



## Pure Minerals Limited

**ASX Announcement**

**30 July 2019**

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### **Quarterly Activities and Cashflow Report** for quarter ending 30 June 2019

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Pure Minerals Limited (ASX: PM1) ("**Pure Minerals**" or "**the Company**") is pleased to provide the following update on its activities during the quarter ending 30 June 2019.

#### **TECH Project**

During the quarter, Pure Minerals' wholly owned subsidiary, Queensland Pacific Metals Pty Ltd ("**QPM**") continued to make significant progress on the Townsville Energy Chemicals Hub ("**TECH Project**").

#### ***Pre-Feasibility Study ("PFS")***

Lead engineer Lycopodium Minerals Pty Ltd ("**Lycopodium**") progressed well on its work program which incorporates two major engineering plant design packages for the processing of laterite ore to produce a mixed hydroxide precipitate ("**MHP**") and refining of the MHP to produce battery grade nickel and cobalt sulphate.

The PFS remains on schedule for completion in the September 2019 quarter. A snapshot of progress is provided below:

- Process Design Criteria – 95% complete;
- First draft of Process Flow Diagrams – complete;
- Initial mass and energy METSIM model – complete;
- ASPEN modelling of iron hydrolysis circuit (including liquid-vapour equilibria) – complete;
- Commenced development of equipment specification and discussions with vendors on major equipment packages for pricing;
- Data sheets for impact crusher, rod mill, ore dryer, barren evaporator, magnesium oxide mill, decomposition heaters prepared;
- Assessment of power reticulation costs and site substation costs – complete; and
- CSIRO have commenced scoping the critical flowsheet options for the refinery section of the plant.

The QPM owner's team has also made significant progress on works that fall outside the Lycopodium scope. This includes infrastructure requirements and certain costing areas including:

- Infrastructure – power, water, road;
- Consumables – pricing of acid, flocculent and reagents; and
- Logistics – road transport, ore shipping, handling and storage.

During the quarter, QPM also worked with Direct Nickel (“DNI”) to undertake further leach extraction testwork. A number of samples were provided by QPM's ore supply partners, grading between 1.3-1.9% Ni and 0.05-0.30% Co. These samples were selected with wide variability in order for QPM to test leach extraction performance against varying grades of ore and different mine locations. Leach extraction results continued to be positive with Ni extraction >95% and Co extraction >90%.

### ***Selection of Project Location – Lansdown Industrial Precinct (“Lansdown”)***

During the quarter, QPM continued to assess land options with respect to settling on a preferred location for the TECH Project. Subsequent to the end of the quarter, QPM selected a site within the Lansdown Industrial Precinct, 40km west of Townsville, and the Townsville City Council (**TCC**) provided conditional commitment to make the land available for that purpose.

Lansdown is currently zoned as rural land, but the TCC is in the process of rezoning the precinct to a strategic high-impact industrial zone. The TCC is establishing Lansdown to attract new industries such as advanced manufacturing, with its key objectives being:

- Best-practice, low-emission, energy-efficient ecologically sensitive industrial development;
- Innovative and dynamic enterprises that support the creation of new job opportunities for Townsville;
- Co-location of industrial uses, such as advanced manufacturing, processing and technology; and
- Minimising adverse amenity impacts upon lands outside the precinct.

