5 October, 2016

Syerston Nickel & Cobalt Pre-Feasibility Study Completed

PFS demonstrates the potential for Syerston to become a leading global supplier of nickel and cobalt sulphate to the lithium-ion battery industry

Scandium by-product credits provide potential for significant economic upside

Clean TeQ Holdings Limited (**ASX: CLQ**) announces the results of the Syerston Nickel & Cobalt Project (**Project**) Pre-Feasibility Study (**PFS**).

Highlights:

- **Project flow sheet designed to produce high purity nickel sulphate and cobalt sulphate products specifically targeted at the fast-growing lithium ion battery (LiB) market**
- **Non-binding offtake MOUs already in place with key LiB industry customers – discussions ongoing in relation to offtake contracts**
- **The PFS assessed the economics of an operation to process 2.5Mtpa ore over an initial 20-year period with existing Reserves available for up to 19-years of additional mine life**
- **Average annual production of 18,730tpa of contained nickel metal equivalent and 3,222tpa of contained cobalt metal equivalent in years 3-20**
- **Post-tax NPV_8 of US$891M (A$1,187M[1]) and 25% post-tax IRR, assuming long term average nickel and cobalt price forecasts of US$7.50/lb and US$12.00/lb respectively – sulphate product premiums represent further upside pricing opportunity**
- **Inclusion of scandium oxide (Sc_2O_3) by-product production (50tpa at US$1,500/kg) increases the post-tax NPV to US$1,233M (A$1,645M) and the post-tax IRR to 30%**
- **Capital cost of US$680 million (A$906 million) including US$62M (10%) contingency**

[1] AUD/USD 0.75 exchange rate applied for the life of mine

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- **Average C1 operating cash cost in years 3-20 of US$2.96/lb nickel, US$0.89/lb nickel after cobalt by-product credits or negative US$0.76/lb nickel after cobalt and scandium by-product credits**
- **Project a catalyst for significant regional investment and employment opportunities in central New South Wales, with peak construction workforce estimated at 850 people, and steady-state operational workforce at 335 people**
- **Key work programmes, infrastructure and permits already in place - Project located adjacent to existing road and rail line; water allocation secured; EIS approved; and Development Consent for a 2.5 Mtpa operation previously granted**
- **Bankable Feasibility Study underway to progress engineering and design and confirm Project economics**

Noting the results of the PFS, Co-Chairman of the Company, Robert Friedland, said: "*The coming decades will see enormous technological disruption in global energy storage and transportation markets. But this technology revolution is interdependent – it requires the rapid development of new and reliable raw material supply chains to service these fast-growing markets. At its heart, Syerston's unique mineral resource, when combined with Clean TeQ's proprietary ion exchange extraction and purification processing platform, has the potential to service a significant portion of global demand for cathode raw material into the lithium-ion battery industry, as well as providing scandium for the next generation of light-weight aluminum alloys for transportation markets.*"

Clean TeQ's CEO, Sam Riggall, also commented: "*The PFS has demonstrated the potential for an extremely robust project, producing metals at a scale, and in a form, that are becoming increasingly critical in energy and transport supply chains. Market interest in the Project has been very strong, and we look forward to progressively de-risking the development plan and working with potential customers and strategic partners in these supply chains.*"

1 PFS Parameters

The PFS assessed the economics of a mine with a designed throughput capacity of 2.5Mtpa of autoclave ore feed from Syerston's near-surface resource for life of mine and, focusing on an initial 20-year period.

Table 1 below provides a summary of the key parameters used in the evaluation of the Project. All dollar figures quoted herein are A$ unless otherwise indicated:

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Table 1: Syerston Project Summary Table – Base Case

Parameter		Assumption / Output
Autoclave Throughput		**2.5Mtpa** [1]
Life of Mine		**39 years**
Initial operating period		**20 years**
Autoclave Feed Grade [2] (Year 3-20 average)	*Nickel*	**0.80%**
	Cobalt	**0.14%**
Production (Years 3-20 average)	*Nickel sulphate*	**85,135tpa**
	Cobalt sulphate	**15,343tpa**
Production (Years 3-20 average)	*Contained nickel*	**18,730tpa**
	Contained cobalt	**3,222tpa**
Recovery (Years 3-20 average)	*Nickel*	**94.2%**
	Cobalt	**93.0%**
Nickel price assumption [3]		**US$7.50/lb**
Cobalt price assumption [3]		**US$12.00/lb**
Exchange Rate		**AUD/USD 0.75**
Total Capital Cost [4]		**US$680M (A$906M)**
C1 Cash Cost (Year 3-20 average) [5]	*before Co credits*	**US$2.96/lb Ni**
	after Co credits	**US$0.89/lb Ni**
Net Present Value (NPV_8) – post tax[6]		**US$891M**
Internal Rate of Return (IRR) – post tax		**25%**

1 Designed processing throughput rate following a 24-month commissioning and ramp up period.
2 Includes pit selection, dilution and mining factors
3 Based on bank/broker long-term consensus market pricing for metal content only. Does not include premiums that are typically paid in the market for battery-grade nickel and cobalt sulphate
4 Includes a US$62M (A$83M) contingency on capital costs
5 C1 cash cost excludes potential by-product revenue from scandium oxide sales and royalties
6 Post tax, 8% discount, 100% equity, real terms

The large scale nickel & cobalt resource assessed through the PFS also hosts significant quantities of scandium. However, given the scandium market is still developing, the PFS Base Case assumes no scandium revenue. In order to demonstrate the significant upside potential that exists from producing scandium oxide as a by-product of nickel and cobalt production, the Company has prepared an Upside Case which includes the capital and operating cost and revenue impact of scandium production. The Upside Case analysis, which includes the impact of sales of 50 tonnes per annum of scandium oxide, is presented in Section 7.2.

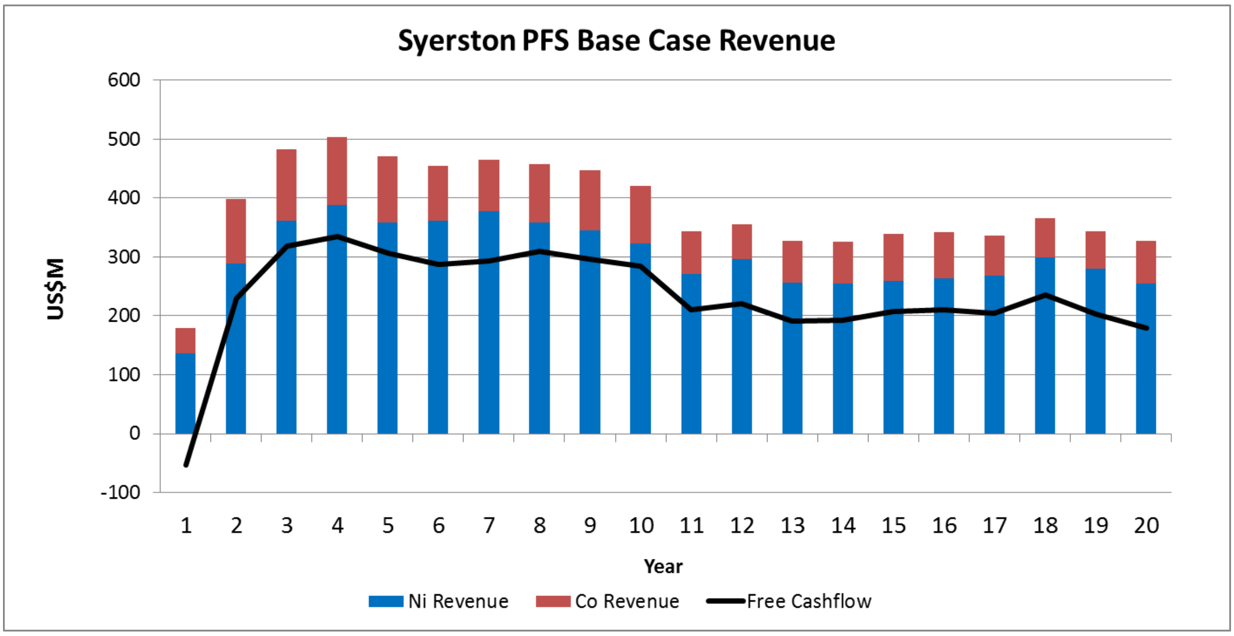

Figure 1: PFS Base Case revenue - excludes sulphate premium and scandium by-product revenue

The plant and infrastructure construction timeframe is estimated to be 3 years. A 24-month commissioning and ramp up period has been allowed with design throughput and production capacity forecast to be achieved at the beginning of year 3. Figure 1 shows the estimated revenue and free cashflow over the initial 20 years of the Project. Financial modelling indicates that the Project will achieve sustainable positive cash-flow during the 4th quarter of the 24-month commissioning and ramp up period.

The nickel industry is primarily set up to produce nickel metal for the stainless steel industry. Nickel metal (and its intermediate forms) is typically reprocessed to produce nickel sulphate products for nickel plating and other chemical applications. In the case of lithium-ion batteries, nickel sulphate is used to produce the precursors used in the production of battery cathode. Due to the additional cost of reprocessing metal to produce sulphate – which typically involves the re-leaching of metal units and precipitation of sulphate compounds – nickel sulphate has typically traded at a premium. While the premium may vary depending on product specifications, market conditions and individual supply arrangements, indications are that the premium has, over recent years, traded in a range of between US$0.50-2.50 per lb of contained nickel over and above the LME price.

The cobalt industry is primarily set up to produce chemicals (rather than metal) for use in a range of applications, including for the production of cathode precursors for lithium ion batteries. As such, while cobalt sulphate sometimes attracts a premium over the LMB cobalt metal price, the premium, if it exists, has in recent years been relatively low.

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The PFS adopted a long term nickel price assumption of US$7.50/lb and long term cobalt price assumption of US$12.00/lb. These prices are consistent with market consensus prices for nickel and cobalt based on long terms forecasts from a range of banks, brokers and research houses. Due to the variability in nickel and cobalt sulphate premiums, the Company has adopted a conservative approach and assumed zero premiums for both sulphate products in the PFS. This represents an opportunity for upside around pricing outcomes.

