

# QUARTERLY ACTIVITIES REPORT

## June 2018



GME Resources Limited (“**GME**” or “**the Company**”) (ASX:GME) progressed the Pre-Feasibility Study (“**PFS**”) on its 100%-owned NiWest Nickel-Cobalt Project in Western Australia (“**NiWest**” or “**NiWest Project**”) during the June 2018 quarter.

- **Preliminary test results from Column Heap Leach testing program supports recovery and leach cycle time advantage of lower heap heights.**
- **NiWest PFS now incorporating additional work programs undertaken and due for completion at or around end July 2018**

GME has continued to make strong progress in pursuit of both a low technical risk and low capital intensity development pathway for the NiWest Nickel-Cobalt Project. Significant study work during the quarter focussed on the heap leach pad-height / cycle optimisation program, resource modelling, mine planning, plant / infrastructure design, cost estimations and final product marketing / sales analysis.

The study work to date, coupled with the success of the historical large-scale heap leaching conducted at Glencore’s adjacent Murrin Murrin Project, highlight the potential opportunity to present a cost effective leaching alternative to the high risk and costly high pressure acid leach (HPAL) process that has to date generally failed to make laterite nickel – cobalt projects attractive investment propositions.

The continuing imbalance in global nickel supply and demand has seen the LME inventories decrease by almost 100kt over the past 6 months. The tightening supply in traditional nickel products coupled with the rapidly growing demand from the Li-ion battery minerals market coincides with the progression of the NiWest Ni – Co project towards being a key supplier to this high growth market.

A handwritten signature in black ink, appearing to read "Jamie Sullivan".

**JAMIE SULLIVAN**  
MANAGING DIRECTOR

9 July 2018

## NIWEST (NICKEL-COBALT) PROJECT

### Pre Feasibility Study

#### Introduction

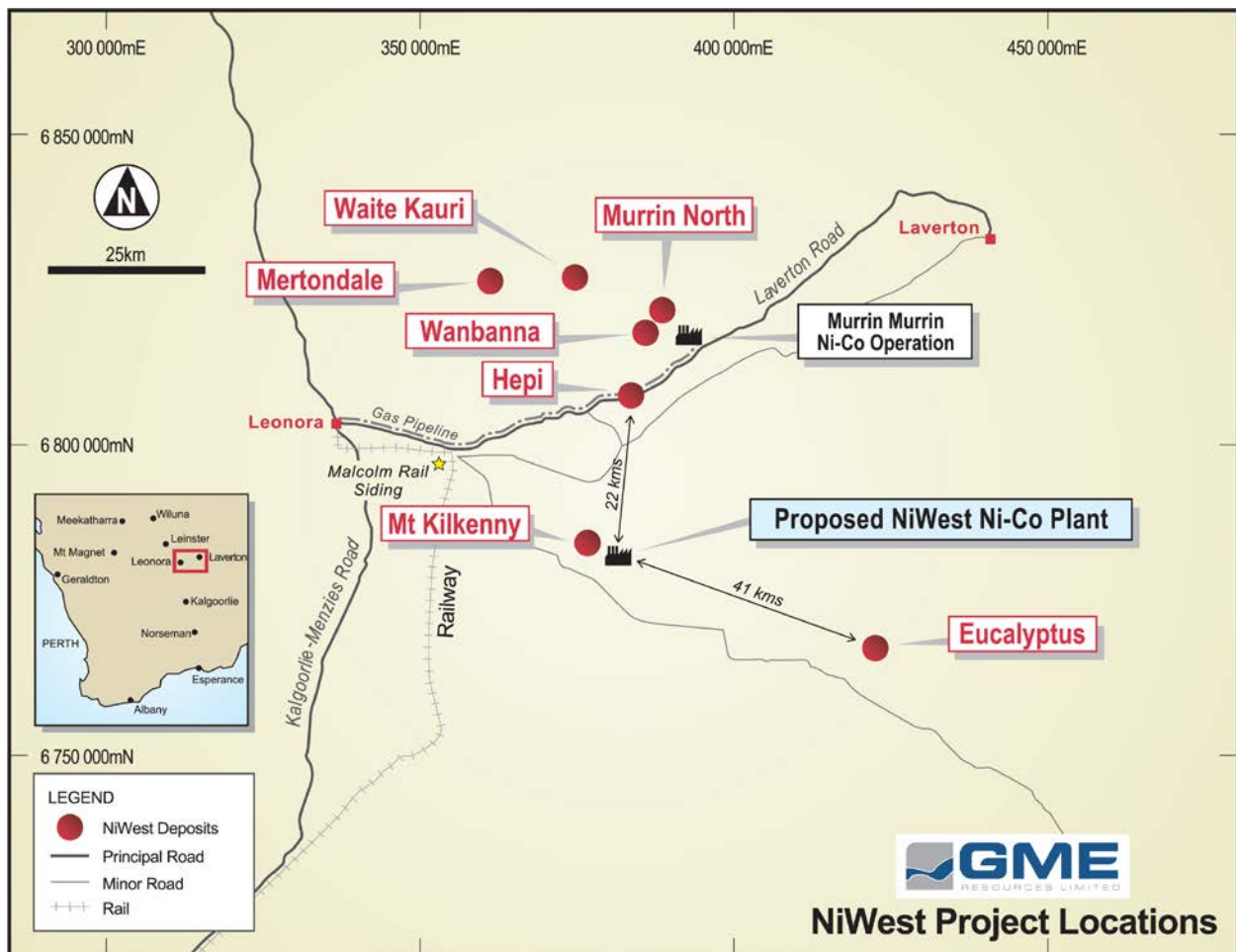
The NiWest Nickel-Cobalt Project is one of the largest high grade, undeveloped nickel-cobalt deposits in Australia. In February 2017 GME defined a Mineral Resource Estimate of approximately 81 million tonnes containing 830,000 tonnes nickel and 52,000 tonnes cobalt (refer Appendix 1 and ASX release dated 21 February 2017).

