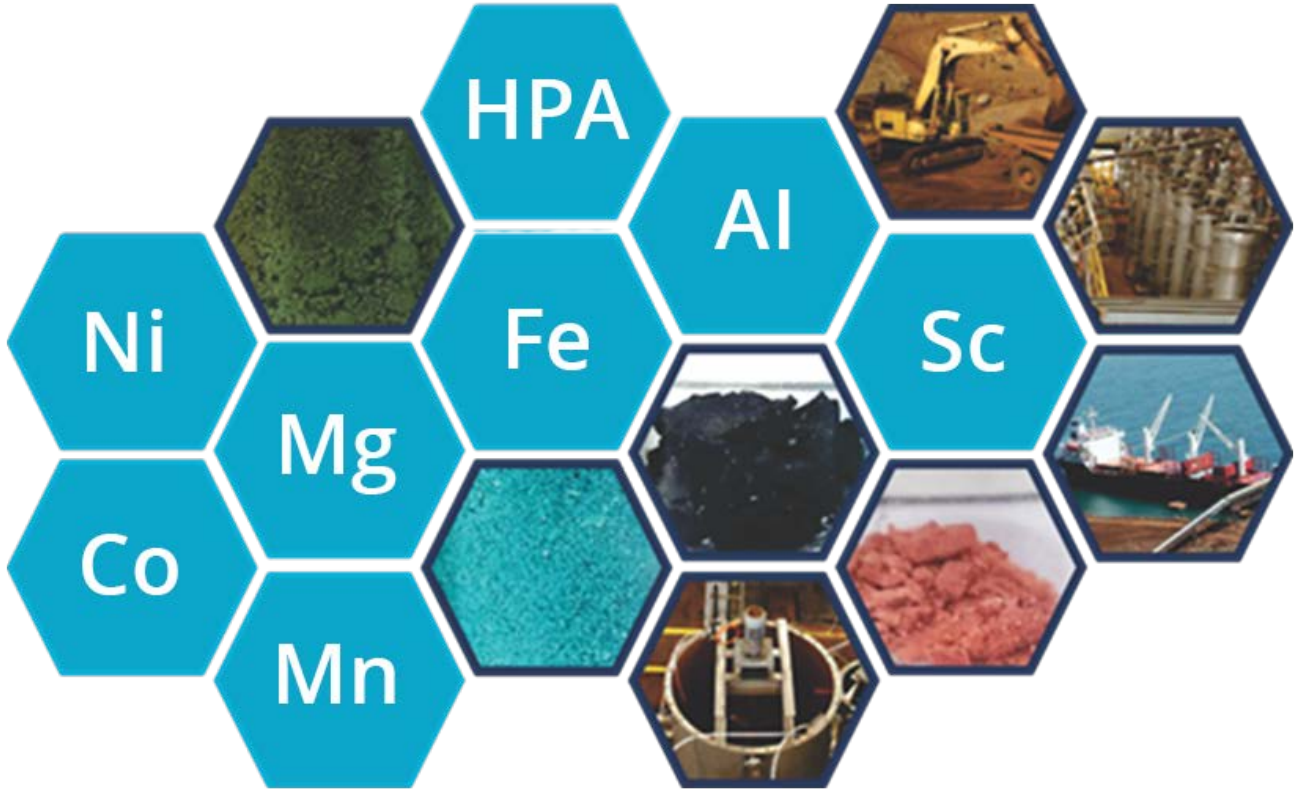
Pure Minerals Limited



Investor Presentation

September 2020

ASX : PM1

QUEENSLAND PACIFIC METALS

Developing innovative processing technologies to produce nickel sulphate, cobalt sulphate and High Purity Alumina

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Capital Raising

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~$4,400,000 Placement

Two tranche placement to institutional and sophisticated investors

Use of Funds	
Piloting testwork including production of intermediate products and subsequent refining to battery grade chemicals	A$3.0M
TECH Project advancement – approvals, feasibility work, infrastructure	A$0.5M
Corporate & admin	A$0.5M
Working Capital	A$0.4M
Total	**A$4.4M**

PM1 PROPOSITION – Townsville Energy Chemicals Hub (TECH)

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Ore Supply – High Grade Nickel-Cobalt Laterite source from New Caledonia

Laterite ore (1.6% nickel)

Shipping from New Caledonia to Townsville

Value Add Business

Processing Plant

Ni-Co Mixed Hydroxide Precipitate

Aluminium Hydroxide

Sulphate Refinery

HPA Refinery

Nickel sulphate

Cobalt sulphate

4N HPA

High grade ore supply from established mines

History of delivering consistent grade to minimise variability

Safe jurisdiction

Clean technology
Recycled leach agent
Off the shelf equipment
Fast to production (no mine)