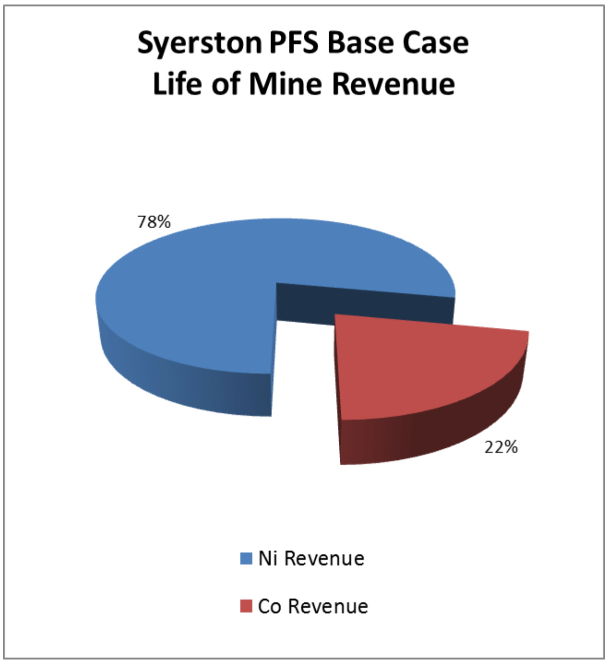

Figure 2: PFS Base Case Project life revenue split

The PFS has been developed on a Measured, Indicated and Inferred resource, completed by McDonald Speijers Pty Ltd (**McDonald Speijers**), based on over 1,300 drill holes (for further detail see ASX announcement dated 20 September 2016).

The PFS was developed, in large part, based on two previous feasibility studies completed by SNC-Lavalin (**SNCL**) for the previous owners of the Project. This provided a very detailed basis for mine planning, infrastructure and process plant design and operation, as well as tailings design.

The previous feasibility studies assumed a flow sheet incorporating high pressure acid leach (**HPAL**) followed by counter-current decantation (**CCD**) for solid liquid separation with sulphide precipitation to produce a relatively low value mixed nickel/cobalt sulphide for on-sale to a third party refinery. Clean TeQ has replaced the CCD and sulphide precipitation circuits with the Company's resin-in-pulp (**RIP**) process to extract and recover nickel and cobalt as sulphates. The use of RIP simplifies the purification process to produce high purity, high value, separate nickel and cobalt sulphate products. In addition to lower capital costs as a result of removing the CCD and sulphide precipitation circuits, the RIP provides a direct processing route for the production of sulphate products at the mine site.

The use of a RIP circuit for recovery of scandium was also assessed based on the extensive test work and technical studies recently undertaken by Clean TeQ as part of the dedicated Scandium Project Feasibility Study. However, the Base Case Nickel & Cobalt Project assessed for the PFS assumes zero scandium revenue, so the PFS Base Case also excludes the capital and operating costs associated with the scandium recovery and refining circuit. The impact of including scandium as a by-product was assessed as a separate Upside Case. See Section 7.2 below for further details.

SNCL undertook a high level process and economic review of the previous feasibility study assumptions in order to validate the design in line with recent nickel and cobalt operations, as well as confirming the reasonableness of escalation factors on key capital and operating metrics, including labour and materials.

SNCL has extensive experience with HPAL design and construction, as well as a detailed understanding of the metallurgical aspects of Syerston through the two previous feasibility studies completed by SNCL for the Project.

Extensive laboratory testing and piloting on Syerston material was completed by the previous owners between 1999 and 2005. The laboratory test work undertaken for the PFS therefore focused on validating the process assumptions for the nickel and cobalt RIP circuit. This test work was undertaken with ALS Metallurgy in Perth and internally at Clean TeQ's laboratory in Melbourne, utilising material taken from site.

Financial modelling and analysis was performed internally by Clean TeQ.

2 Nickel & Cobalt Resource Estimate and Ore Reserves

McDonald Speijers completed an update of the Nickel and Cobalt Mineral Resource Estimate for the Syerston Project in accordance with the guidelines of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (**JORC Code**), 2012 Edition.

Table 2 below provides a summary of the Mineral Resource Estimate. Further information can be found in our ASX announcement dated 20 September 2016.

Table 2: Syerston Nickel & Cobalt Mineral Resource Estimate, 0.60% NiEQ cut off

Classification Category	Million Tonnes	Ni %	Co %	Ni Tonnes	Co Tonnes
Measured	52	0.73	0.11	380,000	57,000
Indicated	49	0.58	0.10	280,000	49,000
Meas + Ind	**101**	**0.65**	**0.10**	**660,000**	**106,000**
Inferred	8	0.54	0.10	50,000	8,000
Total	**109**	**0.65**	**0.10**	**700,000**	**114,000**

Notes: Any apparent arithmetic discrepancies are due to rounding; NiEQ = nickel equivalent

The Mineral Resource Estimate, undertaken by McDonald Speijers, comprises an update to a resource estimate made by them in 2005 for Ivanplats Syerston Pty Ltd (**Ivanplats**) which also incorporates some additional drilling results obtained since then. The 2005 estimate followed programmes of infill drilling conducted by Ivanplats subsequent to a resource estimate published by Black Range Minerals Limited in 1999.

Syerston is an iron-rich nickel laterite deposit with higher than normal levels of associated cobalt and local elevated platinum values. The bulk of the nickel/cobalt resource occurs in an area measuring about 3,000m local grid north-south by 3,500m east-west. The top of the main mineralised zones occurs at depths ranging from zero to about 25m below surface and they are typically about 5m to 25m in thickness.

The economic factors determined as part of the Pre-Feasibility Study were used by Inmett Projects (**Inmett**) to estimate Proved and Probable Ore Reserves for the Project. The Ore Reserves are presented in Table 3 below.

Table 3: Syerston Nickel and Cobalt Ore Reserves

Classification Category	Tonnage, kt	Ni Grade, %	Co Grade, %
Proved	54,930	0.71	0.10
Probable	41,263	0.58	0.10
Total	**96,193**	**0.65**	**0.10**

** Ore Reserve is reported as Autoclave Feed tonnes.*

3 Mining

The Syerston mineralisation is shallow, allowing for simple open-pit mining activities with minimal dilution. The PFS assumed that mining will be undertaken by conventional open pit methods, utilising excavators coupled with trucks. The ore is friable and is amenable to free digging by excavators with no blasting required. The shallower depth material was treated as waste due to the limited assays.

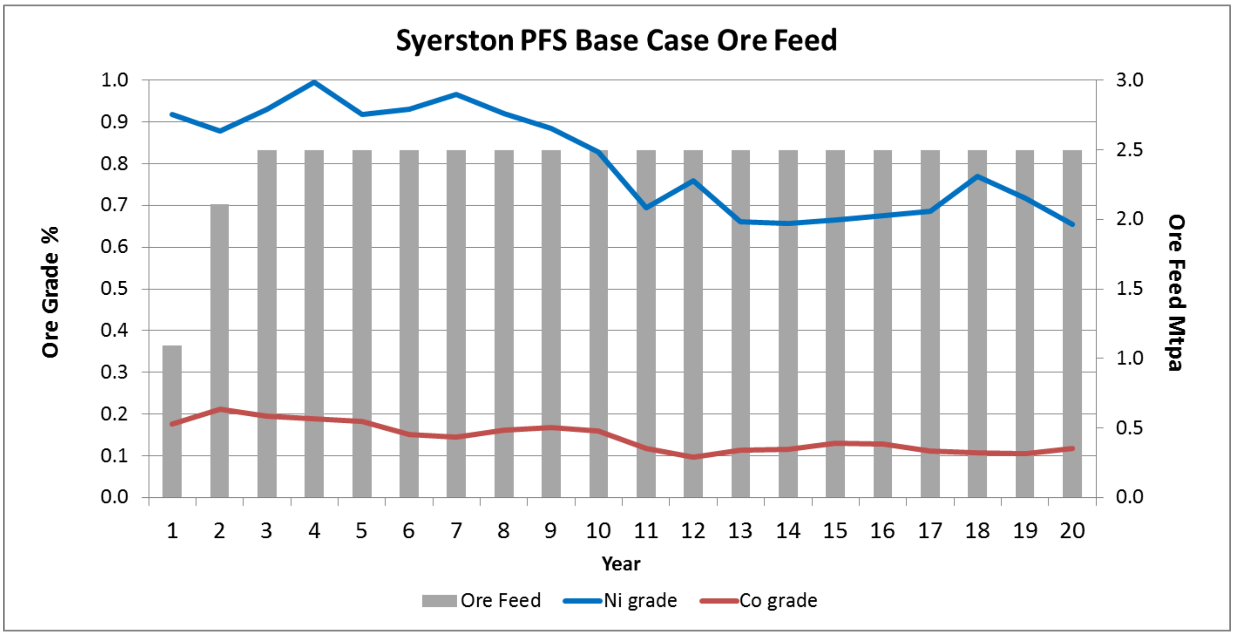

Figure 3: PFS Base Case autoclave ore feed tonnes and grades

The average strip ratio (waste:ore) of the Project is 0.8:1, i.e. there is more ore than waste. Mining studies were carried out by OreWin Pty Ltd (**OreWin**) to determine the optimal mining sequence over the Life of Mine. The autoclave ore feed tonnes and grades over the initial 20 year project life are shown in Figure 3 above.

4 Metallurgy & Processing

The two previous owners completed extensive metallurgical piloting for nickel and cobalt, including variability testing of the different lithologies. This has provided a solid basis to establish the design criteria for the Project. Laboratory scale test-work for nickel and cobalt recovery via RIP was also completed as a part of this study. Clean TeQ has also been able to draw on the extensive metallurgical testing and piloting which was undertaken to develop the scandium recovery flow sheet as part of the dedicated scandium project feasibility study completed in August 2016. Laboratory work was also completed as a part of the PFS to validate the recovery of scandium from high grade nickel/cobalt material.

Figure 4 below provides an overview of the process flowsheet for the PFS.