Past feasibility work has focussed on various processing routes, including high pressure acid leach (HPAL), atmospheric leach (AL) and heap leaching (HL). Recent advances in heap leaching, notably at the large copper projects in South America, have led to a resurgence in the evaluation of heap leaching in pursuit of a low technical risk and low capital cost alternative to the more risky and capital intensive HPAL and AL options. Technical evaluation and metallurgical testwork on the NiWest Project has also more recently focussed on developing a simple, cost effective and flexible flowsheet to deliver high-purity nickel and cobalt products to service the rapidly growing Electric Vehicle (EV) battery minerals market.

To that end, the PFS on NiWest that commenced in July 2017 is based on an on/off Heap Leach and Direct Solvent Extraction (DSX) flowsheet. Key study work during the quarter focussed on the heap leach pad-height / cycle optimisation program, resource modelling, mine planning, plant / infrastructure design, cost estimations and final product marketing / sales analysis.

#### Mineral Resource

The current Mineral Resource Estimate (JORC 2012) at a 0.8% nickel cutoff is 81 million tonnes at 1.03% nickel and 0.06% cobalt, and at a 1% cutoff is 35.1 million tonnes at 1.21% nickel and 0.08% cobalt (refer Appendix 1 and ASX release dated 21 February 2017).



The review of the Eucalyptus, Hepi and Mt Kilkenny, resource models, with the aim of better delineating the higher grade nickel and cobalt areas of the deposits, is nearing completion. These areas are being prioritised in the detailed mine planning currently underway.

### ***Ore Reserve & Mine Planning***

The PFS will incorporate the maiden Ore Reserve estimate, which in turn will be based on the updated Mineral Resource model. Mine planning is focussing on the Mt Kilkenny, Eucalyptus and Hepi resource areas, with the proposed processing plant to be located at Mt Kilkenny.

### ***Metallurgical Development***

On 9 October 2017, GME announced that it had produced high purity nickel products including nickel sulphate, nickel carbonate and nickel cathode. During the March 2018 quarter GME also produced high quality cobalt sulphide. As a result, the Company has now successfully tested all stages of the proposed flowsheet, namely heap leach, acid neutralisation and Fe/Al removal, direct solvent extraction (DSX) and nickel/cobalt production.