High purity - Value add commercial refining processes

Products for high growth EV sector

PM1 Proposition

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High Grade Ore Supply	✓ Secured high grade 15 year ore supply agreement with two major New Caledonia mining companies – highest quality ore bodies in the world. ✓ High grades ~1.6% Ni / ~0.17% Co to be supplied from existing mines ✓ Consistent quality and tonnage, supplied Queensland Nickel Refinery for 38 years, low mining/exploration risk
No Mining Required	✓ Reduced environmental footprint ✓ No flora/fauna/native title considerations ✓ Faster approvals process than a traditional mining project
Demonstrated Technology	✓ Although the DNi Process hasn't been commercialised, and therefore carries some risk, offsetting this are the facts that: - The technology has been extensively tested on a wide range of ores (Brazil, Australia, Indonesia, New Caledonia) - The individual unit operations within the flowsheet are commercial in other industries - Process equipment is simple and "off-the-shelf" – no special alloys, no huge autoclaves, low pressure (atmospheric) ✓ Nitric acid is recycled – cost advantage over HPAL ✓ Recovery of all valuable metals in the ore
Townsville site secured at Lansdown Park	✓ Extensive infrastructure network including Port, Rail and Road and multiuser opportunities ✓ Long term history of handling and processing imported ore from New Caledonia/Philippines/Indonesia ✓ Skilled labour and engineering support
Modest Environmental Footprint	✓ Residue is benign and only represents 20% of original ore feed – no tailings dam required ✓ Potential to utilise residue as engineered landfill – this would make the TECH Project have zero solids discharge ✓ "Green" appeals to ultimate end users of battery chemicals who are very socially and environmentally conscious
Experienced Management	✓ Combined 60+ years nickel laterite experience ✓ Experience in New Caledonia and with majors Rio Tinto, BHP and Alcoa ✓ Strong project development knowledge

FLOWSHEET - Process plant to produce feedstock for refinery

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Nitric acid leaching advantages

Nitric acid leaching: most efficient acid

- Low temperature, atmospheric pressure
- Treats entire orebody
- Simple alloys/construction
- 95% metal extraction
- Licensed from Direct Nickel (DNi Process™)

Recycled: recycle/re-use > 98% of the leaching agent

- Significantly reduce operating costs
- Greatly reduced environmental impact

Product options: Mixed Hydroxide Product MHP (>40% nickel) or refined, battery-grade products

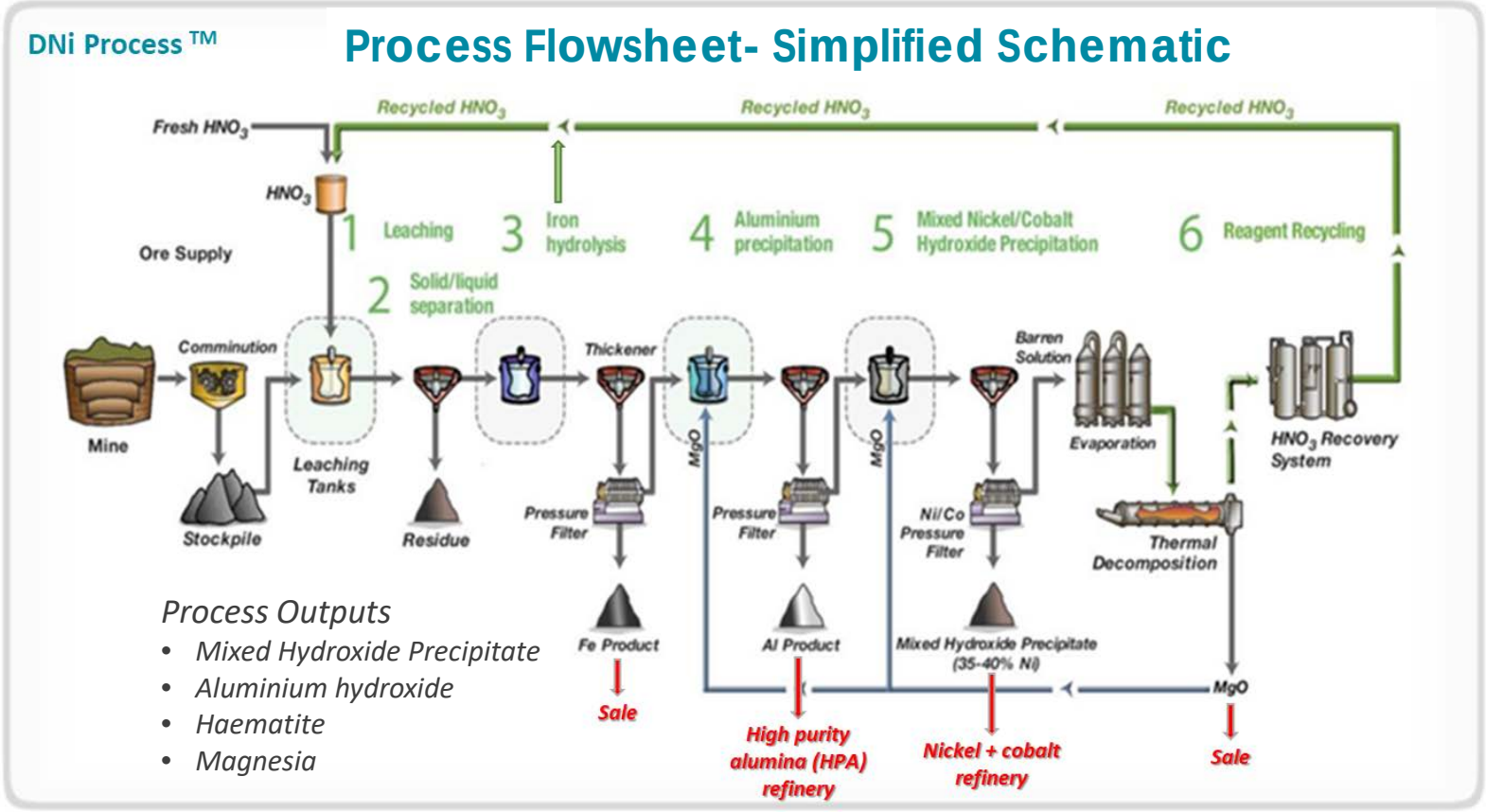
Co-product revenues: Haematite, Magnesia, Alumina