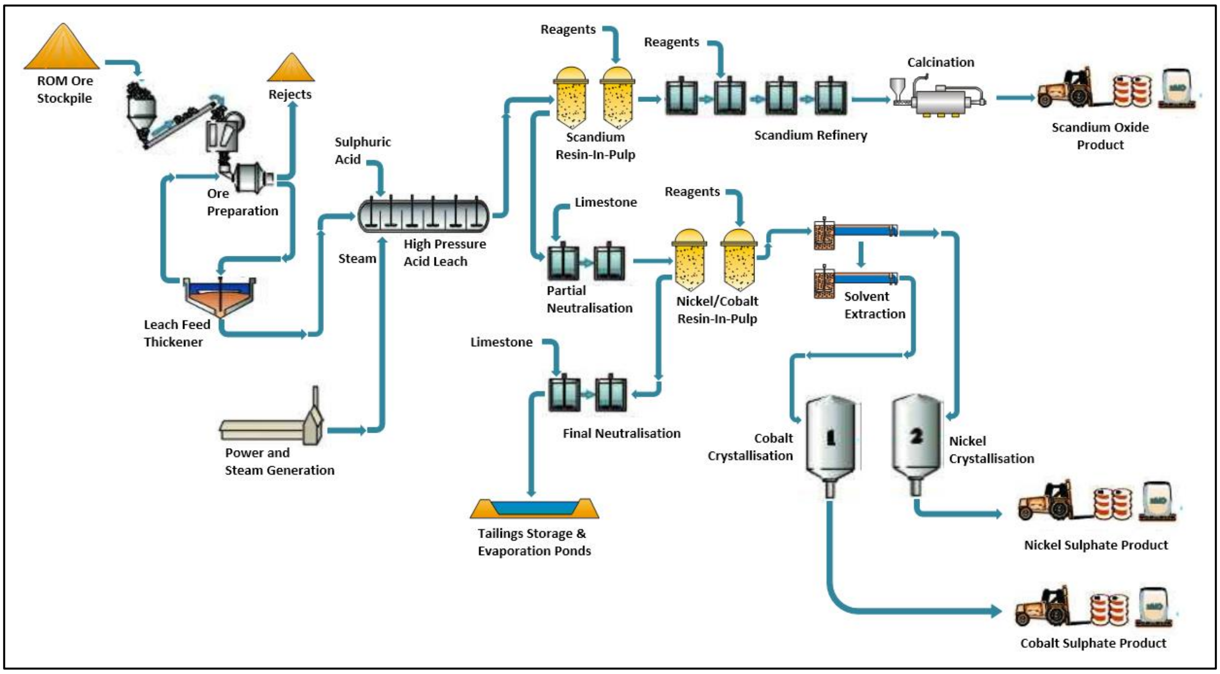

Figure 4: Syerston PFS Flowsheet including a scandium recovery RIP circuit and refinery

Clean TeQ has extensive experience in development, testing and piloting of a RIP circuit for recovery of nickel and cobalt from lateritic ores. A detailed programme of research and test-work, including construction and operation of a comprehensive pilot plant operation, was undertaken by Clean TeQ

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between 2007 and 2009. The programme successfully demonstrated RIP as an effective process for the recovery of nickel and cobalt from lateritic leach slurries. Clean TeQ owns this pilot plant which was used as the demonstration plant for the scandium recovery test-work in 2015 (see Figure 5 below).

The PFS flow sheet assumes a milling circuit, followed by high pressure acid leach and RIP on leached slurry for nickel and cobalt recovery as an intermediate sulphate solution. The nickel/cobalt-rich sulphate solution is then refined through a small solvent extraction and purification step prior to crystallisation to produce separate hydrated nickel sulphate ($NiSO_4.6H_2O$) and hydrated cobalt sulphate ($CoSO_4.7H_2O$) products.

The barren slurry is neutralised by the addition of limestone and sent to a tailings storage facility. The Project mining licence applications incorporate an area adjacent to the Syerston deposit which contains a substantial limestone deposit. This limestone deposit is proposed to be developed as part of the Project. The relatively dry climate of the region means that it is amenable to residue disposal to conventional tailings storage facilities and evaporation ponds.

Figure 5: Clean TeQ's proprietary Resin-In-Pulp (RIP) process demonstration plant, which is to be used for production of NiSO4 and CoSO4 samples for customer testing

Syerston's ore exhibits some unique and favourable characteristics. It is differentiated from typical clay-hosted laterite projects in a number of ways. In particular, it is a limonitic deposit consisting predominantly of goethite (high iron, low clay) that is low in acid-consuming elements such as calcium and magnesium. Extensive metallurgical and leaching test-work undertaken as part of the previous

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feasibility studies demonstrated that the limonitic nature of the ore results in low acid consumption relative to other nickel laterites. As sulphuric acid is typically a major operating cost for laterite operations, a low acid consuming ore provides significant operating cost advantages to Syerston.

The limonitic nature of the ore also results in a low viscosity slurry. A low viscosity leachate slurry exhibits good ‘flow’ characteristics, allowing for more concentrated process slurries and therefore, lower overall volumes of throughput. This means that a smaller sized plant can treat the same tonnage of ore, reducing capex and utilising lower levels of power, steam and reagents.

Figure 6 below shows the PFS production profile for nickel and cobalt over the initial 20 years of operation of the Project. The Project exhibits relatively high cobalt grades, which means that cobalt represents approximately 22% of forecast total revenues at the prices assumed. Project economics are optimised by scheduling higher grade areas of the resource in the earlier years.

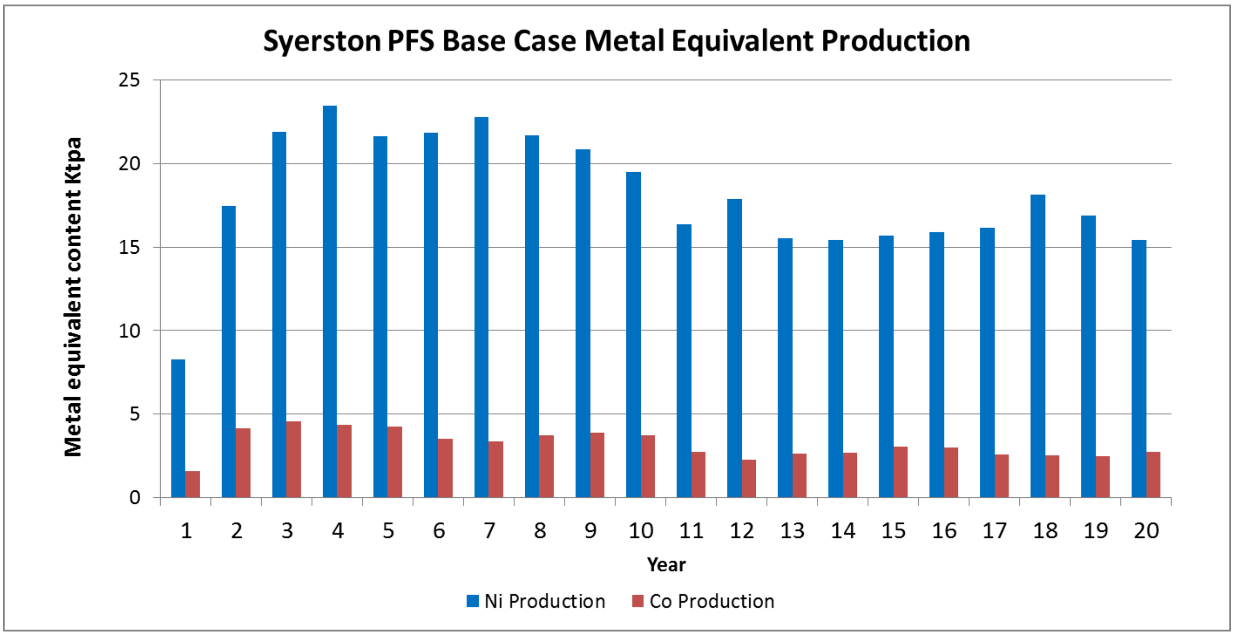

Figure 6: Nickel and Cobalt production profile

5 Capital Cost Estimate

The capital estimate includes a 10% contingency on direct and indirect costs and is estimated at an accuracy level of ±35%. The construction period is estimated at 36 months, including detailed engineering and design. The capital estimate includes all associated infrastructure, power supply, water pipeline and commitments to local councils for community and local government road upgrades in the Project area as detailed in the Project Voluntary Planning Agreements (discussed in section 8.1).

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Sustaining capital is not included in this capital estimate, but has been included in the financial analysis (discussed in Section 7). A sustaining capital allowance of US$5.5 million per annum was assumed in the Pre-Feasibility Study financial model.

Table 3 provides a breakdown of the capital cost estimate.

Table 3: Syerston Capital Cost Estimate

Project Area	US$M	A$M
Mining	$11	$15
Site Preparation	$14	$18
Process Plant	$172	$229
Process Utilities	$85	$113
Services	$110	$146
Infrastructure	$45	$60
Total Directs	**$436**	**$582**
Indirects, including EPCM	$99	$132
Owners Costs including Spares & First Fills	$87	$116
Capital Cost, excluding Contingency	**$622**	**$829**
Contingency (10% of Directs and Indirects)	$62	$83
Total Capital Cost Estimate	**$680**	**$906**

Note: figures may not sum due to rounding

6 Operating Cost Estimate

Table 4 provides a summary of the estimated average operating costs of the Project following the initial commissioning and ramp up period. An average long term exchange rate of AUD/USD 0.75 was applied.

Table 4: Average Operating Cost[2] (Years 3-20)

Cost Centre	US$ p.a. Year 3-20	US$/lb Ni before Co credits	US$/lb Ni after Co credits
Mining	$24.2	$0.59	N/A
Processing	$91.3	$2.21	N/A
General & Administration[3]	$6.5	$0.16	N/A
Total Average Operating Cost	**$122.1**	**$2.96**	**$0.89**

Note: figures may not sum due to rounding

The PFS assumed a steady state operational manning requirement of 335 full time equivalent roles plus contractors for maintenance and mining based on the assessment undertaken as part of the previous

[2] Excludes royalties
[3] Includes allowance for transportation cost

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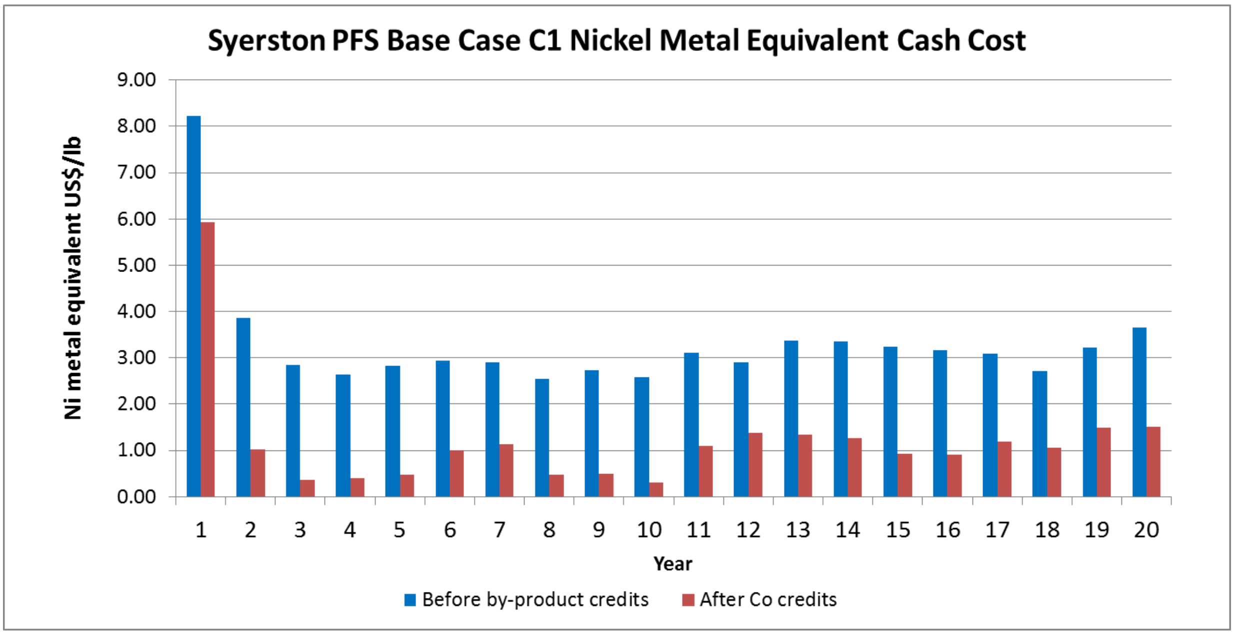
feasibility study. The PFS also estimated that the manning requirement peaks at 850 full time equivalent roles during construction.