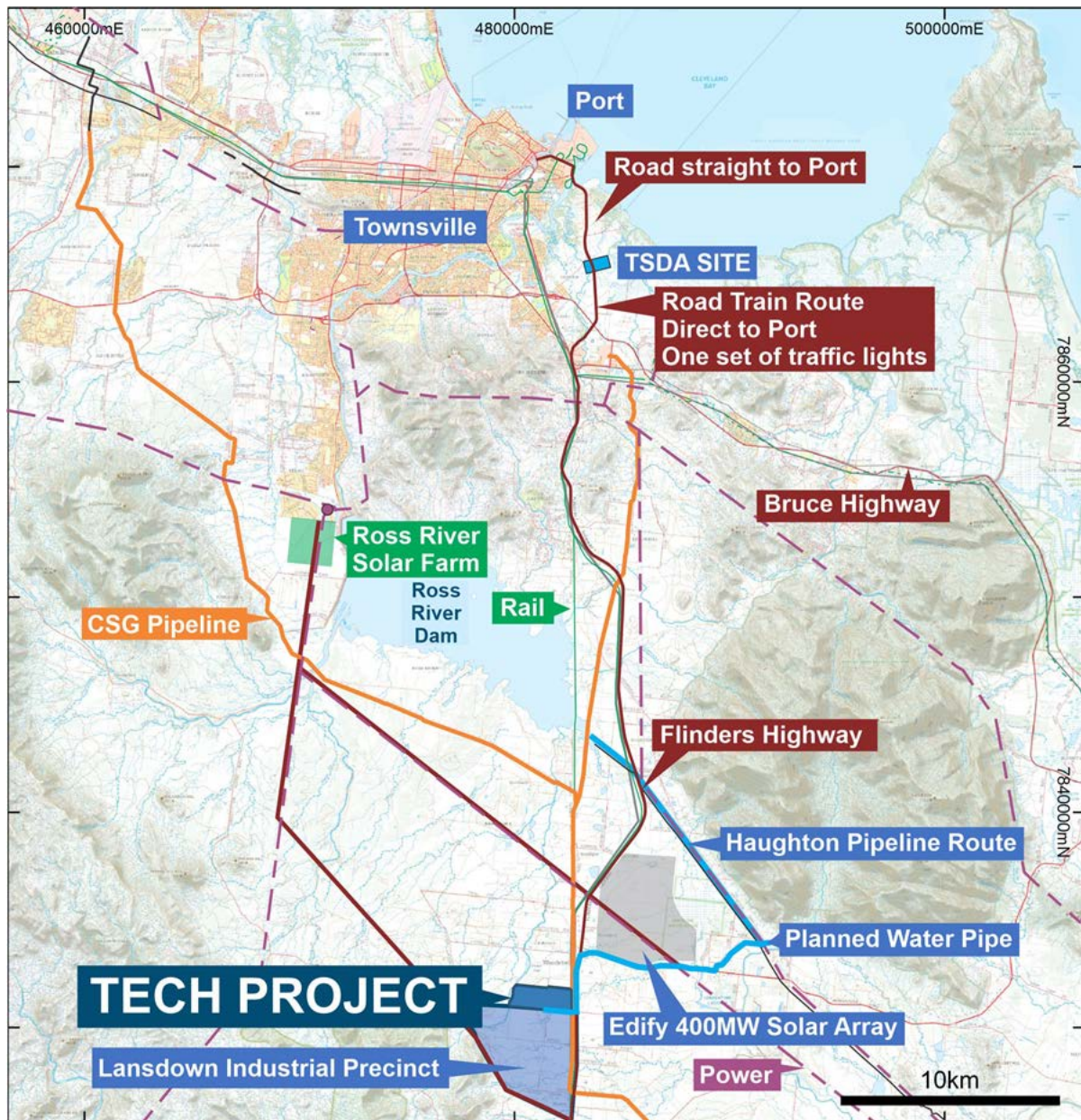


Figure 1: TECH Project Location

The blocks of land conditionally committed to the TECH Project are part Lot 19 (127 hectares) and Lot 20 (162 hectares). Constructing the TECH Project in Lansdown offers many benefits:

**Road** – The Flinders Highway connects the Port of Townsville to Lansdown with only one traffic light. Class 1 and 2 road trains are allowed on the Flinders Highway, which will offer the TECH Project an effective and efficient trucking solution.

**Rail** – There is a 40m wide rail corridor along the Flinders Highway frontage that allows for a spur or siding off the main rail line, which could be an alternative ore transport solution.

**Water** – The Houghton pipeline is currently being duplicated to allow an additional 85GL per annum. The TECH Project requires approximately 1.5GL per annum of raw water.

**Power and Transmission** – The existing Ross River solar farm (150MW) is located in close proximity and the planned Edify solar farm (400MW) is even closer. 66kV transmission lines run directly to the TECH Project site. The TECH Project requires approximately 10MW power per annum.