- Little or no residues

Scalable: Stirred tanks – just make them bigger

Speed to market:

- Approvals – no mine, no effluent, no tailings
- Construction – simple alloys and vessels



DNi Process™ vs High Pressure Acid Leach (HPAL)

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	DNi Process™	HPAL
Ore Feed	Full lateritic ore profile	Limonitic ore (typically or low Mg saprolite[1])
Ore Preparation	Ore drying	No drying required
Pressure	1 atmosphere	Up to 44-59 atmospheres
Temperature	100°C	250-270°C
Plant Materials	304-series stainless steel	Titanium-lined autoclaves and piping
Acid Consumption	25-80 kg of nitric acid (68%) per tonne of dry ore processed[2] ≥98% of the nitric acid is recycled	250-500 kg of sulphuric acid (98%) per tonne of ore processed
Waste Materials	Environmentally inert dry nitrogen-rich residue, contributing to mine rehabilitation as a fertiliser	Tailings about 3x the volume of the DNi Process requiring neutralisation, containment and indefinite monitoring
Product	Mixed (Ni-Co) Hydroxide Product	Mixed (Ni-Co) Hydroxide Product
By-Products	Haematite, Magnesia, Aluminium hydroxide, Manganese, Scandium	Ammonium sulphate, Scandium
Technology	Easily scalable (stirred tanks, not complex pressure vessels) Yet to be proven at commercial scale	High capacity required to reach economic threshold Works, but with a majority of commercial failures[3]

1. Mg content contributes to high acid consumption
2. While nitric acid is significantly more expensive than sulphuric acid, the DNi Process™ includes the ability to recycle >98% of the nitric acid
3. Economic and/or technical failures: Bulong, Cawse, Ambatovy, Goro and Ravensthorpe

Source: Direct Nickel, Pure Minerals, Terra Studio

Projected EV Nickel Demand – The Right Time for DNi Process™

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First HPAL* 1960

* *HPAL "High pressure acid leach"*

2nd Generation HPAL
Bulong 1998-2003 (C&M)
Murrin Murrin 1999→ (operational, 75% design)
Cawse 1998-2009 (C&M)

3rd Generation HPAL
Ravensthorpe 2008-2009, 2011-2017 (C&M), 2020
Goro 2009→ (operational, 65% design)
Ramu 2012→ (operational, 5 year ramp-up)
Ambatovy 2012→ (operational, poor availability)
Taganito 2013→ (operational, poor availability)
Gordes 2014→ (operational, low throughput)

3rd Generation HPAL
Coral Bay 2005-
(operational)

DNi Pilot Plant
Successful demonstration of technology but the time wasn't right

1st Gen Nickel Pig Iron
China plants – 8% Ni
(low quality)

2nd Gen Nickel Pig Iron (NPI)
14% Ni (high quality)
squeezing out need for LME nickel metal for stainless steel.
Most viable process for stainless steel industry

1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020

EV Revolution
Class 1 nickel (after refining) for batteries – NPI not suitable for batteries.
Not enough sulphide resources to meet demand – laterites must be developed.
HPAL issues (capital, environment, failures) – Right time for DNi Process™

The Need for Green
The world is more socially, environmentally conscious.
- HPAL/NPI - sovereign risk, tailings
- NPI - very high GHG intensity

TECH Project – delivering Ni/Co from a safe jurisdiction with a modest environmental footprint

Piloting Activities

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QPM's pilot plant activities will:

- Demonstrate flowsheet with representative ore
- Produce samples for potential customers
- Generate results to feed directly into a Bankable Feasibility Study
- Provide opportunities for investor visits (physical or virtual)
- Clear the path to start Definitive Feasibility study

Completed✓
Bulk Sample sourced from New Caledonia partners has been transported to Perth

Representative Ore

Q3/Q4 2020
Direct Nickel pilot plant to be assembled and operated at ALS Global

Ni-Co MHP

Q1→ 2021
MHP will be further refined to produce battery chemicals Nickel sulphate and Cobalt sulphate at CSIRO.
Samples to be provided to potential offtakers

Aluminium Hydroxide

Q1/Q2 → 2021
Aluminium Hydroxide will be further refined to produce 4N HPA.
Samples to be provided to potential offtakes

High Grade Haematite

Sun Metals

Q1/Q2 2021
Haematite will be used for iron collaboration with Sun Metals (wholly owned subsidiary of Korea Zinc)