Mining costs were estimated assuming contractor mining. All processing inputs are derived from mass balance and process design criteria which were established based on the previous feasibility studies and adjusted for the changes to the process. All of the main reagent costs are based on supplier quotes. Maintenance costs were derived from the previous feasibility study, factored on capital cost. Commonwealth, state and local government charges and levies are included as appropriate in the cost estimates. The financial model also incorporated the impact of the 4% NSW state royalty (net of allowable deductions) and the 2.5% gross revenue royalty payable to Ivanhoe Mines.

After allowing for cobalt credits, the PFS assessed the C1 cash operating cost for nickel metal equivalent at an average of US$0.89/lb during years 3-20. The impact on cash operating cost of scandium oxide as a potential by-product is assessed in the PFS Upside Case which is presented below in section 7.2.



Note: Years 1 & 2 include the impact of commissioning and ramp up and associated costs

Figure 7: PFS Base Case C1 cash operating unit costs

7 Valuation & Sensitivity Analysis

The valuation of the Project was undertaken via an assessment of the forecast discounted cash flows over the initial 20 year life of the Project. A cash flow model was constructed for the PFS, based on inputs from the previous study's mass balance and the engineering cost estimate completed in 2005 and adjusted to reflect the changes to the process plant.

The model assumed an 8% discount rate, 100% equity financed and a 30% corporate tax rate. No expansions of the mine were assumed.

Long term nickel and cobalt prices were assumed to be a flat US$7.50/lb and US$12.00/lb, respectively, assuming zero sulphate premiums for either product (as outlined in Section 1). These prices are in line with market consensus of the long term prices of these metals.

Based on this analysis the 2.5Mtpa Project returns a NPV_8 (post-tax) of A$1,187M with an IRR (post-tax) of 25%.

7.1 Sensitivity Analysis

A sensitivity analysis for Project was carried out to determine the effects of key variables in relation to the Base Case post-tax NPV of A$1,187M at a discount rate of 8%. The results of the sensitivity analysis are presented in Table 5 below.

Table 5: Syerston Project NPV Sensitivity Analysis

NPV_8 (A$M)	-20%	-10%	Base	+10%	+20%
Autoclave Feed Grade	643	915	1,187	1,458	1,730
Capital Cost	1,313	1,250	1,187	1,124	1,060
Operating Costs	1,379	1,283	1,187	1,091	994
AUD/USD	1,371	1,279	1,187	1,095	1,003
Ni Price	765	976	1,187	1,398	1,608
Co Price	1,065	1,126	1,187	1,248	1,309
Ni Recovery	765	976	1,187	1,398	1,608
Co Recovery	1,065	1,126	1,187	1,248	1,309

7.2 Upside Case - Scandium Oxide Production

The current market for scandium oxide is approximately 10-15 tonnes per annum. Prices range from US$2,000-3,000 per kilogram and supply is constrained and highly fragmented. Clean TeQ continues to progress a range of activities in order to build the scandium market. While the potential applications of scandium are broad, Clean TeQ has focussed its development activities on the use of aluminium-scandium alloys for light-weighting in the global transport industry. Through the development of Syerston, Clean TeQ intends to create the world's first reliable, long-life, low-cost source of scandium oxide.

Given the scandium market is still developing, the PFS Base Case development scenario assumes no scandium revenue. In order to demonstrate the significant upside potential that exists from producing scandium oxide as a by-product of nickel and cobalt production, the Company has prepared an Upside Case which includes the impact of scandium production.

The Upside Case flow sheet assumes a milling circuit, followed by high pressure acid leach and RIP to recover scandium into a scandium-rich eluate solution. The slurry is then sent to a second RIP system for nickel and cobalt recovery as an intermediate sulphate solution. The scandium-rich eluate solution is sent through a purification process to produce a final 99.9% Sc_2O_3 product. The nickel/cobalt-rich sulphate solution is then sent through a small solvent extraction separation purification step prior to crystallisation to produce separate hydrated nickel sulphate ($NiSO_4.6H_2O$) and hydrated cobalt sulphate ($CoSO_4.7H_2O$) products.

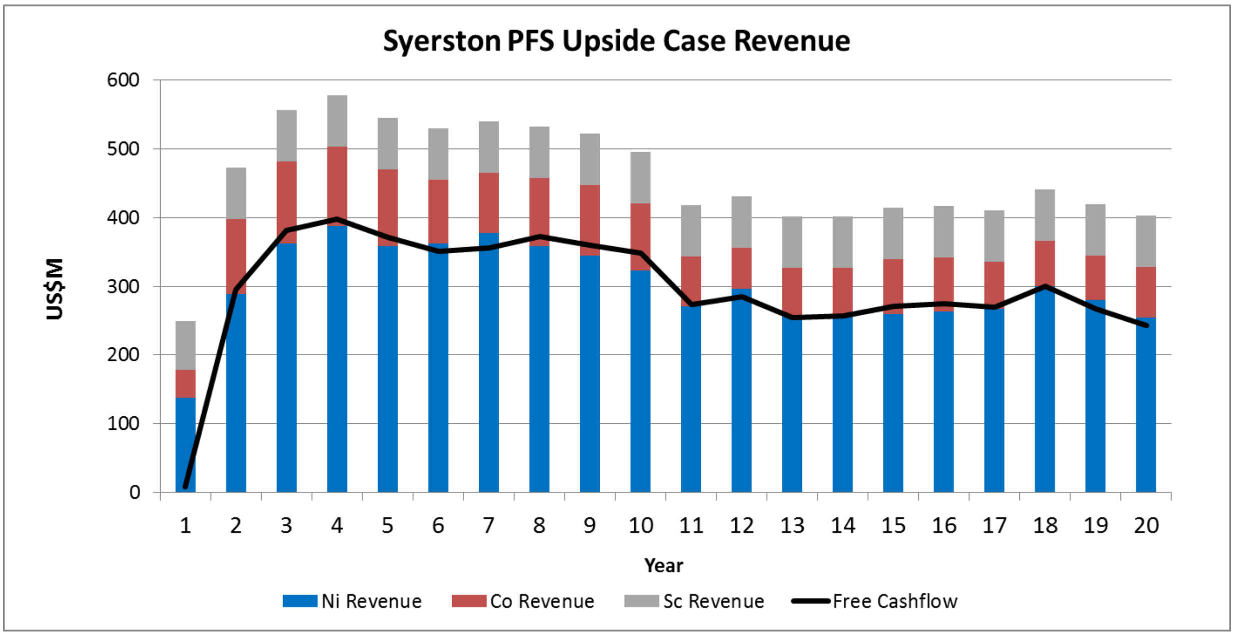


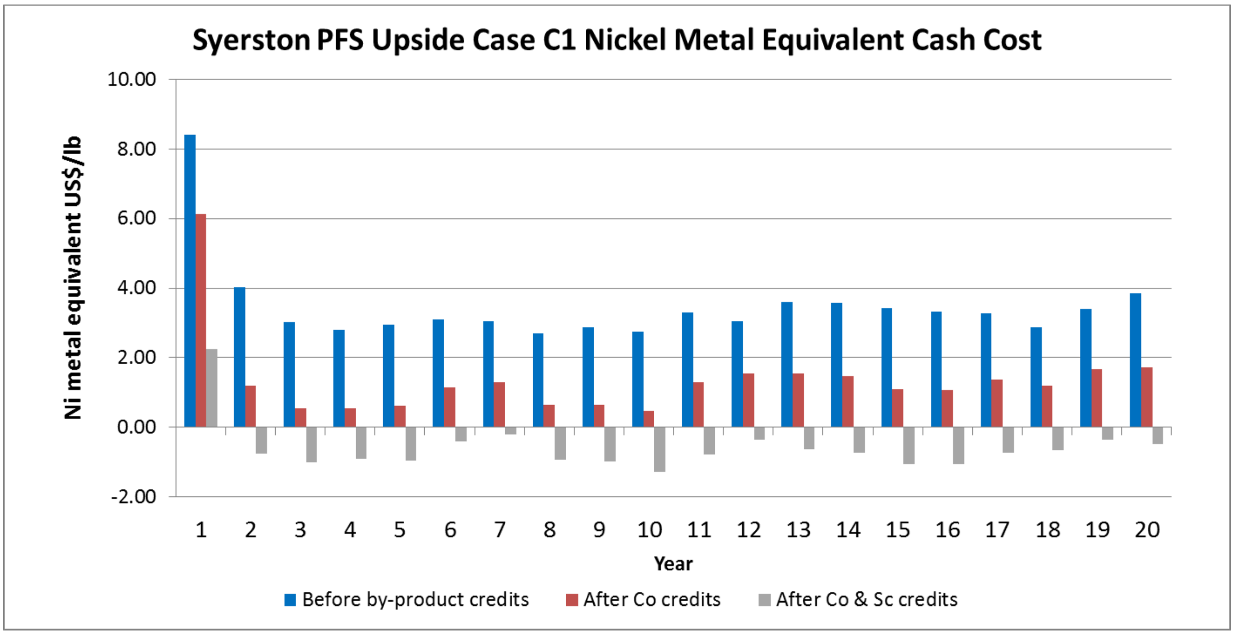
Figure 8: PFS Upside Case impact of scandium oxide by-product sales

Assuming an average scandium head grade of 53ppm (for more details please see ASX announcement dated 20 September 2016) and a processing recovery of 85%, the Project has the potential to produce up to 170tpa scandium oxide over years 3-20. The incremental up front capital cost of the scandium RIP recovery and purification circuit is A$20 million (assuming a recovery circuit capable of producing 50tpa of scandium oxide). Given the scandium is recovered as a by-product of nickel and cobalt production, the incremental cost of recovering scandium is relatively low.

The Upside Case assumes 50tpa of scandium oxide (Sc_2O_3) is extracted as a by-product and sold for US$1,500/kg Sc_2O_3. These production and pricing assumptions are consistent with those used for the dedicated scandium project assessed as part of the Scandium Feasibility Study (for full details see the ASX announcement dated 30 August 2016).

Figure 9 shows impact of the additional scandium on C1 Nickel equivalent cash cost when cobalt credits are applied and when both cobalt and scandium credits are applied.

Figure 10 shows the percentage revenue generated by each of the metals in the Upside case over the life of mine.



