalt	DRC	6,300
Norilsk	Russia	4,900
Clean TeQ Sunrise*	Australia	~ 4,620 p.a. (years 2 – 6 post ramp up)
Ruashi	DRC	4,600
Moa Bay	Cuba	3,600
Big Hill	DRC	3,600
BOSS Mining	DRC	3,300
Vale	New Caledonia	3,200
Murrin Murrin	Australia	2,800
Taganito	Philippines	2,800
Artisinal	DRC	More than 20,000

Source: Public data, Darton Cobalt Market Review 2017, Clean TeQ estimates \*Average annual production based on 2018 Definitive Feasibility Study

### Scandium for a new generation of lightweight alloys



- Sunrise is one of the world's largest and highest grade scandium resources
- Scandium is used to provide next generation lightweight aluminium alloys for key transportation markets
- Clean TeQ continues to promote the use and development of new scandium alloys with industry participants including Airbus and Chinalco
- Current development plan is to extract scandium oxide as a by-product of cobalt and nickel sulphate production
- Marginal cost of production expected to be very low (approx. US\$150/kg²)

#### Airbus Group's Light-rider



The world's first 3D printed electric bike aluminium-scandium frame makes it lighter and stronger

The bike weighs 35kg, contains a 6kWh battery, has a top speed of 80km/h and a range of 60km

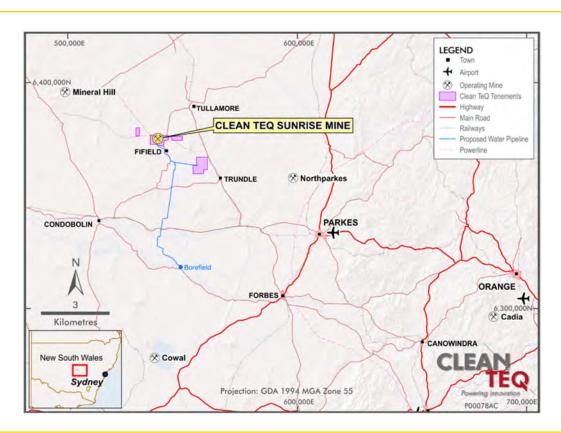
<sup>\*</sup> Refer to endnotes.



## Advanced development project in Central NSW



- 100% owned by Clean TeQ
- Laterite (iron-hosted) mineral resource, rich in nickel, cobalt and scandium
- One of the largest and highest grade sources of cobalt outside Africa
- Located 350 km west of Sydney in an established mining region
- Significant infrastructure in place including sealed road to site
- Fully permitted and development ready



### **Primary drivers to success**



#### Mineralogy

- Near surface deposit with maximum depth of 40 metres
- High cobalt grades relative to other laterite deposits<sup>3</sup>
- Very low in acid consuming elements (magnesium and calcium<sup>4</sup>)

#### **Flowsheet**

- Clean iX® continuous ion exchange technology provides lowest cost path to batteryready products
- Production of final cobalt and nickel sulphates onsite

#### Location

- Fully auditable, non-DRC supply
- Access to rail, road, power and water infrastructure
- Supportive local community in established mining area

<sup>\*</sup> Refer to endnotes.

# Fully permitted and development ready



✓ STUDIES	Definitive Feasibility Study completed in June 2018
✓ PERMITS	Approved 2.5 Mtpa project from NSW Government
✓ WATER	Secured 3.2 GLpa water allocation
✓ INFRASTRUCTURE	Road and rail access in place
✓ POWER	Power and gas in close proximity
✓ PILOT PLANT	Successful pilot plant operation demonstrated process flowsheet
✓ MAIDEN OFFTAKE	Secured initial offtake agreement with Beijing Easpring
✓ MINING LEASES	Mining Leases granted
✓ CAPABILITY	Strong technical team with track record of delivery
✓ PREPARING FOR CONSTRUCTION	Engineering underway with MCC – our project delivery partner

# 2018 Definitive Feasibility Study



### Outstanding economic and technical outcomes

#### STRONG ANNUAL PRODUCTIONS

Nickel: 19,620 tonnes per annum Cobalt: 4,420 tonnes per annum Average over first 10 years



# EXCELLENT PROJECT ECONOMICS

NPV of US\$1.39 billion



#### **40+ YEAR MINE LIFE**

supported by mineral Reserve



## PRODUCTION OF HIGH PURITY BATTERY GRADE MATERIALS

- Nickel Sulphate
- Cobalt Sulphate

**PLUS** Scandium Oxide for automotive & aerospace applications



#### **EXCEPTIONAL CASH FLOWS**

Life of Mine Revenue: +US\$14 billion LOM EBITDA: ~US\$8.60 billion Average EBITDA: US\$344 million per annum



#### CAPITAL COST ESTIMATE

US\$1.49 billion including \$165 million contingency



# FIRST QUARTILE OPERATING COSTS

Negative US\$1.46/lb Ni after by-product credits<sup>7</sup>





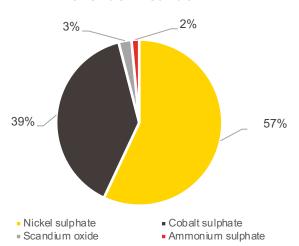
<sup>\*</sup> Refer to endnotes.