ROBUST FINANCIALS: Base Case EBITDA of AUD 261m/a

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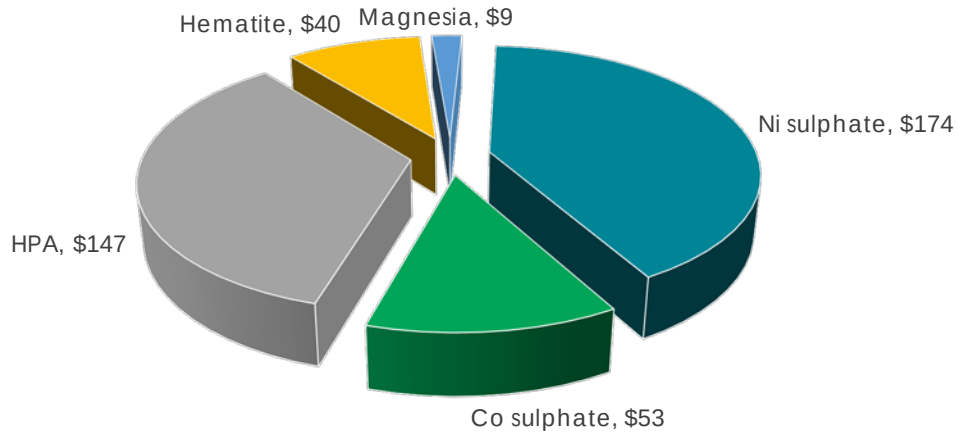
Key Physical Outputs	
	Annual Production (t)
Nickel Sulphate	26,400 t
Cobalt Sulphate	3,100 t
High Purity Alumina (4N) HPA	4,000 t
Haematite	327,700 t
Magnesia	20,100 t

Capital and Operating Costs	
	Assumed 0.68 AUD:USD
Capex (excluding contingency)	AUD 554m
Contingency	AUD 96m
Operating Expenditure	AUD 163m/a

Key Metric	Units	Base Case	Spot Case
Nickel Price	US$/lb	7.00	5.70
Nickel Sulphate Premium	US$/lb	2.00	2.00
Cobalt Price	US$/lb	25.00	14.15
HPA Price	US$/t	25,000	20,000
EBITDA	AUD (m)	261	211
Post Tax NPV	AUD (m)	1,470	1,080
Post Tax IRR	%	30.7	24.9
Capital Payback	Years	3.5	4.25

Refer to ASX announcement 7th April 2020

Revenue Split in AUD million



Incremental Annual EBITDA

Pathway to Funding

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Project Feasibility Stage (current)

- Piloting
- Feasibility studies
- Regulatory approvals
- Secure project partners/offtake

Funding Options

- Traditional equity investors
- Strategic investment by partner/offtaker
- Government grants
- R&D tax incentive

The aim at this stage is to deliver strong shareholder returns by advancing and de-risking the TECH Project

Project Construction – Funding Options

Achieving success in the project feasibility stage will increase the value of the company and open doors to funding opportunities for project construction

Debt

- **Project Partners:** Strategic opportunity for a 'Big Brother' to be involved in a project that would be a game changer for the nickel industry
- **NAIF:** TECH Project could be suitable for NAIF funding being in Northern Australia and will deliver many social benefits to Townsville and surrounding region
- **Export Finance Australia:** EFA is targeting assistance to critical minerals projects, which the TECH Project will produce
- **Offtake Finance:** Offtake is in high demand given the lack of nickel supply – end users understand the need for project participation or funding to secure offtake
- **International Export Credit Agencies:** Potential to obtain international ECA funding, particularly for plant and equipment being sourced from overseas

Equity

- **Project Partners / Offtakers:** Securing project or offtake participation by way of equity investment
- **Institutional Investors:** Traditional equity investors targeting critical minerals investment
- **Green Funds:** Many funds targeting green investments and the emerging EV sector

LOCATION: Ideal Infrastructure Setting

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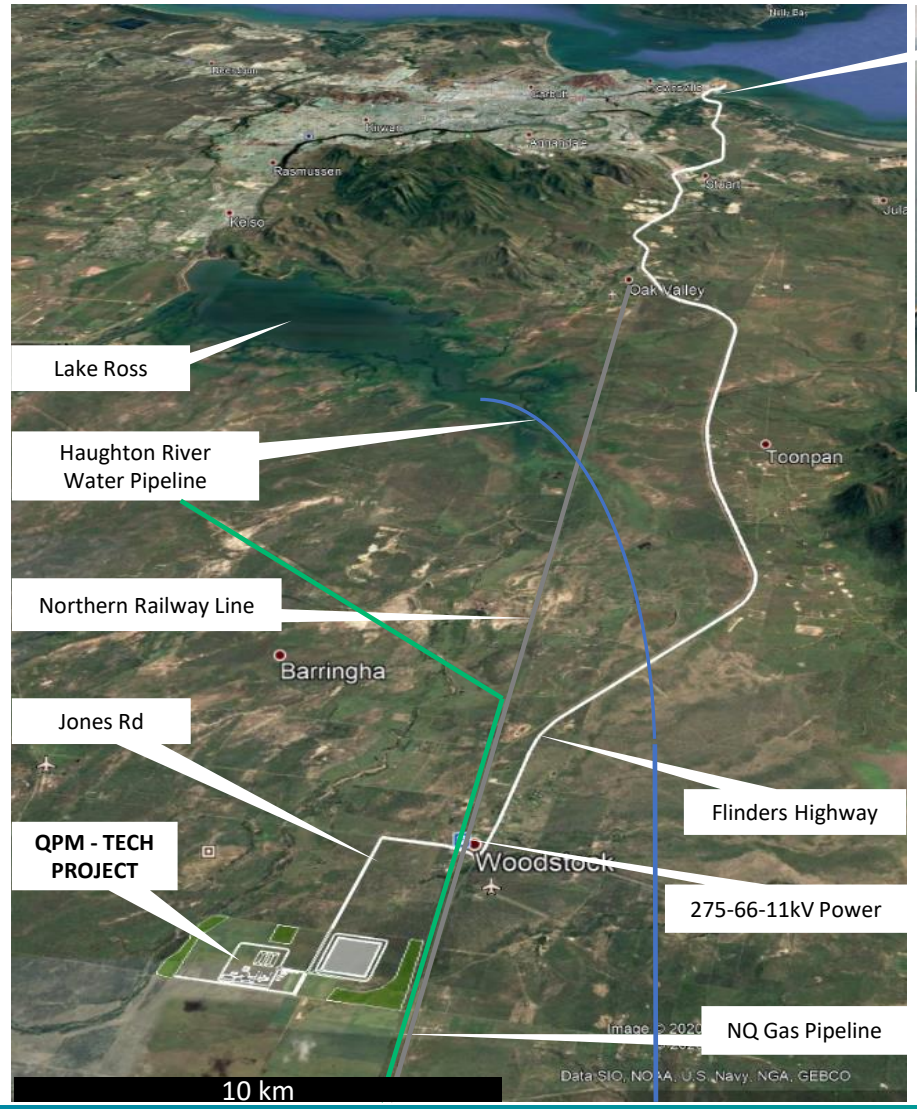