Note: Years 1 & 2 include the impact of commissioning and ramp up and associated costs

Figure 9: PFS Upside Case impact of scandium oxide by-product on cash operating cost

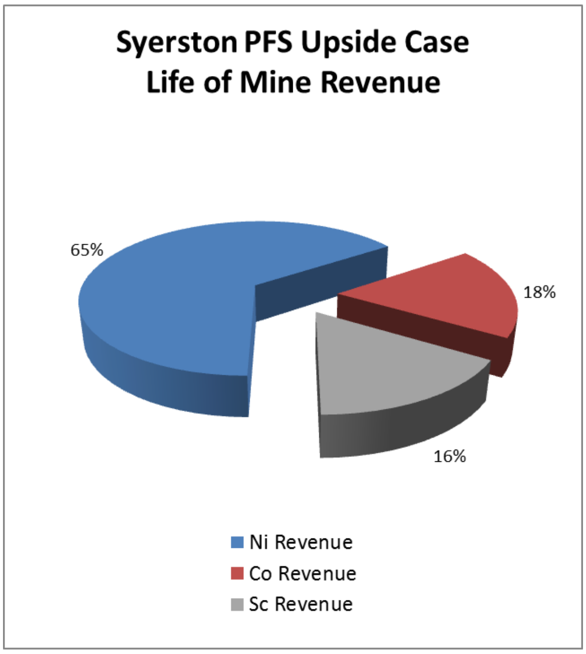


Figure 10: PFS Upside Case Project life revenue percentages

The summary results of the Upside Case are outlined in Table 6 below.

Table 6: Syerston Project Summary Table with Scandium Recovery

Parameter		Assumption / Output
Autoclave Feed Grade[1] (Years 3-20 average)	*Scandium*	**53ppm**
Recovery (Years 3-20 average)	*Scandium*	**85%**
Production (Years 3-20 average)	*Scandium oxide*	**50tpa Sc_2O_3**
Scandium oxide price assumption		**US$1,500/kg**
Additional Capital Cost for Scandium Plant		**US$15M (A$20M)**
Upside Case Total Capital Cost		**US$695M (A$927M)**
C1 Cash Cost (Year 3-20 average) [2]	*before Co & Sc credits*	**US$3.12/lb Ni**
	after Co & Sc credits	**-US$0.76/lb Ni**
Net Present Value (NPV_8) – post tax		**US$1,233M**
Internal Rate of Return (IRR) – post tax [3]		**30%**

1 Includes pit selection, dilution and mining factors applied
2 C1 cash cost does not include royalties
3 Post tax, 8% discount, 100% equity, real terms

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Table 6 above highlights the importance that scandium has in providing an important potential source of additional revenue for the Project. The incremental capital and operating cost of generating that additional scandium revenue is much lower than could be considered on a smaller scale via development of a stand-alone scandium project. As the scandium recovery process is part of the primary processing route, it allows for a reliable supply of significant quantities of scandium oxide supply to customers for the life of the mine.

The mine plan presented in the Upside Case does not exploit the vast majority of the very high grade scandium resource which sits adjacent to the nickel/cobalt deposit (for full details of the scandium only resource see the ASX announcement of 17 March 2016). This provides the Company with the ability to readily and significantly increase scandium production in future years for virtually no additional capital cost by adjusting feed to the plant.

7.3 1.5Mtpa Operation

A smaller Project processing 1.5Mtpa of ore was considered to determine the impact on Project economics. An internal study was completed to estimate the capital and operating cost, as well as the Project metrics. Although the smaller scale project did provide for a somewhat lower up front capital development cost, the impact of economies of scale and the mostly fixed cost infrastructure requirements of the Project means that the NPV and IRR impact of those capital savings were more than offset by the negative revenue and operating cost impacts. As such, it was determined that a larger operation of 2.5Mtpa provides the best overall economic result and the 2.5Mtpa operation will be progressed into the Bankable Feasibility Study stage.

8 Environmental & Permitting

8.1 Environmental Impact Statement and Development Consent

An Environmental Impact Statement (**EIS**) was prepared in 2000 by Black Range Minerals as a requirement to apply for Development Consent for the Project. Potential environmental impacts, impact assessments, mitigation measures and environmental management, rehabilitation and monitoring strategies are documented in the EIS. The Project was granted Development Consent in May 2001 and a modified Development Consent was granted in 2006.

In April 2016 Clean TeQ applied for a modification of the Development Consent to include scandium oxide as a product and to operate an initial smaller scale scandium operation while preserving the approval for a larger nickel/cobalt operation which may be considered in the future. The modification is expected to be approved by the end of Q4, 2016.

The modification application included draft Voluntary Planning Agreements (**VPA**) which have been agreed with each of the local Shires outlining contributions that Clean TeQ will make to local road

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upgrades, road maintenance and contributions to a range of community based activities. These contributions are included in the financial analysis.

8.2 Water Supply

Water investigations determined that the closest viable source of water for the Project is the Company's established borefield near the Lachlan River, approximately 65km south of the Project area. Black Range and Ivanplats Syerston completed the EIS and Development Consent assuming utilisation of this borefield.

Water Bore Licenses have been granted to the Project by the NSW Office of Water for 3.2GL p.a., representing a key benefit for the Project. The estimated cost of the water pipeline has been included in the capital cost estimate.

9 Nickel and Cobalt Marketing

In recent months, Clean TeQ has met with numerous companies in the LiB cathode supply chain from traders and cathode makers through to EV auto manufacturers. The Company has received strong expressions of interest for offtake of the Syerston nickel and cobalt sulphate materials from a number of these parties.

The Company has entered into a small number of non-binding offtake Memoranda of Understanding (**MoU**) representing a proportion of Syerston's anticipated production over the first five years of the mine life with counterparties who are well established in the LiB supply chain. The MoU's define certain key terms of the offtake contracts including volumes and pricing structure. As the Bankable Feasibility Study is progressed, offtake discussions will continue with these parties, and others, with a view to committing the majority of Syerston production under binding off take agreements over the next 12 - 18 months.

Appendix A - *Nickel and Cobalt in the Lithium-Ion Battery Market* provides a general overview of the LiB market and the impact that the growing demand for LiB's from the electric vehicle industry is anticipated to have on the demand for nickel and cobalt sulphate over the next decade.

10 Project Funding

While the Bankable Feasibility Study is being completed over the next 12 months the Company will be undertaking a range of activities to secure the financing required for the development of the Project, including progressing a range of options in relation to offtake finance, project level financing and debt financing.

A number of potential offtake customers have also made initial unsolicited inquiries about providing funding for the development of the Project. The Company will continue to explore options in relation to securing financing from one or more customer(s) for the Project, as discussions progress in relation to securing binding offtake commitments.

Given the favourable Project economics demonstrated by the PFS, and the strong demand for offtake that is currently being indicated by potential customers, the Company believes that the Project has the capacity to attract a reasonable level of debt funding. Discussions with debt financiers have commenced with a view to securing debt finance for a proportion of the total Project funding.

The Company may also consider developing the Project in conjunction with one or more strategic partners at the project level.

11 Next Steps

Given the favourable Project economics demonstrated by the PFS and the strong offtake demand that is currently being indicated by potential customers, the Company has commenced a Bankable Feasibility Study to assess the development of the proposed large scale 2.5Mtpa project to produce nickel and cobalt sulphate products to supply the forecast strong demand growth from the LiB sector.

The Bankable Feasibility Study will include operation of Clean TeQ's RIP pilot plant at ALS Metallurgy in Perth. The pilot campaign will process a bulk sample of approximately 20 tonnes of Syerston ore to produce samples of high purity nickel and cobalt sulphate for customer testing and validation purposes. The pilot plant is currently being recommissioned and is expected to run through October and November 2016 with product samples expected to be available to customers in the first quarter of 2017. The full Bankable Feasibility Study is expected to be completed in Q4, 2017.

As outlined above, the Company will continue to progress offtake and financing discussions with various counterparties while the Bankable Feasibility Study is underway. Given the potential importance of scandium by-product production to the Project, the Company will also continue current marketing activities aimed at developing the market for scandium oxide, with a focus on aluminium-scandium alloys for the global transport sector.

For more information about Clean TeQ contact:

Sam Riggall, Executive Chairman or Ben Stockdale, CFO +61 3 9797 6700

About Clean TeQ Holdings Limited (ASX: CLQ) – Based in Melbourne, Clean TeQ, using its proprietary Clean-iX® continuous ion exchange technology, is a leader in metals recovery and industrial water treatment. For more information about Clean TeQ please visit the Company's website at www.cleanteq.com.

About the Syerston Scandium Project – Clean TeQ is the 100% owner of the Syerston Project, located in New South Wales. The Syerston Project is one of the largest and highest grade scandium deposits in the world and one of the highest grade and largest cobalt deposit outside of Africa.

*The information in this document that relates to nickel-cobalt Mineral Resources is based on information compiled by Diederik Speijers and John McDonald, who are Fellows of The Australasian Institute of Mining & Metallurgy and employees of McDonald Speijers. There was no clear division of responsibility within the McDonald Speijers team in terms of the information that was prepared – Diederik Speijers and John McDonald are jointly responsible for the preparation of the Mineral Resource Estimate. Diederik Speijers and John McDonald have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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'. Diederik Speijers and John McDonald, who are consultants to the Company, consent to the inclusion in the report of the matters based on their information in the form and context in which it appears***.**

*The information in this document that relates to scandium Mineral Resources is based on information compiled by Sharron Sylvester, who is a Member and Registered Professional of the Australian Institute of Geoscientists and is an employee of OreWin Pty Ltd. Sharron Sylvester has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Sharron Sylvester, who is a consultant to the Company, consents to the inclusion in the report of the matters based on their information in the form and context in which it appears***.**

The information in this document that relates to Ore Reserves is based on information compiled by Michael Ryan, MAusIMM (109558), who is a full time employee of Preston Valley Grove Pty Ltd, trading as Inmett Projects. Michael Ryan has sufficient experience that 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 in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Michael Ryan, who is a consultant to the Company, consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Michael Ryan holds options in Clean TeQ Holdings Limited, the ultimate parent entity of Scandium21 Pty Ltd, the owner of the Project.

This release may contain forward-looking statements. The actual results could differ materially from a conclusion, forecast or projection in the forward-looking information. Certain material factors or assumptions were applied in drawing a conclusion or making a forecast or projection as reflected in the forward-looking information.

The Syerston Nickel/Cobalt Project is at the Pre-Feasibility Study phase and although 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 nickel, cobalt and scandium 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 Syerston Nickel Cobalt Project is considered to have positive economic potential.