**Communications** – High speed communications will be available with fibre optic cable running along the site's boundaries.

## **Corporate**

### ***Acquisition of QPM***

During the quarter, Pure Minerals completed the acquisition of QPM and now owns 100% of the outstanding share capital in QPM.

### ***Directors***

John Downie was appointed as Managing Director of Pure Minerals. Mr Downie is a mechanical engineer and has over 30 years' experience in the mining industry. He has extensive experience in lateritic nickel mining and processing, having previously been Director of Mines for Vale's Goro operations, CEO of Gladstone Pacific Nickel and Director of Projects at Queensland Nickel. He has also been employed in senior roles at Barrack Mines NL, Alcoa of Australia Ltd and Boral Resources Ltd.

In conjunction with John Downie's appointment, Lincoln Ho resigned from the Board.

### ***Funding and Grants***

In June, Pure Minerals received firm commitments from institutional and sophisticated investors to raise \$2.1 million (before costs) via a share placement of 123,529,401 fully paid ordinary shares at an issue price of \$0.017 per share ("**Placement**")

Tranche 1 of the Placement has been completed, with 86,919,765 shares being issued and funds received (gross of fees) of \$1.48 million.

Tranche 2 of the Placement is subject to shareholder approval and will result in an additional \$0.62 million (before costs) of funding.

As part of the TECH PFS, CSIRO is undertaking critical flowsheet options works. This work is being subsidised by a \$47,507 grant, provided by the Department of Industry, Innovation and Science's Innovations Connection program.

QPM is still awaiting to hear if it is successful for the CRC-P Grants Scheme.

As at 30 June 2019, Pure Minerals had \$2.69M in cash and cash equivalents.

### ***Marketing***

During the quarter, QPM held a number of meetings with potential customers and parties which may offer strategic assistance to the TECH Project. Trade and Investment Queensland Australia (**TIQ**), a department of the Queensland State Government, has been particularly helpful in assisting QPM and facilitating meetings.

Discussions to date have been positive. Advancing towards running of the pilot plant will be a critical milestone for the TECH Project, as it will provide QPM with significant quantities of nickel and cobalt sulphate for potential customers to conduct testwork on.

### ***Investor Relations***

With the completion of the QPM acquisition, Pure Minerals has started to focus on raising its profile and educating potential investors on the TECH Project. During the quarter, Pure Minerals attended the Minerals and Investment conference in Perth and Mines & Money Brisbane. Subsequent to the quarter, Pure Minerals also attended the Noosa Mining conference.

### **Further information:**

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### Tenement Table: ASX Listing Rule 5.3.3

During the quarter, Pure Minerals relinquished E09/2133 and E09/2136-I relating to the Morrissey Hill project, reaffirming its focus on the TECH Project.

Mineral tenement interests held at the end of the quarter

Tenement ID	Status	Applic. Date	Granted Date	Expiry Date	Holding	Name	Registered Co.
E08/2693	GRANTED	04-Feb-15	29-Sep-15	28-Sep-20	80%	Mt Boggola	Mineral Developments Pty Ltd
E09/2217	GRANTED	17-Feb-17	13-Sep-17	12-Sep-22	100%	Battery Hub	Pure Manganese Pty Ltd
E52/3523	GRANTED	17-Feb-17	06-Nov-17	05-Nov-22	100%	Battery Hub	Pure Manganese Pty Ltd
EPM27035	GRANTED	28-Aug-2018	12-Feb-19	12-Feb-21	100%	Serpentine Ridge	Queensland Pacific Metals Pty Ltd

#### The mining tenement interests relinquished or surrendered during the quarter and their location

E09/2133 and E09/2136-I were relinquished.

#### The mining tenement interests acquired during the quarter and their location

Nil

#### Beneficial percentage interests held in farm-in or farm-out agreements at the end of the quarter

Not applicable.

#### Beneficial percentage interests in farm-in or farm-out agreements acquired or disposed of during the quarter

Not applicable.