Pure Minerals Limited

ASX Announcement **31 January 2019**

Quarterly Activities and Cashflow Report
for quarter ending 31 December 2018

Pure Minerals Limited (ASX: PM1) ("**Pure Minerals**" or "**the Company**") is pleased to provide following update on its activities during the quarter ending 31 December 2018.

Battery Hub Project (100% PM1) – E09/2217 and E52/3523

During the relevant quarter, Pure Minerals, in conjunction with its geological consultants, continued to assess the prospectivity of the Battery Hub Project with primary focus on reviewing the comprehensive testwork conducted by the CSIRO and thoroughly supervised by METS Engineering.

Option to acquire Queensland Pacific Metals Pty Ltd

Pure Minerals entered into a binding option agreement with Queensland Pacific Metals Pty Ltd ("**QPM**") to acquire 100% of the issued capital in QPM ("**Acquisition**") (see ASX announcement on 15 October 2018). QPM is a private Australian company proposing to become a producer of battery metals nickel sulphate and cobalt sulphate.

QPM has entered a binding ore supply agreement to purchase high grade nickel-cobalt ore from its New Caledonian ore supply partners which are Société des Mines de la Tontouta and Société Miniere Georges Montagnat S.A.R.L ("**Ore Supply Agreement**"). In order to process the feed ore, as announced on ASX 22 October 2018, QPM has entered into a framework agreement with Direct Nickel Projects Pty Ltd ("**DNP**"), which owns the intellectual property related to the DNi Process™. This process uses nitric acid to digest, at atmospheric pressure, a range of minerals found in lateritic ores.

Advantages of the DNi Process™ compared with traditional High-Pressure Acid Leach ("**HPAL"**) processing plants are:

- The leaching reagent (nitric acid) can be recycled – this reduces operating costs as acid consumption is minimal
- Nitric acid promotes resistance of stainless steel and thus the materials used to construct the DNi Process™ plant are lower cost and easier to fabricate and source compared with HPAL plant
- DNi Process™ tailings footprint is approximately only one-third of HPAL tailings footprint
- In addition to nickel and cobalt, DNi Process™ can extract other valuable co-products including hematite, magnesia and alumina, which would further improve project economics

Core Metallurgy Pty Ltd ("**Core Metallurgy**") has completed an initial laboratory test program on representative ore samples from New Caledonia. The results of test-work indicate that using nitric acid under atmospheric conditions is highly effective at extracting nickel and cobalt. Extraction and leach time exceeded the target with over 95% extraction and better than four hours leach time.

As announced on 8 November 2018, QPM engaged CSIRO Mineral Resources ("**CSIRO**") to identify the most effective processing flowsheet to upgrade nickel and cobalt mixed hydroxide precipitate ("**MHP**") to produce battery grade nickel and cobalt sulphate (see Figure 1).