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Syerston Nickel & Cobalt Pre-Feasibility Study JORC Code, 2012 Edition – Table 1

Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	· *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* · *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	The Mineral Resources estimates that provide the basis for the Ore Reserve estimates are in the first part of this document. The Ore Reserve estimate is reported as Autoclave Feed tonnes and grades. The Measured and Indicated Mineral Resources reported in the first part of this document are inclusive of those Mineral Resources modified to produce the Ore Reserves.
Site visits	· *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* · *If no site visits have been undertaken indicate why this is the case.*	Michael Ryan has undertaken numerous site visits to the project since 1998 as Project Manager through all studies and project owners since that time. Most recent site visit was in September 2016.
Study status	· *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* · *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	The Syerston Nickel Cobalt Pre-Feasibility Study has been undertaken to convert Mineral Resources to Ore Reserves. The mine plan is based on pit designs and modifying factors have been applied. The modifying factors include metallurgical recoveries based on extensive metallurgical test work including pilot plant and variability testing. Project design criteria established from engineering and metallurgical studies have been used as the basis of the project capital and operating costs.
Cut-off parameters	· *The basis of the cut-off grade(s) or quality parameters applied.*	Autoclave acid consumption, post beneficiation autoclave feed grades, costs, net smelter return (**NSR**) and value were applied to the blocks in the model to determine cut-off grade Mine production was scheduled based on an elevated cut-off of NiEQ > 1.1%. The Ore Reserve is based on the marginal cut-off grade with a Block Value of A$0.00/t which is approximately NSR A$50.00/t or 0.25% NiEQ. Blocks with NiEQ ≥ 0.8 % and NiEQ < 1.1% were assigned as medium grade and blocks with a Value > 0 A$/t and NiEQ < 0.8%.

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Criteria	JORC Code explanation	Commentary
		The primary parameters for the cut-off are: US$7.50/lb Ni and US$12.00/lb Co, average recoveries 92% Ni and 91% Co, acid cost A$77/t, fixed processing costs of A$30/t, and NSW State royalty and a 2.5% Royalty to Ivanhoe Mines Ltd. Scandium revenues have not been included in the cut-off grade calculation and the Scandium Resource within the Ore Reserve represents an upside opportunity.
Mining factors or assumptions	· *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* · *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* · *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.* · *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* · *The mining dilution factors used.* · *The mining recovery factors used.* · *Any minimum mining widths used.* · *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their*	The Ore Reserve estimate is based on Measured and Indicated Mineral Resources. Inferred Resources are not included in the estimate. Inferred Resources have been assumed to have zero grade. A 2016 Ore Reserve Model was prepared using 2016 modifying factors including prices, recoveries and costs to determine NSR and Block Values for reporting by cut-off grade within pit designs. Parent cell size in the model is 20 m E x 20 m N x 2 m RL and sub cells are included in the model. Pit designs were not prepared in 2016 for the Syerston Nickel & Cobalt Pre-Feasibility Study, the pit designs from the 2005 Syerston Ni-Co Feasibility Study were used to report the Ore Reserve from the 2016 Ore Reserve Model. In 2005, pit optimisations were undertaken on the 2005 resource model with relevant dilution, cost, revenue and geotechnical inputs taken into consideration and the optimisation pit shells were used for detailed pit design taking into account ramps and geotechnical considerations. It is recommended that updated pit optimisation and pit design be undertaken in the further study work to confirm the pit staging and optimise the Ore Reserve, and ore and waste schedules. Mining of Ore is planned to be undertaken on 2 m benches. Dilution and mining losses have been assumed to be included in the Resource model. The Syerston Nickel & Cobalt Pre-Feasibility Study considered infrastructure requirements associated with the conventional excavator and truck mining operation including pre-beneficiation, crushing and conveying systems, dump & stockpile locations, plant and maintenance facilities, access routes, fuel, water and power.

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Criteria	JORC Code explanation	Commentary
	inclusion. · *The infrastructure requirements of the selected mining methods.*	
Metallurgical factors or assumptions	· *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* · *Whether the metallurgical process is well-tested technology or novel in nature.* · *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* · *Any assumptions or allowances made for deleterious elements.* · *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* · *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	Processing of the ore comprises of: ore comminution, High Pressure Acid Leaching, Resin-In-Pulp and elution for nickel and cobalt sulphate, and purification via solvent extraction and purification. Waste streams are neutralised prior to disposal in a Tailings Storage Facility. The use of High Pressure Acid Leach (HPAL) for laterite mineralisation is widely used within industry. The use of Resin-In-Pulp (RIP) is a novel unit process for laterite processing. However, Clean TeQ has developed the process for RIP in nickel and cobalt laterite ore processing over 12 years, which has included multiple large scale piloting on several laterite deposits. Extensive metallurgical test work and piloting has previously been carried out on several ore types and composites over the Project. Variability testing was completed on mineral samples which represented the first 5 to 10 years of production. Based on the results of the metallurgical testing, Ni and Co have variable processing plant recoveries dependent on material type. Ni recoveries average 92% ranging from 91% to 93%. Co recoveries average 91% ranging from 90% to 91. A 24-month commissioning and ramp up period was assumed. The acid consumption calculation used for the Project was developed, with consideration for the main elements in the orebody contributing to acid consumption. The factors applied to each element was based on analysis of multiple samples and composites over the deposit. Two large scale pilot plant operation has been carried out on Syerston bulk sample, representing material likely to be processed in the first 10 years of operation. This clearly demonstrated the HPAL characteristics of the mineralisation.
Environmental	· *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage*	The project completed an EIS in 2000 and was granted Development Consent by the NSW Government in 2001. Waste will be used in the walls of the TSF. Waste material has been characterised as part of the EIS. The study has allowed for rehabilitation of the waste dumps, TSF and other surface facilities in line with the EIS and Development Consent conditions in place. Erosion control measures will be provided along with the relocation and spreading of stockpiled topsoil material. Flora and fauna will be established in line with the development consent and EIS requirements

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Criteria	JORC Code explanation	Commentary
	and waste dumps should be reported.	
Infrastructure	· *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	Processing plant and associated infrastructure is provided for in the project capita cost, including power and water supplies, off-site road upgrades as required under the Development Consent conditions for the project. The project lies within EL 4573 and several MLA's overlay the project area. The company has 100% ownership of the EL and MLA's, as well as freehold ownership of the majority of the project area, and water rights for the project. Land currently not owned by the company required for the project is under negotiation for purchase. The company has a water licence for 3.2GLp.a. from a bore field located 65km south of the Project area. A water pipeline will be constructed to supply water to the project and has been allowed for in the capital estimate. The borefield and water pipeline were a part of the EIS completed on the project. The Project is well serviced by roads, both for transport and access to the local communities for labour accommodation. As a part of the Development Consent in place on the project, upgrades to certain sections of roads have been agreed. The costs for these upgrades have been accounted for in the capital cost. Transport of all bulk commodities and reagents to site are via rail and road, with the main transport routes identified.
Costs	· *The derivation of, or assumptions made, regarding projected capital costs in the study.*	Projected mining capital costs have been calculated on the basis of contractor mining. The capital cost for the processing facility and associated infrastructure was derived by Inmett Projects based on the 2005 Feasibility Study and inputs on appropriate escalation provided by SNC-Lavalin. The flowsheet and mass balance used to derive the design criteria is based on metallurgical test work. These design criteria form the basis for design and equipment sizing. A 1.25% of directs was applied for sustaining capital each year of operation plus the cost of tailings dam wall lifts.
	· *The methodology used to estimate operating costs.* · *Allowances made for the content of deleterious elements.* · *The source of exchange rates used in the study.* · *Derivation of transportation charges.* · *The basis for forecasting or source of treatment and refining charges, penalties for*	Mining is to be undertaken by a mining contractor and operating costs were calculated from budget quotations. NSW state and Ivanhoe private royalties have been included. All costs are in Australian Dollars, with an exchange rate of AUD/USD 0.75 was assumed. Product transport costs are included. Mining and process plant production schedules were prepared from the pit design bench reporting and ore types. Process inputs to the operating cost model were established from a mass balance model and design criteria for all unit operations. Unit rates for reagents, utilities and consumables were based on vendor quotations. Operational labour numbers were established through

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Criteria	JORC Code explanation	Commentary
	failure to meet specification, etc. · *The allowances made for royalties payable, both Government and private.*	development of a site organisational structure. The processing plant assumed a full time workforce with only contract labour used for certain ancillary positions. The mine includes a technical and supervisory team managing the mining contractor. Labour rates were provided by a human resources consultant. Maintenance consumables were derived as a percentage of direct costs for each unit processing area. Transportation charges are included in the unit rates for inputs as all costs are on a free in store basis. The study assumes that the refinery for nickel and cobalt is on site producing sulphate products. No allowances were made for penalties for failure to meet specification.
Revenue factors	· *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* · *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	A long term price of US$7.50/lb Ni and US$12.00/lb Co was assumed for the life of the project. The derivation of the price was based on, long term consensus pricing. A fixed exchange rate of AUD/USD 0.75 was used for the life of mine. Head grades for the processing plant were established through a mine schedule. Treatment, refining and transportation charges were calculated via an operating cost model with estimates for costs calculated for each period. No allowance was made for penalties.
Market assessment	· *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* · *A customer and competitor analysis along with the identification of likely market windows for the product.* · *Price and volume forecasts and the basis for these forecasts.* · *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	The current global production of nickel is estimated at 2Mtpa, with nickel sulphate currently representing 5% or 90ktpa of nickel equivalent. Nickel sulphate is used for a range of applications but primarily for battery production and electroplating. The current global production of cobalt is estimated at 100ktpa, with around 35% being as cobalt sulphate. The largest impact on both nickel sulphate and cobalt sulphate demand is likely to be the increase in prevalence of lithium ion batteries, with an estimated 2-3 times increase of demand predicted within 10 years. The customers currently sourcing nickel and cobalt sulphate products are cathode manufacturers for the lithium ion battery industry, mainly in Japan, Korea and China. Main competitors include current nickel and copper mines, which produce cobalt as a by-product. Intermediate products, such as briquettes and metal, are purchased by refiners, who convert these into nickel and cobalt sulphate products. The production pathway at Syerston is such that nickel and cobalt sulphate products are sold direct to cathode producers, without the need of an intermediate refining step. The nickel sulphate price is mainly driven by the LME price of nickel, as it makes up a relatively smaller portion