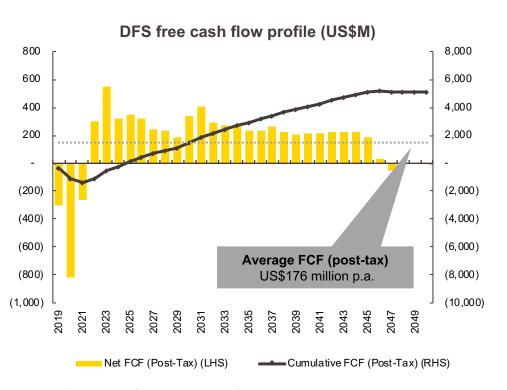
# Strong free cash flow generation



- Clean TeQ Sunrise is forecast to deliver:
  - US\$14 billion in revenue<sup>8</sup>
  - LOM EBITDA of US\$8.6 billion
  - Average annual EBITDA of US\$344 million

#### Revenue Breakdown





<sup>\*</sup> Refer to endnotes. DFS assumes commodity prices of US\$8/lb Ni (including sulphate premia), US\$30/lb Co, US\$1,500/kg Sc and US\$90/t ammonium sulphate.

# Competitive operating cost position



	US\$/Ib Ni before credits	US\$/Ib Ni after credits
Mining	\$1.14	\$1.14
Processing	\$3.33	\$3.33
Haulage & port	\$0.07	\$0.07
General & administration	\$0.14	\$0.14
Cobalt credits		(\$5.60)
Scandium credits (assumes sales capped at 10 tpa)		(\$0.36)
Ammonium sulphate credits		(\$0.18)
Total C1 <sup>9</sup> cash operating cost	\$4.68	(\$1.46)



Source: Wood Mackenzie. Assumed cobalt price for 2025 for the purposes of this chart is US\$19/lb in real 2017 US\$.

<sup>\*</sup> Refer to endnotes.

# Significant community and social benefits



- Strong community benefits over life of mine including:
  - Long-term employment
  - Significant infrastructure upgrades
  - Increased tax revenue
  - Government royalties payable



# STEADY STATE OPERATIONS WORKFORCE

**300** people (excluding mining contractors and ancillary services)



#### CORPORATE TAX

~A\$2.2 Billion over life of mine



# EMPLOYEE SALARIES AND WAGES

~A\$1.9 Billion (including staff and contractors)



# STATE ROYALTIES AND PAYROLL TAX

~A\$630 million over life of mine



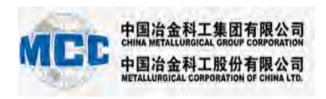


# Project engineering & design underway



#### MCC selected as a key project delivery partner

- Fixed-price EPC contract with MCC
  - Covering engineering, procurement and on-site construction for process plant scope
- MCC built, own and operate Ramu nickel-cobalt mine in Papua **New Guinea**
- Front-end-engineering and Design (FEED) contract signed with MCC
- Integration of engineering teams and handover of project data complete
  - FEED now underway
- Early works are progressing with engineering of the water pipeline





### Comprehensive project financing package



#### Project debt, strategic partnership & offtake

- Mandated Lead Arranger (MLA) group for project debt facility
  - Industrial Commercial Bank of China (ICBC), National Australia Bank, Societe General and Natixis
- US\$500 million indicative debt commitments received prior to syndication
- Extensive due-diligence is ongoing by a range of parties considering product offtake and project level investment
- Product samples provided to various participants including:
  - OEMs
  - Cathode manufacturers
  - Battery manufacturers
  - Integrated trading houses
- Initial offtake agreement signed with Beijing Easpring
  - Easpring is a leading producer of cathode materials in China













- Binding 5-year offtake agreement for 20% of Ni and Co sulphate
- Transparent pricing mechanism LME/LMB Price + sulphate premia (negotiated quarterly)
- Offtake will convert to LOM supply with project level investment

## Our key project partners



#### Well-aligned for successful project delivery



#### **Debt financing**

ICBC appointed to the Mandated Lead Arranger (MLA) group for project debt financing in November 2017



#### **Project delivery**

Heads of Agreement signed with MCC in August 2018 for an EPC contract to engineer and construct Clean TeQ Sunrise. FEED contract signed.



#### **Offtake**

Binding five-year offtake agreement for 20% of cobalt and nickel sulphate production signed with Beijing Easpring



#### **Product end-use**

Landmark agreement with Chinalco and Chongqing University for the development and adoption of scandium alloys in the global transport industry



# **Corporate overview**



Capital Structure				
ASX/TSX code	CLQ			
Ordinary shares <sup>1</sup>	746.3M			
Unlisted options <sup>1</sup>	12.8M			
Performance rights <sup>1</sup>	8.3M			
Cash at bank (31 December 2018)	\$117.4M			
Market capitalisation <sup>2</sup> (undiluted)	\$261.2M			

Major Shareholders <sup>3</sup>		
Robert Friedland	12.9%	
Pengxin International	12.4%	
FMR LLC	6.9%	
AustralianSuper	6.3%	
Board/Management <sup>4</sup>	~7%	