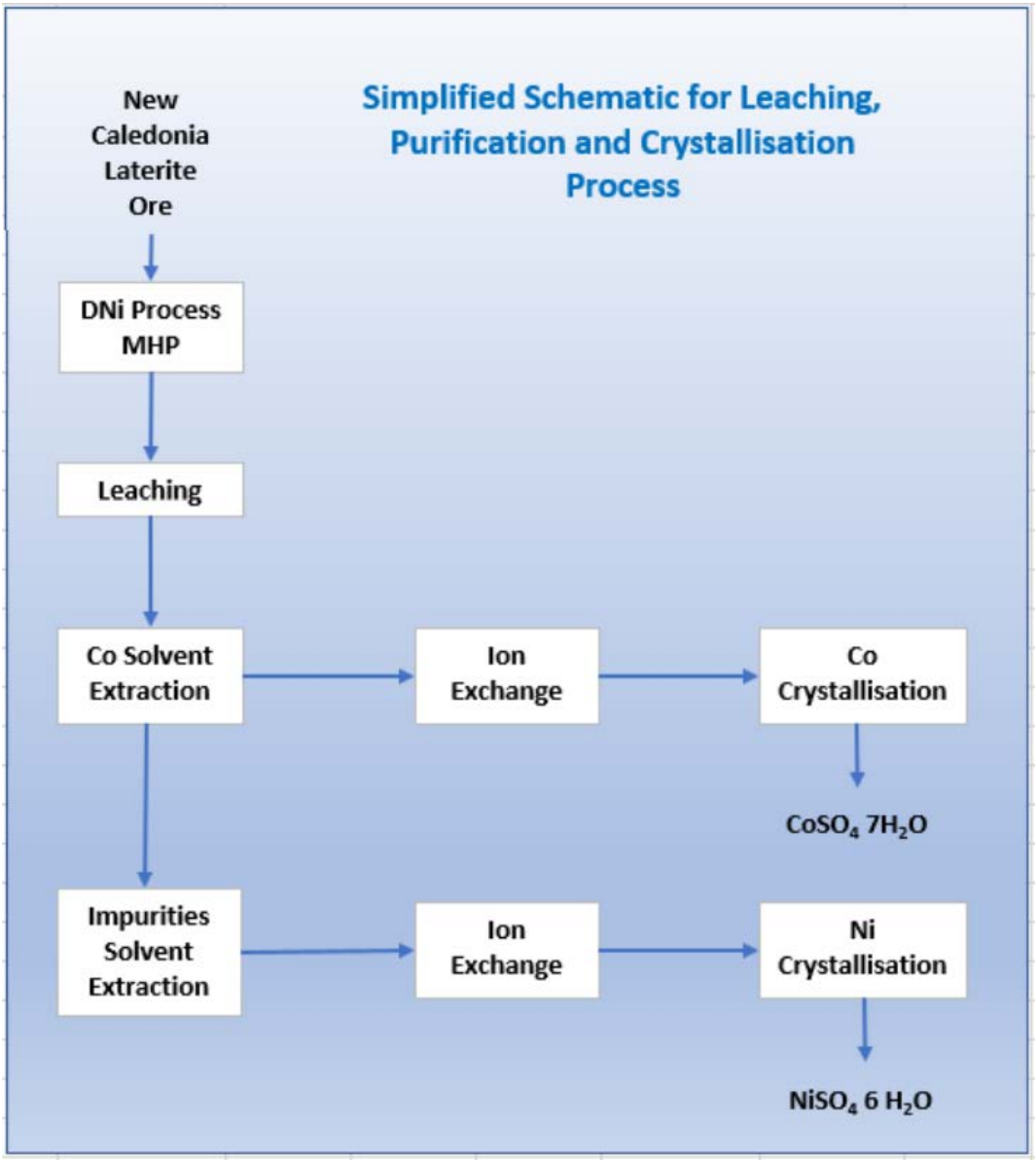

Figure 1: Processing flowsheet from New Caledonia Ore to Final Product

In addition to nickel and cobalt, a raw manganese dioxide product was also produced during the DNi Process™ (see Figure 2).

Figure 2: Nickel-Cobalt MHP from DNi Process™ (green) upgraded to produce Nickel Sulphate (blue), Cobalt Sulphate (orange-pink) and Manganese Dioxide (black)

Post-record date Events

PM1 announced on 21 January 2019 that QPM has released a positive scoping study results on its proposed battery materials refinery in Townsville ("**Scoping Study**"). The Scoping Study was compiled by QPM with assistance from lead consultant Boyd Willis Hydromet Consulting ("BWHC").

Highlights from the Scoping Study are:

- Annual primary production of approximately 25,400 tpa nickel sulphate and 3,000 tpa cobalt sulphate (contained nickel 5,760t and contained cobalt 630t)
- Annual co-product production of approximately 221,000 tpa hematite, 8,700 tpa alumina and 4,600 tpa magnesium oxide
- Construction capital cost of US$297 million, which includes a contingency of US$65 million
- Annual operating cost of A$108 million (US$77 million)

Subsequently, PM1 and QPM has agreed to extend its due diligence deadline from 45 days to 139 days after the execution of the term sheet, being 28 February 2019 and the deadline for PM1 to receive shareholder approvals and regulatory approvals has been extended to 3 May 2019.

Tenement Table: ASX Listing Rule 5.3.3

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
E09/2133	GRANTED	19-Dec-14	20-Jul-16	19-Jul-21	80%	Morrissey Hill	Mineral Developments Pty Ltd
E09/2136-I	GRANTED	04-Feb-15	20-Jul-16	19-Jul-21	80%	Morrissey Hill	Mineral Developments Pty Ltd
E09/2217	GRANTED	17-Feb-17	13-Sep-17	12-Sep-22	100%	Battery Hub	Pure Manganese Pty Ltd
E47/3919	APPLICATION	27-Nov-17	n/a	n/a	100%	Regnard Bay	Pure Minerals Ltd
E52/3523	GRANTED	17-Feb-17	06-Nov-17	05-Nov-22	100%	Battery Hub	Pure Manganese Pty Ltd

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

Nil

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.

Further information:

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