Ideal site (290 Ha) allocated to QPM in the Townsville Industrial Precinct.

- Water pipeline
- Gas pipeline (35 PJ/y capacity – we need 4 PJ/y)
- Electric transmission lines (275kV, 66kV and 11kV)
- Fibre optic communications
- Existing Ross River (140 MW) and Edify (400MW) solar arrays
- Road train access to Townsville Port (Flinders Highway)
- Rail line
- Environment - gently undulating grazing land, sparsely wooded
- Zoned heavy industrial

SULPHATE REFINERY– Townsville Energy Chemicals Hub (TECH)

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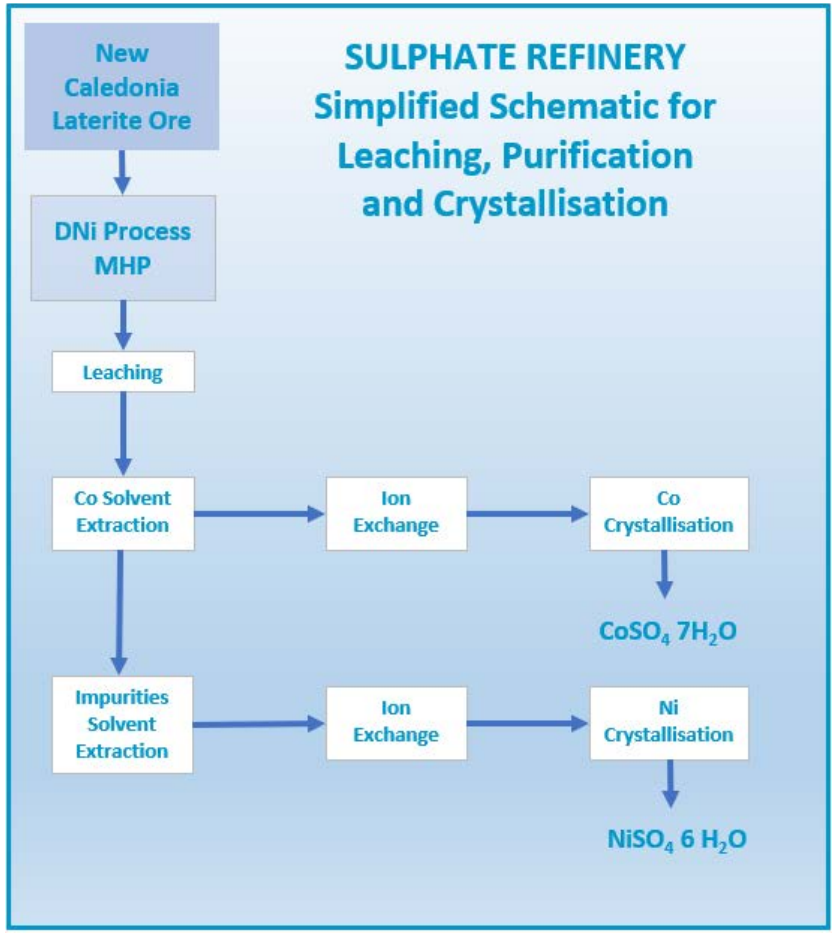
QPM Product Samples Mixed Hydroxide Precipitate MHP, Cobalt sulphate, Nickel sulphate and Manganese sulphate

CSIRO Waterford (Curtin University Western Australia) Pilot Plant Location



SULPHATE REFINERY
Simplified Schematic for Leaching, Purification and Crystallisation