#### ***Heap Leaching***

A testing program to optimise certain heap leaching parameters was commenced in February 2018. The program comprised comparing the performance of 2 metre high columns with 4 metre columns to assess the benefits of lowering the heap height.

Benefits typically associated with lower heaps include increased recovery, shorter leach cycles and improved geotechnical stability of the heaps.

The residue from the respective leached columns is currently being assayed and analysed to confirm the results of the testing. The outcome of the testing will be reflected in the PFS.

#### ***Direct Solvent Extraction***

Batch and pilot testing of the proposed direct solvent extraction flowsheet was completed and reported on in the March 2018 quarter. Refer to Appendix 2 for a summary of the overall program.

### ***Processing & Refining***

The PFS will determine capital and operating cost estimates for the NiWest Project based on the following process flowsheet:

- Crushing & Agglomeration
- Heap Leaching
- Acid Neutralisation and Fe/Al Removal
- Direct Solvent Extraction
- Nickel Sulphate and Cobalt Sulphate Crystallisation

### ***Infrastructure***

It is proposed that the operation will include an acid plant to produce sulphuric acid for the heap leach operations as well as by-product power for the processing plant.

Water will be sourced from local aquifers at Mt Kilkenny and from dewatering of the open pits. Power will be sourced from the acid plant and back up power will be provided by way of diesel generators.

### ***Marketing & Sales***

The Heap leach and DSX flowsheet configuration adopted in the PFS purposefully provides flexibility to tailor final nickel and cobalt products to the specific requirements of Li-ion battery manufacturers. The pilot plant testing conducted to date has confirmed that the various nickel and cobalt products can be produced to the requisite quality.

GME has conducted a review of the nickel and cobalt markets, including the rapidly emerging Li-ion battery minerals market. The review not only provides the various marketing and sales assumptions in the PFS, but also provides a springboard for more comprehensive engagement with key players in the nickel and cobalt offtake markets post completion of the PFS.

### **Nickel & Cobalt Markets**

The LME quoted price of nickel increased by 12% to US\$14,823 per tonne during the June 2018 quarter. LME nickel inventories again fell by nearly 50kt over the quarter to finish at approximately 273kt.

The quoted price of cobalt decreased by approximately 17% to US\$77,550 per tonne during the quarter.

### **GOLD ASSETS**

The rehabilitated Devon Gold Mine remains on Care and Maintenance. No work on the gold assets is planned for the September 2018 quarter.

### **CORPORATE**

#### **Capital Raising**

The Company completed a Renounceable Entitlement Issue (the Offer) during the quarter raising \$2.03 million from the issue of 18,543,855 shares. Directors were very pleased with the level of support from Shareholders with applications received from 334 holders and a shortfall of only \$150,000.

The Offer was partially underwritten by Somers Partners and completion of the Offer was announced on 15 June 2018.

#### **General Meeting**

Results of a General Meeting held on 11 May 2018 were advised to ASX later that day noting that the resolution put to the meeting had been passed.

<b>For further information please contact:</b>		
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<p><b>About GME</b> – GME Resources Limited is an ASX listed exploration and development company with nickel and cobalt interests in Western Australia. GME’s principal asset is its 100% owned NiWest nickel-cobalt project situated adjacent to Glencore’s Murrin Murrin Operation. The Company is presently conducting a Pre-Feasibility Study into the technical and economic viability of a heap leach and direct solvent extraction operation at one of the largest undeveloped nickel/cobalt deposits in Australia.</p> <p><b>More information is available on GME’s website at <a href="http://www.gmeresources.com.au">www.gmeresources.com.au</a></b></p>		

## COMPETENT PERSON STATEMENTS

### NiWest Project

Where the Company refers to the NiWest Nickel/Cobalt Project Mineral Resource Estimate (referencing the release made to the ASX on 21 February 2017), it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the resource estimate with that announcement continue to apply and have not materially changed.