<sup>1.</sup> As at 31 December 2018

<sup>2.</sup> Based on CLQ share price of \$A0.35

<sup>3.</sup> Approximate balances at 29 January 2019

<sup>4.</sup> Excludes options and performance rights

### Competent and qualified persons consents



The information in this presentation that relates to Mineral Resources is based on information compiled by Mr Lynn Widenbar, a member of the Australasian Institute of Mining and Metallurgy. Mr Widenbar is a full-time employee of Widenbar and Associates. Mr Widenbar is a consultant to Clean TeQ and has sufficient experience which is relevant to the style of mineralisation and type of deposit and to the activity which he has undertaken 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". Mr Widenbar consents to the inclusion in this presentation of the matters based on their information in the form and context in which it appears.

The sections in this presentation that relate to the Clean TeQ Sunrise Ore Reserves are based on information compiled by; Mr Luke Cox, Mr Tim Harrison and Mr Lee White. Mr Cox is a full-time employee of Clean TeQ. Mr Harrison is a full-time employee of Clean TeQ and holds shares and options in the company. Mr White is employed by Kalem Group Pty Ltd and is engaged as an internal consultant to Clean TeQ.

Mr Cox, Mr Harrison and Mr White are all Members of the Australasian Institute of Mining and Metallurgy and each have sufficient experience relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the JORC Code 2012.

The qualified persons who are responsible for the disclosures regarding the DFS in this presentation are Mr Lynn Widenbar, a member of the Australasian Institute of Mining and a member of the Australian Institute of Geoscientists (AIG) (for the Mineral Resource) and Mr Tim Harrison MAusIMM (CP Met) for the disclosures other than the Mineral Resource. Mr Harrison and Mr Widenbar are both Qualified Persons under the terms of NI 43-101. Mr Widenbar is a full-time employee of Widenbar and Associates and is independent of Clean TeQ. Mr Harrison is Clean TeQ's Principal Metallurgist and is not independent of Clean TeQ. Mr Harrison and Mr Widenbar (for the Mineral Resource only) supervised the preparation of the DFS and have reviewed and approved the scientific and technical information in this news release, including information relating to the DFS. Mr Harrison has also verified the technical data disclosed in this presentation.

For further details on the content of this presentation, please refer to the ASX releases on the Company's website.

CleanTeq has prepared a current, independent, NI 43-101-compliant technical report for the Sunrise Project titled ""Sunrise Nickel Cobalt Project, New South Wales, Australia NI 43-101 Technical Report" dated effective 25 June 2018 and which is filed at <a href="www.sedar.com">www.sedar.com</a> and available on the company's website at <a href="www.cleanteq.com">www.cleanteq.com</a>. The technical report was prepared by SRK Consulting (Australia) Pty Ltd. The technical report includes relevant information regarding the effective dates and the assumptions, parameters and methods of the mineral resource and reserve estimates on Sunrise Project, as well as information regarding data verification, exploration procedures and other matters relevant to the scientific and technical disclosure contained in this presentation in respect of the Sunrise Project."

#### **Endnotes**



- 1. Class 1 Nickel refers to products with a nickel content of 99% or more, including electrolytic nickel, pellets briguettes, granules, rondelles, and powder/flakes.
- 2. Estimated marginal cost of production per kilogram refined scandium oxide based on 10 tonne per annum production.
- 3. Based on publicly disclosed information.
- 4. Extensive metallurgical test work has demonstrated very low acid consumption (250-280 kg/tonne HPAL feed) relative to publicly disclosed consumption rates of other nickel laterite projects, which range from 340-500 kg/tonne.
- 5. Full information regarding the Definitive Feasibility Study is contained in the technical report titled "Sunrise Nickel Cobalt Project, New South Wales, Australia NI 43-101 Technical Report" dated 25 June 2018 and filed at www.sedar.com and available on the company's website at www.cleanteq.com
- 6. Net Present Value (NPV) is calculated at 8% discount rate, real, 100% equity basis.
- 7. By-product credits include cobalt, scandium and ammonium sulphate.
- 8. Projected revenue and EBITDA assumes commodity prices: nickel US\$8/lb (including sulphate premia), cobalt US\$30/lb, scandium US\$1,500/kg, ammonium sulphate US\$90/t.
- 9. C1 Cash cost of nickel produced (per lb) is the sum of production costs, net of capital expenditure development costs and by-product credits, divided by the nickel pounds produced. C1 cash costs reported by the Company include mining, processing, haulage and port expenses. By-product credits are calculated based on expected sales (net of mining and processing costs) of cobalt, scandium oxide and ammonium sulphate divided by the total pounds of nickel, using the assumed sales prices of US\$30/lb for cobalt, US\$1,500/kg for scandium and US\$90/tonne for ammonium sulphate. C1 cash cost of nickel produced per pound is a non-IFRS measure used by the Company to manage and evaluate operating performance of the Company's operating mining unit, and is widely reported in the mining industry as benchmarks for performance, but does not have a standardized meaning and is disclosed in addition to IFRS measures.

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