QPM Refinery flowsheet development by CSIRO Exclusive Licence to QPM

Nickel Sulphate Hexahydrate				Cobalt Sulphate Heptahydrate			
Impurity	Unit	Typical Specification Target	PM1 target	Impurity	Unit	Typical Specification Target	PM1 target
Al	ppm	<5	**<5**	Al	ppm	<5	**<5**
Ca	ppm	<10	**<7**	Ca	ppm	<25	**<20**
Cd	ppm	<3	**<1**	Cd	ppm	<5	**<1**
Cl	ppm	<25	**<10**	Cl	ppm	<50	**<10**
Co	ppm	<50	**<30**	Co	%	>21.0%	**>21.0%**
Cr	ppm	<3	**<1**	Cr	ppm	<3	**<1**
Cu	ppm	<5	**<3**	Cu	ppm	<5	**<3**
Fe	ppm	<5	**<3**	Fe	ppm	<5	**<3**
Mg	ppm	<20	**<20**	Mg	ppm	<10	**<10**
Mn	ppm	<5	**<10**	Mn	ppm	<5	**<5**
Na	ppm	<25	**<20**	Na	ppm	<25	**<20**
Ni	%	>22.0%	**>22.0%**	Ni	ppm	<50	**<30**
Pb	ppm	<5	**<3**	Pb	ppm	<5	**<3**
Si	ppm	<10	**<10**	Si	ppm	<10	**<10**
Zn	ppm	<5	**<3**	Zn	ppm	<5	**<3**
TOC	ppm	<50	**<50**	TOC	ppm	<50	**<50**
Water Insol	ppm	<100	**<100**	Water Insol	ppm	<100	**<100**
Magnetic Sub.	ppb	<50	**<50**	Magnetic Sub.	ppb	<50	**<50**

QPM Target elemental specifications (%) for battery grade nickel and cobalt sulphate

HPA REFINERY – Townsville Energy Chemicals Hub (TECH)

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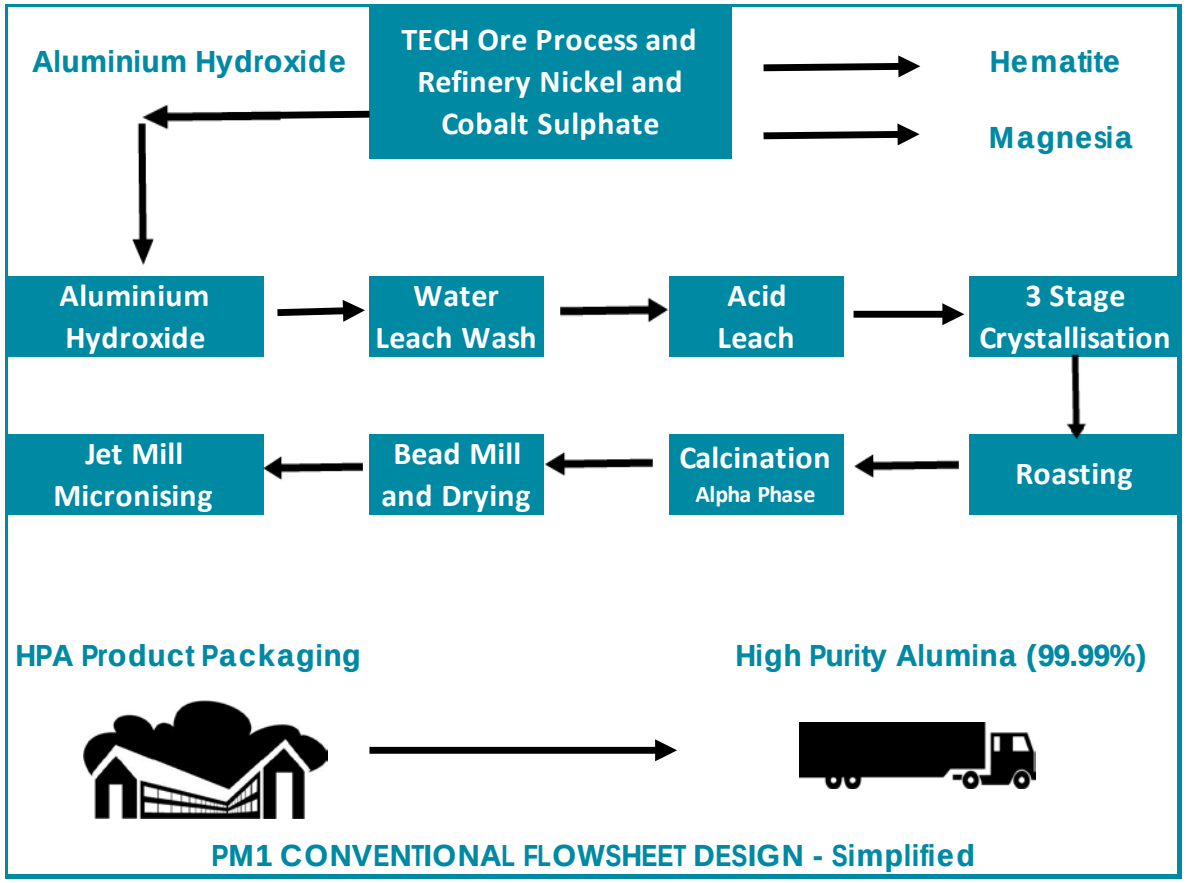

PM1 CONVENTIONAL FLOWSHEET DESIGN - Simplified

Company Comments

Alpha HPA - Most highly valued by the market, so this could assist with financing. Innovative front end involving no mining, with SX recovery. Secretive aspects make it harder to evaluate technical risk.

Altech Chemicals - Most commercially advanced with construction of site facilities, partially financed, but most expensive on capex and opex comparisons

Queensland Pacific Metals - No mining, off the shelf 3-stage crystallisation that is well-proven, lowest opex and capital, high grade aluminum hydroxide feedstock (by-product) from integrated ore processing plant. Boehmite product option instead of HPA.