The information in this announcement that relates to Processing / Engineering testwork and related operating and capital cost estimates is based on information reviewed by Mr David Readett (B.E. Met Eng., FAusIMM, CP (Met)). Mr Readett is an independent consulting engineer working through a Company known as MWorx Pty Ltd. Mr Readett is a Chartered Professional Metallurgical Engineer and has 25 years of relevant experience in this area of work. Mr Readett consents to the inclusion in this announcement of the matters based on information provided by him and in the form and context in which it appears.

### Forward Looking Statement

This announcement contains statements related to our future business and financial performance and future events or developments involving GME Resources (GME) that may constitute forward-looking statements. These statements may be identified by words such as "potential", "exploitable", "proposed open pit", "evaluation", "expect", "future", "further", "operation", "development", "plan", "permitting", "approvals", "processing agreement" or words of similar meaning. Such statements are based on the current expectations and certain assumptions of GME management & consultants, and are, therefore, subject to certain risks and uncertainties. A variety of factors, many of which are beyond GME's control, affect our operations, performance, business strategy and results and could cause the actual results, performance or achievements of GME to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements.

## APPENDIX 1: NiWest Resource Estimate JORC 2012

### Mineral Resource Estimate for NiWest Project at 0.8% Ni Cut-off Grade

JORC Category	Tonnes (million)	Nickel Grade (%)	Cobalt Grade (%)	Nickel Metal (kt)	Cobalt Metal (kt)
Measured	34	1.07	0.07	362	23
Indicated	28	1.02	0.06	282	17
Inferred	19	0.97	0.06	186	12
<b>Total</b>	<b>81</b>	<b>1.03</b>	<b>0.06</b>	<b>830</b>	<b>52</b>

### Mineral Resource Estimate for NiWest Project at 1.0% Ni Cut-off Grade

JORC Category	Tonnes (million)	Nickel Grade (%)	Cobalt Grade (%)	Nickel Metal (kt)	Cobalt Metal (kt)
Measured	17.0	1.24	0.08	212	14
Indicated	12.1	1.18	0.07	144	9
Inferred	6.0	1.20	0.07	71	4
<b>Total</b>	<b>35.1</b>	<b>1.21</b>	<b>0.08</b>	<b>427</b>	<b>27</b>

## APPENDIX 2: Hydrometallurgical Development Program – 2017/2018

Stage	Aim(s)	Work Program	Observation(s)	Conclusion(s)
<p><b>1</b></p> <p><b>Neutralisation Batch Testing</b></p> <p><i>ASX release 12/4/17</i></p>	<ul style="list-style-type: none"> <li>Neutralisation of PLS acid and precipitation of &gt;99% of Fe and Al with suitable solid/liquid separation characteristics.</li> <li>Establish the optimum conditions for solution neutralisation, Fe/Al removal and minimisation of target Ni &amp; Co metal losses.</li> <li>Generate a neutralised PLS suitable for subsequent DSX processing.</li> </ul>	<ul style="list-style-type: none"> <li>Conducted in February – April.</li> <li>Conducted batch/continuous solution neutralisation &amp; Fe/Al removal.</li> <li>Conducted tests at a range of pH levels and temperatures.</li> <li>Conducted re-leach tests on neutralised slurry.</li> <li>Established design and determination of process conditions through testing and mass balance modelling.</li> <li>Conducted batch DSX shake-out tests to establish physical and chemical suitability/compatibility of neutralised PLS for DSX.</li> </ul>	<ul style="list-style-type: none"> <li>Tests demonstrated that PLS neutralisation and Fe/Al removal can be undertaken at 40°C using a single stage approach. Test failures did occur at pH levels outside of the optimal range.</li> <li>Addition of a re-leach stage minimises Ni and Co losses.</li> <li>Conditions established to ensure physical and chemical suitability/compatibility of neutralised PLS for DSX.</li> </ul>	<ul style="list-style-type: none"> <li>Single stage neutralisation achieved.</li> <li>Process is effective at temperature of 40°C</li> <li>Established optimum conditions for neutralisation process such that Fe/Al removal, solid/liquid separation and minimum Ni/Co objectives achieved.</li> <li>Require re-leach stage.</li> <li>Process design and mass balance modelling completed.</li> </ul>
<p><b>2</b></p> <p><b>Neutralisation Continuous Pilot Testing</b></p> <p><i>ASX release 3/7/2017</i></p>	<ul style="list-style-type: none"> <li>Replicate results in Stage 1 in a continuous pilot plant environment.</li> <li>Generate 2m<sup>3</sup> of neutralised PLS to enable conducting Stage 3 (Batch and Continuous Pilot Testing of DSX).</li> </ul>	<ul style="list-style-type: none"> <li>Conducted in April – June.</li> <li>Operated a continuous acid neutralisation and Fe/Al removal pilot plant using PLS derived from bulk column heap leach test on a representative sample from Mt Kilkenny.</li> <li>Utilised an industry technology supplier to test and determine the solid liquid characteristics of the neutralised solids.</li> <li>Conducted batch DSX shake-out tests to establish the physical and chemical suitability/compatibility of the neutralised PLS for DSX.</li> </ul>	<ul style="list-style-type: none"> <li>Completed acid neutralisation.</li> <li>&gt;99% Fe &amp; Al removal to below target tenors.</li> <li>Achieved target solids underflow density from thickener.</li> <li>Acceptable vacuum filtration rates.</li> <li>Re-leach stage minimised Ni and Co losses to &lt;3%.</li> <li>Neutralised PLS compatible with DSX.</li> </ul>	<ul style="list-style-type: none"> <li>Successfully replicated Stage 1 batch/ continuous testing results in continuous pilot plant.</li> <li>Confirmed process is effective at temperature of 40°C.</li> <li>Neutralisation achievable in a single stage.</li> <li>Solution generated from proposed HL operation can be prepared for treatment in the DSX stage.</li> <li>Process design and mass balance modelling confirmed and optimised based on results.</li> </ul>

