



11 December 2018

## **Cougar Trials Innovative Hydrometallurgical Nickel & Cobalt Extraction Process at Pyke Hill**

- **Bench scale test work provides encouraging initial results utilising Pyke Hill Ni-Co laterite samples – detailed test work programme scheduled**
- **Drilling programme planned to retrieve representative metallurgical scale samples from the high-grade nickel and cobalt zones of the Pyke Hill orebody**
- **Innovative extraction process has the potential to provide a near-term avenue to production at Pyke Hill with a significantly reduced CAPEX requirement**
- **Pyke Hill contains a Total JORC 2012 Resource of 10.5Mt @ 0.99% Ni and 0.08% Co including a high-grade cobalt JORC 2012 Resource of 5Mt @ 0.94% Ni and 0.14% Co**

Cougar Metals NL (“Cougar” or “the Company”) (ASX: CGM) is pleased to provide an update on a test work programme currently being undertaken on an innovative hydrometallurgical extraction process for potential implementation at the Company’s Pyke Hill Nickel Cobalt Laterite Project (“Pyke Hill”) located east of Leonora in Western Australia.

To date, Cougar has carried out an initial test work programme utilising historic reverse circulation (“RC”) drill spoil taken from surface at Pyke Hill. Following a detailed review of this initial programme, it has been determined that a more detailed series of tests is warranted. As a result, a drilling programme is currently being designed to retrieve representative metallurgical scale samples from the high-grade nickel and cobalt zones of the Pyke Hill orebody for use in the next phase of test work.

The hydrometallurgical extraction process was developed by Dr Willer Pos, a former director of AngloGold Ashanti in Brazil who originally devised the process routes to extract metals from secondary sources. These processes have been adapted for the extraction of a range of metals from varying ore types, including nickel and cobalt from laterites.

The hydrometallurgical process is yet to be fully optimised and currently utilises a short leach time (sub 30 minutes) conducted at atmospheric pressure and with no additional heat. A commercial operation with these parameters would result in a significantly lower capital expenditure requirement compared to current and other alternative processing routes.



**Cougar's Executive Chairman, Randal Swick commented,** "We are very encouraged by these initial results, and although we are still in the early stages of investigating this process, we believe it has the potential to provide Cougar with a near-term, low-cost route to production at Pyke Hill.

"One of the key factors on the path to commercialisation will be determining if the process can be appropriately scaled, and we are currently in the final stages of planning a follow-up test work programme that will allow us to gain a clearer understanding of this important aspect.

"We look forward to providing further updates on the outcomes from this follow-up test work programme in due course."

For further information please contact the undersigned via email using [r.swick@cgm.com.au](mailto:r.swick@cgm.com.au)

Yours sincerely  
**COUGAR METALS NL**  
**RANDAL SWICK**  
*Executive Chairman*

#### **Forward Looking Statements**

*Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Cougar Metals NL, industry growth or other trend projections are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors.*

**Pyke Hill June 2018 Mineral Resource (>0.8% Ni or > 0.08% Co)**

Co Domain	Class	Tonnes Mt	Ni %	Co %	Ni Metal Tonnes	Co Metal Tonnes
High Co >0.08% Co	Measured	1.9	0.94	0.13	17,900	2,500
	Indicated	3.0	0.94	0.14	28,600	4,300
	<b>Sub Total</b>	<b>5.0</b>	<b>0.94</b>	<b>0.14</b>	<b>46,500</b>	<b>6,800</b>
Low Co >0.8% Ni, <0.08% Co	Measured	2.3	1.05	0.04	23,800	900
	Indicated	3.2	1.02	0.04	32,600	1,200
	<b>Sub Total</b>	<b>5.5</b>	<b>1.03</b>	<b>0.04</b>	<b>56,500</b>	<b>2,100</b>
<b>Total</b> <b>&gt;0.8% Ni or &gt;0.08% Co</b>	Measured	4.2	1.00	0.08	41,800	3,400
	Indicated	6.3	0.98	0.09	61,500	5,500
	<b>Total</b>	<b>10.5</b>	<b>0.99</b>	<b>0.08</b>	<b>103,300</b>	<b>8,900</b>

(Rounding discrepancies may occur in summary tables)



Figure 1: Pyke Hill Ni-Co Project location map

## COMPETENT PERSONS STATEMENT

*The Information in this report that relates to Mineral Resources previously reported, see ASX Announcement 11 September 2018, "Pyke Hill Nickel Cobalt Laterite Project – JORC 2012 Resource Statement".*