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Criteria	JORC Code explanation	Commentary
		of the total nickel market. The long term consensus price of nickel is US$7.50/lb contained nickel and has been assumed for this study. Typically, sulphate products are sold at a premium, due to the additional processing required. However, no consideration was made for a premium on products sold from Syerston. The cobalt sulphate price is determined by the LMB cobalt terminal market. The long term consensus price of US$12.00/lb cobalt was assumed for this project. Both nickel and cobalt demand is predicted to increase over the next decade, with nickel production driven by the stainless steel industry and cobalt driven by the lithium ion battery industry. The mine will produce nickel and cobalt sulphate products to a certain specification, with the price and premium (if applicable) to be negotiated with each customer in a supply contract.
Economic	· *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* · *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	The financial model uses the assumptions noted above and the Ore Reserve. The base case assumes a discount rate of 8% and has an NPV of A$1,187M. Results were calculated for a range of discount rates. No inflation or escalation assumptions were made. A company tax rate of 30% was applied. Sensitivity analysis of +20% and -20% of key variables were carried out, with NPV_8 ranging from A$1,730M to A$643M. Key sensitivities are autoclave feed grade, nickel and cobalt price and recovery, capital and operating cost and exchange rate.
Social	· *The status of agreements with key stakeholders and matters leading to social licence to operate.*	A Development Consent has been granted by the New South Wales government for the project based on an EIS submitted in 2000 and subsequent modifications in 2004 and 2006. Approvals for a modification to this consent to allow scandium oxide as a product has been submitted, June 2016, and is awaiting final approval. Voluntary planning agreements with local councils have been agreed in principle and subject to approval of the Development Consent Modification by the NSW Department of Planning.
Other	· *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* · *Any identified material naturally occurring risks.* · *The status of material legal agreements and marketing arrangements.*	A Development Consent is currently in place for the project. The company has applied for a modification to the development consent for the inclusion of scandium oxide as a product from the site, as well as the provision for an initial small scale operation for scandium production. It is anticipated that this modification will be approved in Q4, 2016. An EL and MLA's are currently in place over the project area. A mining lease will be required to be granted prior to commencement of construction on site. An EIS was completed for the Project, including the

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Criteria	JORC Code explanation	Commentary
	· *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	associated off-site infrastructure and did not highlight any material risks. Subsequent environmental studies completed on the project have not identified any material risks to the Project.
Classification	· *The basis for the classification of the Ore Reserves into varying confidence categories.* · *Whether the result appropriately reflects the Competent Person's view of the deposit.* · *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	The Ore Reserve estimates are based on the Mineral Resource estimates classified as 'Measured' and 'Indicated' after consideration of all mining, metallurgical, social, environmental and financial aspects of the project. All Proved Ore Reserves were derived from the Measured Mineral Resources and all Probable Ore Reserves were derived from the Indicated Mineral Resources The Ore Reserve classifications reflect the Competent Person's view of the deposit
Audits or reviews	· *The results of any audits or reviews of Ore Reserve estimates.*	The study has been the subject of internal review by Clean TeQ and the contributing consultants prior to completion. No external audits of the Syerston Nickel & Cobalt Pre-Feasibility Study have been undertaken at the date of publishing.
Discussion of relative accuracy/ confidence	· *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such*	The accuracy and confidence levels of the study are suitable for the reporting of Ore Reserves in a Pre-Feasibility Study as defined in the JORC Code 2012. The Ore Reserve is a global estimate and is based on optimisation of the entire Mineral Resource. Modifying Factors were developed individually for the appropriate inputs to the study. The use of the elevated cut-off grade reduces the impact of any potential increases in cost, reduction in recovery, or reduced productivities.

Criteria	JORC Code explanation	Commentary
	an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. · *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* · *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* · *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

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Appendix A - Nickel and Cobalt in the Lithium-Ion Battery Market

Cobalt and nickel are critical raw materials in the production of cathodes for the lithium-ion battery (**LiB**) market. These metals are used in the production of precursor materials, which are converted to cathode active material for use in the batteries.

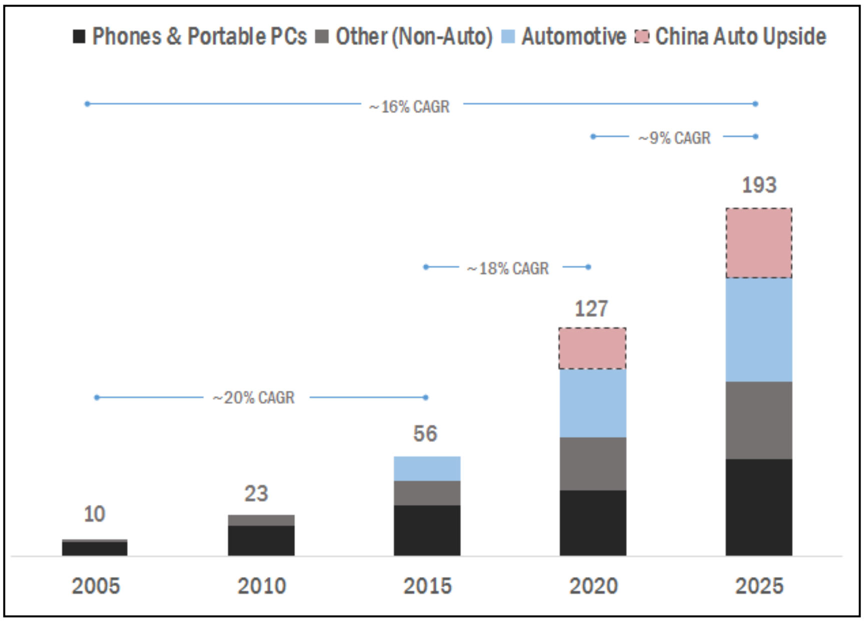
The battery industry requires nickel and cobalt to be supplied in specific chemical form for production of precursor material. In the case of both cobalt and nickel, this is generally in the form of hydrated metal sulphates ($CoSO_4.7H_2O$ and $NiSO_4.6H_2O$).

The demand for lithium-ion cells is anticipated to grow strongly over the next decade as production of electric vehicles increases and batteries become an important component in utility-scale energy storage systems.

Syerston's high cobalt grades, combined with Clean TeQ's proprietary ion exchange technology to produce the specific cobalt and nickel sulphates required by lithium-ion cell manufacturers, positions the Company to benefit from strong forecast growth in demand for LiB's.

The global LiB market has grown at a 20% compound annual growth rate (CAGR) over the last 10 years[4], mainly due to the steady growth in portable electronic devices (laptops, smartphones, etc) and, more recently, the emergence of automotive applications. Forecasts for LiB demand growth vary, but even the most conservative estimates are predicting LiB demand to experience rapid growth over the next 10 years.

Figure 1: Historic and Forecast Global LiB Sales (GWh) [5]



[4] *Source: Avicenne Energy Analysis 2014*

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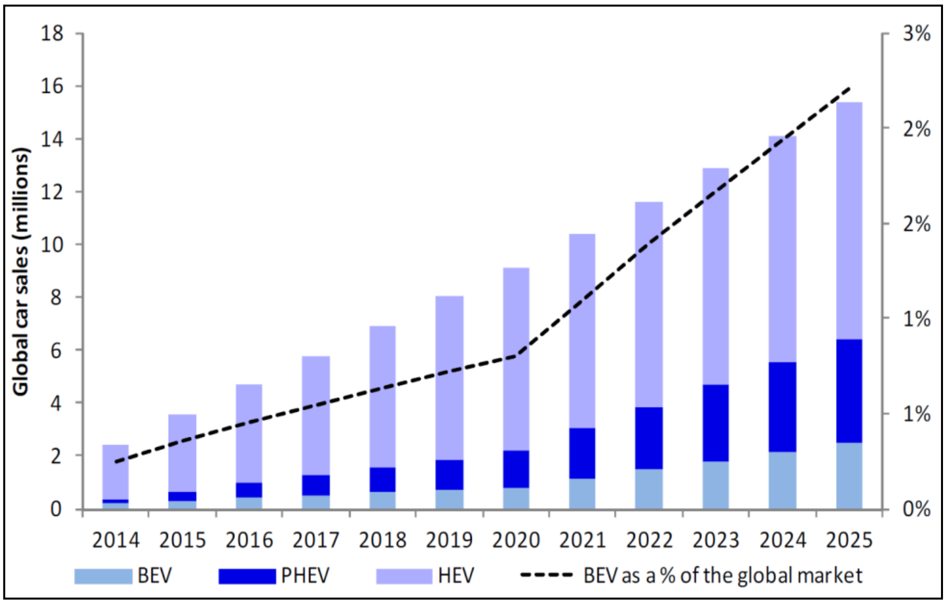
Much of the current acceleration in demand for LiB's is resulting from their use in electric vehicles. From approximately 0.5 million plug-in hybrid electric vehicles (**PHEV**) and battery electric vehicles (**BEV**) sold in 2015, demand is forecast to grow to 2 million units by 2020 and 6 million units by 2025 (see Figure 5). As battery costs fall, BEV drivetrains with higher capacity batteries are expected to replace PHEV's and hybrid electric vehicles (**HEV**), further adding to demand for key raw materials.

Figure 2: Forecast Global x-EV Sales (2014 – 2025)[5]



Lithium-Ion Battery Chemistries

Lithium ion cells contain a positive and a negative electrode. The positive electrode (cathode) is made of various formulations or 'chemistries' of oxidized metals. The negative electrode is generally made of carbonaceous material (natural and synthetic graphite). When the battery is charged, ions of lithium move through an electrolyte from the cathode to the anode and attach to the carbon. During discharge, the lithium ions move back from the carbon anode to the cathode (See Figure 6).

The different battery types or 'chemistries' are defined by the compositions of their metalliferous cathodes. There are five main battery chemistries which comprise the majority of the LiB market. Of those, lithium-cobalt-oxide (**LCO**) is the dominant battery in portable electronic devices. The nickel-cobalt-manganese (**NCM**) and nickel-cobalt-aluminium (**NCA**) chemistries are increasingly becoming the industry standard for electric vehicle applications, due to their high energy density.