APPENDIX 2: Hydrometallurgical Development Program – 2017/2018 (continued)

Stage	Aim(s)	Work Program	Observation(s)	Conclusion(s)
<p><b>3</b></p> <p><b>DSX Batch &amp; Continuous Pilot Testing</b></p> <p><i>ASX release 5/9/2017</i></p>	<ul style="list-style-type: none"> <li>• Test NiWest DSX flowsheet in a continuous pilot plant.</li> <li>• Production of high purity Ni sulphate electrolyte solution and Co solution for production of a range of potential high purity products.</li> </ul>	<ul style="list-style-type: none"> <li>• Conducted in July - September</li> <li>• Established process design and determined process conditions through batch testing and mass balance modelling.</li> <li>• Designed, constructed and commissioned continuous DSX pilot plant.</li> <li>• Used Mt Kilkenny neutralised solution generated in Stage 2 as DSX feed.</li> </ul>	<ul style="list-style-type: none"> <li>• Plant operated continuously for 5 days.</li> <li>• No phase separation issues noted in the extraction or subsequent stages.</li> <li>• No interfacial crud generated or transferred through the pilot plant circuit.</li> <li>• Target Ni and Co extraction of &gt;95% achieved.</li> <li>• Target advance high purity electrolyte upgrade factors of 14-16x PLS grade achieved.</li> </ul>	<ul style="list-style-type: none"> <li>• PLS and its impurities do not impact on circuit performance.</li> <li>• DSX flowsheet can treat neutralised PLS to generate pure nickel electrolyte that can be tailored to produce multiple high purity products.</li> <li>• Process design and mass balance modelling confirmed and optimised based on results.</li> <li>• Ni purity of &gt;99% achieved.</li> </ul>
<p><b>4</b></p> <p><b>Production of final products</b></p> <p><i>ASX release 9/11/2017</i></p>	<ul style="list-style-type: none"> <li>• Prove technical effectiveness of the refining flowsheet to treat high purity Ni sulphate electrolyte solution.</li> <li>• Demonstrate flexibility of flowsheet to produce range of products.</li> <li>• Generate process design and mass balance modelling.</li> </ul>	<ul style="list-style-type: none"> <li>• Conducted in October 2017 – March 2018.</li> <li>• Designed, constructed and commissioned batch pilot plant systems for Ni and Co production.</li> <li>• Produced Ni sulphate, LME grade Ni cathode, high purity Ni carbonate &amp; high purity Ni chloride products.</li> <li>• Stripped sample of loaded organic with hydrochloric acid to generate pure Ni chloride.</li> <li>• Conducted batch Co IX and SX testing to generate high purity Co sulphide and Co sulphate.</li> </ul>	<ul style="list-style-type: none"> <li>• &gt;99% purity Ni sulphate produced at suitable commercial particle size distribution.</li> <li>• LME grade Ni cathode produced.</li> <li>• Produced high purity Ni carbonate.</li> <li>• Produced high purity Ni chloride.</li> <li>• Produced high purity Cobalt sulphide.</li> </ul>	<ul style="list-style-type: none"> <li>• NiWest process flowsheet adopted in the PFS is capable of producing multiple Ni &amp; Co products to specification.</li> <li>• Process design and mass balance modelling completed.</li> <li>• Process Design Criteria (PDC) established for fully integrated Ni/Co process.</li> </ul>