OUR HPA ADVANTAGE: Best in the Business

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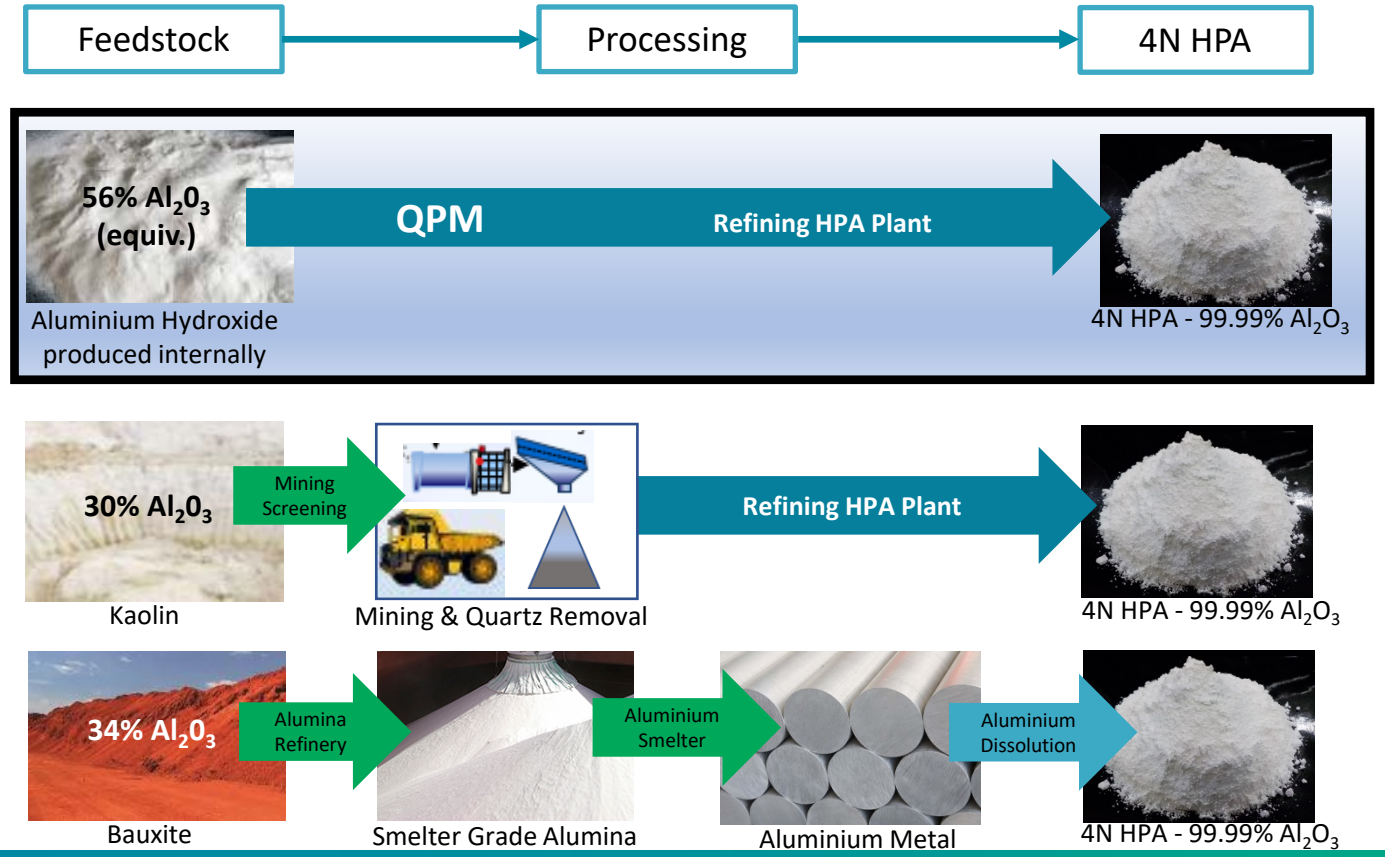
Project Economics Boosted with Aluminum Hydroxide Co-Product Upgraded to produce High Purity Alumina HPA (4N) in lowest cost quartile



CRU[1] forecast 272,000 tpa of HPA demand by 2028 (i.e. 30% CAGR[2] demand growth by 2028)

- Future LED[3] markets will require higher quality HPA
- LIB[4]'s separators demand 187,000 tpa by 2028
- LED's demand forecast 85,000 tpa by 2028
- Significant supply deficit forecast

[1] Commodity Research Unit (CRU) market analysts
[2] Compound Annual Growth Rate (CAGR)
[3] Light Emitting Diode (LED)
[4] Lithium-Ion Batteries (LIB)