[5] *Source: Deutsche Bank research 2016*

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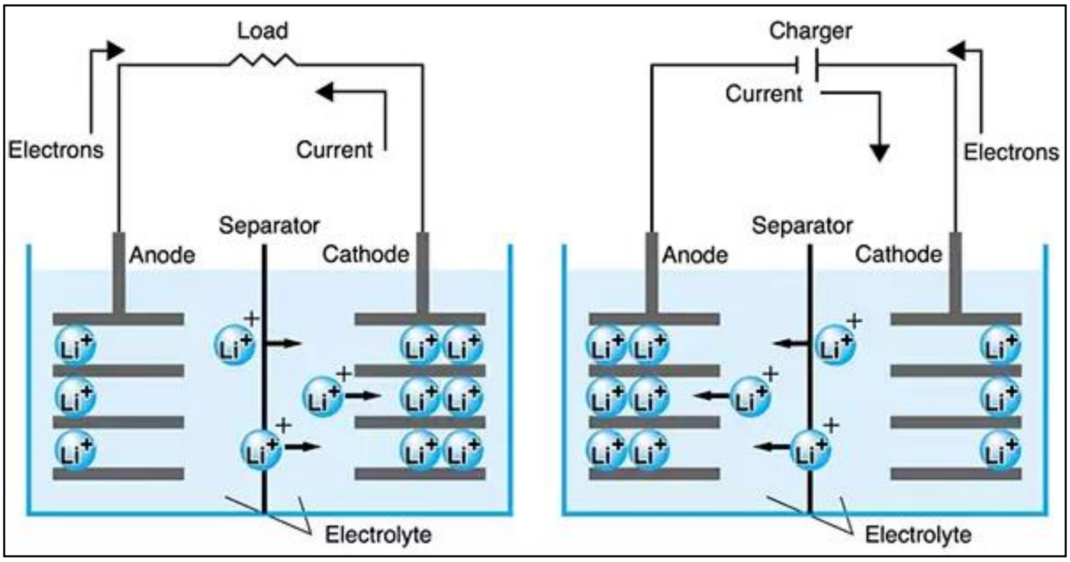
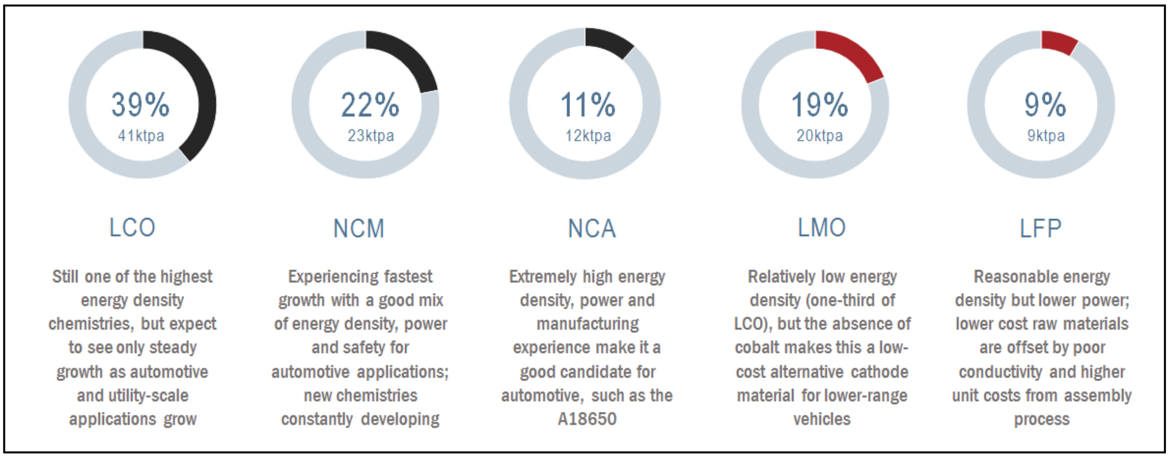
Figure 3: Rechargeable LiB Cell[6]



In recent years, China's automotive industry has favored adoption of lithium-iron-phosphate (**LFP**) and lithium-magnesium oxide (**LMO**) battery chemistries. However, there is a clear global trend to the adoption of NCM and NCA chemistry due to their higher energy densities, increased life cycle and the auto industry's preference for passenger vehicles with longer range. Significant growth in the LiB sector is expected to come from NCM and NCA chemistries, both of which can contain relatively high nickel and cobalt content.

Figure 4: LiB Chemistry Market Share[7]



[6] *Source: Stephen Evanczuk, DigiKey Electronics*
[7] *Source: Avicenne Energy Analysis 2014*

LiB cathode production requires high purity precursor materials to ensure high performance and extended battery life. NCA and NCM battery chemistries require high purity nickel sulphate ($NiSO_4.6H_2O$) and cobalt sulphate ($CoSO_4.7H_2O$) to produce precursor materials. LCO battery chemistry requires cobalt oxide.

Cathode is Critical to Battery Cost and Performance

The cathode is fundamentally important to both the performance and cost-competitiveness of a lithium-ion cell. Raw materials can represent 50%–70% of the cost of manufacturing a lithium-ion cell, depending on the chemistry adopted. As such, nickel and cobalt can represent as much as 80% of the metal cost in the cathode, or approximately 20% of the total cell cost (see Figure 8).

The predicted growth in the LiB market means that a considerable amount of high grade nickel sulphate and cobalt sulphate will be required over the next ten years. As such, reliable and cost-competitive nickel and cobalt supply has an important role to play in the future of LiB's (see Figure 9).

While there is a large and established market for nickel which is driven by the global steel sector, almost all of the world's cobalt is produced as a by-product from nickel and copper mines. For this reason, cobalt stands apart as one of the few metals consumed at industrial-scale that has almost no source of primary supply. Global refined production in 2015 was in the order of 90,000 tonnes[8] of contained cobalt, a large portion of which was exported to, and processed in, China. In order to meet the demands of the growing LiB market, there will need to be a significant increase in global supply of cobalt. At a time when nickel and copper prices are at or near long-term historic lows, this presents real challenges for cobalt supply, as seen in recent or pending mine and refinery closures in Africa (Katanga Mining) and Australia (QNI).

[8] *Source: Darton Commodities, "Global Cobalt Review, 2015–2016"*

Figure 5: Estimated NCM Cell Cost Breakdown[9]

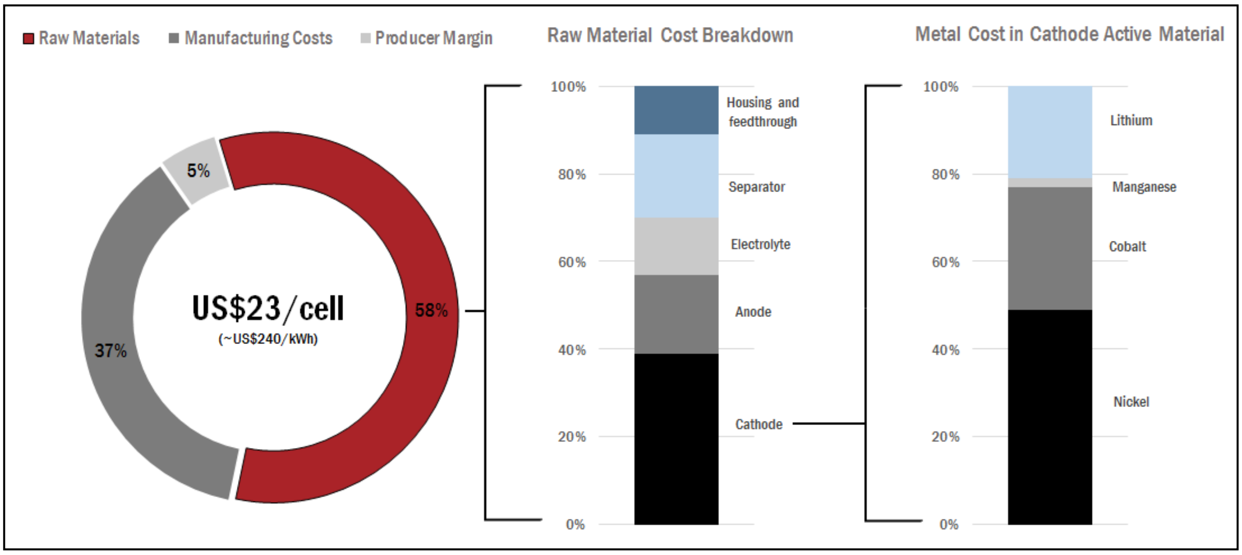
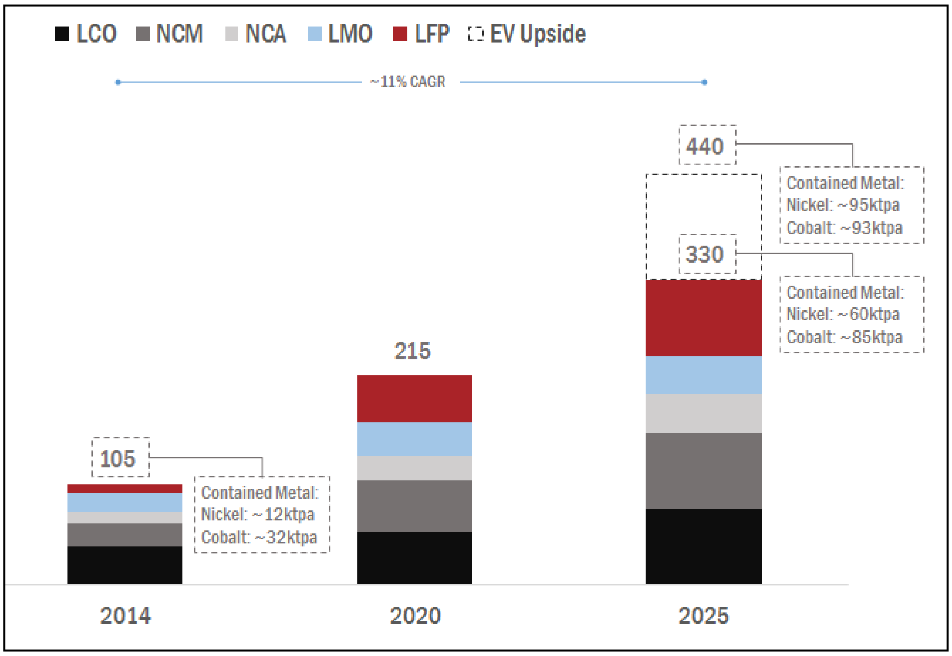


Figure 6: LiB Cathode Raw Material Demand[10]



[9] *Source: Roland Berger (2012) and internal analysis. Assumes a 96Wh PHEV cell (26Ah, 3.7W) using NCM622 cathode chemistry. Cathode cost includes non-metallic materials (carbon black, binder, foil). Internal assumptions concerning split of costs assumes average long-term prices of Ni US$7.00/lb; Co US$12.00/lb; Mn US$1.00/lb; Li US$6.50/kg (as LCE).*

[10] Source: Avicenne Energy Analysis 2014. EV Upside based on Avicenne upside case for 2025 of 2.6m units of EV sales. Metal demand based on internal Clean TeQ estimates.

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In addition to the risk through by-product dependence, global cobalt supply is heavily concentrated in the Democratic Republic of Congo (DRC). In 2015 production sources in the DRC represented 65% of global mined cobalt supply. A large portion of this production was from artisanal mining operations involving child labour.[11] While cobalt is not listed as a 'conflict mineral', the LiB industry is under increasing pressure to demonstrate an auditable cobalt supply chain to ensure that responsible procurement practices are adopted.

A recent report by Amnesty International and Afrewatch, "*This is what we die for: Human rights abuses in the Democratic Republic of the Congo power the global trade in cobalt"*, highlighted the child labour practices adopted in many of the artisanal mines and urged the global electronics and automotive industries to provide better auditing of their supply chains. See:

http://www.amnesty.org.au/images/uploads/about/Amnesty_report_2016_Human_rights_abuses_in_DRC_power_global_cobalt_trade.pdf

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[11] *Source: Darton Commodities, "Global Cobalt Review, 2015-2016"*

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