## APPENDIX 3: Tenement Summary

Project	Tenements	Interest Beginning Period	Interest End Period
<b>Abednego West</b>	M39/427, M39/0825 P39/5557 -5559	Golden Cliffs 100% Golden Cliffs 100%	Golden Cliffs 100% Golden Cliffs 100%
<b>Eucalyptus</b>	M39/744 M39/289, M39/430 M39/344 M39/666 and M39/674 M39/313, M39/568, M39/802 - 803 P39/5459 E39/1795, E39/1859, E39/1860	NiWest Ni Co Rights NiWest 100% NiWest 100% NiWest 100% NiWest 100% NiWest 100% NiWest 100% NiWest 100%	NiWest Ni Co Rights NiWest 100% NiWest 100% NiWest 100% NiWest 100% NiWest 100% NiWest 100% NiWest 100%
<b>Hawks Nest</b>	M38/218	Golden Cliffs 100%	Golden Cliffs 100%
<b>Hepi</b>	M39/717 - 718, 819, P39-5813	NiWest 100%	NiWest 100%
<b>Laverton Downs</b>	M38/1266	Golden Cliffs 100%	Golden Cliffs 100%
<b>Linden</b>	M39/1077 – 1078 E39/1760 ML 39/500	Golden Cliffs 100% GME 10% / 90% Exterra Resources	Golden Cliffs 100% GME 10% / 90% Exterra Mining
<b>Mertondale</b>	M37/591	NiWest 100%	NiWest 100%
<b>Mt Kilkenny</b>	M39/878 – 879, E39/1784 E39/1794, E39/1831 E39/1873 ELA39/2071-72 P39/5508,5509,5510,5528	NiWest 100% NiWest 100% Nil NiWest 100%	NiWest 100% NiWest 100% Under application NiWest 100%
<b>Murrin Murrin</b>	M39/426, 456, 552, 553 and 569	GlenMurrin 100% Nickel Cobalt. Golden Cliffs 100% gold and other minerals	GlenMurrin 100% Nickel Cobalt Golden Cliffs 100% gold and other minerals
<b>Murrin North</b>	M39/758	NiWest 100%	NiWest 100%
<b>Waite Kauri</b>	M37/1216 P37/8427-8428 (MLA 37/1334)	NiWest 100% NiWest 100%	NiWest 100% NiWest 100%
<b>Wanbanna</b>	M39/460	NiWest 80% / 20% Wanbanna Pty Ltd	NiWest 80% / 20% Wanbanna Pty Ltd
<b>Misc. Licences</b>	L37/175, L31/46, L40/25 L39/215, L39/177, L37/205 L39/222, L39/235, L39/237,	NiWest 100% NiWest 100% Golden Cliffs 100%	NiWest 100% NiWest 100% Golden Cliffs 100%

### LEGEND

**E:** Exploration Licence | **P:** Prospecting Licence | **PLA:** Prospecting Licence Application | **M:** Mining Lease | **ELA:** Exploration Licence Application | **L:** Miscellaneous Lease | **MLA:** Mining Lease Application