FAST TRACK PROGRESS: Over the last twelve months

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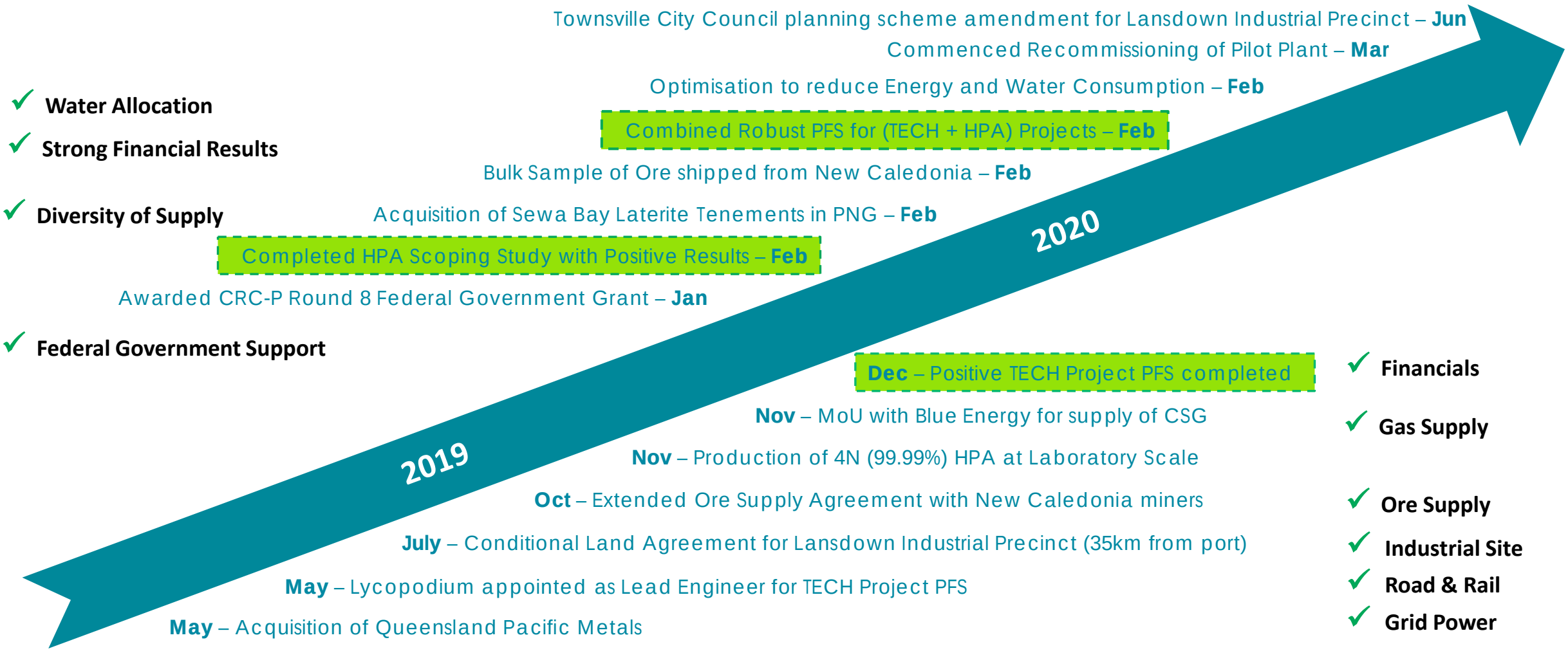

- ✓ **Water Allocation**
- ✓ **Strong Financial Results**
- ✓ **Diversity of Supply**
- ✓ **Federal Government Support**

May – Acquisition of Queensland Pacific Metals

May – Lycopodium appointed as Lead Engineer for TECH Project PFS

July – Conditional Land Agreement for Lansdown Industrial Precinct (35km from port)

Oct – Extended Ore Supply Agreement with New Caledonia miners

Nov – Production of 4N (99.99%) HPA at Laboratory Scale

Nov – MoU with Blue Energy for supply of CSG

Dec – Positive TECH Project PFS completed

Awarded CRC-P Round 8 Federal Government Grant – **Jan**

Completed HPA Scoping Study with Positive Results – **Feb**

Acquisition of Sewa Bay Laterite Tenements in PNG – **Feb**

Bulk Sample of Ore shipped from New Caledonia – **Feb**

Combined Robust PFS for (TECH + HPA) Projects – **Feb**

Optimisation to reduce Energy and Water Consumption – **Feb**

Commenced Recommissioning of Pilot Plant – **Mar**

Townsville City Council planning scheme amendment for Lansdown Industrial Precinct – **Jun**

- ✓ **Financials**
- ✓ **Gas Supply**
- ✓ **Ore Supply**
- ✓ **Industrial Site**
- ✓ **Road & Rail**
- ✓ **Grid Power**

Target Milestones

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Piloting and Feasibility

- Piloting of DNi process on New Caledonian ore to produce MHP, haematite and aluminium hydroxide
- Piloting of process to refine MHP to battery grade nickel sulphate and cobalt sulphate
- Piloting of process to refine aluminium hydroxide to 4N HPA
- Testwork on haematite with Sun Metals
- Firm up project size
- Commencement of Bankable Feasibility Study

Marketing and Offtake:

- Provide samples to potential customers
- Broaden marketing base (current focus has been on Asia)
- Secure project involvement by way of offtake, partnership, investment or funding with end users

Other Project Advancement

- Finalise reservation deed for Lansdown property in Townsville
- Finalise port access
- Arrange access to other supporting infrastructure
- Apply for project of state significance in Queensland
- Commence regulatory approvals
- Evaluate opportunity for commercial use of tailings as potential landfill

NICKEL SULPHATE OUTLOOK: Strong Battery Market Fundamentals

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- **Wood Mackenzie** predicts production of nickel in chemicals could rise from 211,000 tpa in 2019 to a peak of **450,000 tpa nickel in 2027**
- The EV sector could drive demand to reach **800,000 tpa nickel by 2035**
- It is feasible that these premiums for nickel sulphate in the battery sector will be available in the years ahead
- The sector's requirements for higher-purity nickel sulphate will be a key consideration for premiums

Priscila Barrera - June 8th, 2020

Global nickel in chemicals production by country

As demand from the electric vehicle (EV) space continues to accelerate, nickel sulphate supply will struggle to meet demand, with output expected to peak in 2027, according to Wood Mackenzie. 8th June 2020