



A.B.N. 52 007 626 575

17 October 2018

ASX:JRV

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## Jervois Mining Quarterly Activities Report to 30 September 2018

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**Jervois Mining Limited**  
**ACN: 007 626 575**  
**ASX: JRV**

**Corporate Information:**  
223.2M Ordinary Shares  
22.9M Unlisted Options

**Non-Executive Chairman**  
Peter Johnston

**Chief Executive Officer**  
Bryce Crocker

**Non-Executive Director**  
Brian Kennedy

**Non-Executive Director**  
Michael Rodriguez

**Non-Executive Director**  
Stephen van der Sluys

**Company Secretary**  
Alwyn Davey

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### HIGHLIGHTS

- Jervois Mining ("Jervois") confirms application for Kabanga nickel-cobalt deposit in Tanzania
- Nico Young Pre-Feasibility Study ("PFS") on track for completion in Q4 2018:
  - Metallurgical results continue to show strong cobalt recoveries, with 80% now projected
  - Additional stacking, crushing and bottle roll testwork planned at SGS Australia Pty Ltd ("SGS") in Perth, Australia and HydroGeoSense in Tucson, Arizona USA
  - Focus on 3.0Mtpa scenario as the primary development plan; larger project has significantly improved economics
  - Lycopodium Minerals Pty Ltd ("Lycopodium") equipment selection on 3.0Mtpa production rate largely complete; final assessment of Chinese equipment sourcing underway, including acid plant
  - Nagrom Brisbane Laboratories ("Nagrom") successful generation of mixed hydroxide ("MHP") product sample
  - Lycopodium study scope expanded to include a refinery to produce nickel sulphate and cobalt sulphide
- Australian Mines exercised its A\$6.0 million purchase option over the Flemington nickel-cobalt-scandium project in NSW; completion for both this contract and the Nyngan and Flemington royalty sales to Cobalt27 Capital Corp. ("Cobalt27") for US\$4.5 million is expected in Q4 2018.

## **CORPORATE UPDATE**

### **Prospecting Licence (“PL”) Application over the Kabanga nickel-cobalt deposit in Tanzania**

During the quarter, Jervois confirmed it had applied for a PL over the Kabanga nickel-cobalt deposit in the Kagera region of Tanzania.

Jervois believes the Kabanga sulphide deposit to be the highest quality undeveloped nickel-cobalt deposit in the world, unmatched in scale and grade. Since discovery, the resource has had approximately US\$250 million of expenditure and a definitive feasibility study (“DFS”) completed.

Kabanga was previously subject to a Retention License (“RL”) held by Glencore plc and Barrick Gold, however in January 2018, the Tanzanian government published the Mining (Mineral Rights) Regulations, 2018, which cancelled all existing RLs and stipulated that rights over all areas which were the subject of such RLs reverted to the Government. In May 2018, Jervois applied to the Mining Commission for a PL covering the ground held under the previous RL.

Jervois believes it can significantly improve on the DFS prepared by the previous owners of Kabanga, and that it has the access to capital markets, organisational capacity, expertise and drive to construct the project in an accelerated timeframe. Discussions with the Government of Tanzania are continuing.

### **Investment in eCobalt**

As reported last quarter, Jervois acquired 7.249 million shares or approximately 4.54% of the then outstanding shares of eCobalt Solutions Inc (“eCobalt”) (TSX:ECS), a Toronto Stock Exchange-listed (“TSX”) cobalt company which owns 100% of an advanced development project currently under construction in Idaho, United States.

eCobalt owns the Idaho Cobalt Project outside the town of Salmon in the heart of the historic cobalt belt in Lemhi Country Idaho, United States, which represents the only near-term domestic cobalt production potential in the country.

### **Flemington option exercise**

During the quarter, Australian Mines Limited (ASX:AUZ) elected to exercise its A\$6.0 million purchase option over the Flemington nickel-cobalt-scandium project near Fifield, New South Wales, Australia.

In late 2016, Jervois optioned the Flemington project (exploration licences EL 7805 and EL 8546) to Flemington Mining Operations Pty Ltd, a wholly-owned subsidiary of Australian Mines, for A\$6.0 million in cash, of which A\$2.0 million in rolling option payments had been received by Jervois prior to the final exercise notice.

Australian Mines' notification in late August triggered the final Option Exercise Fee of A\$0.6 million plus GST, which it has paid, with the remainder of the purchase price, A\$3.4 million plus GST, to be paid upon regulatory approval of the transfer by the New South Wales authorities. This is expected to occur during Q4 2018.

The option exercise by Australian Mines created a 1.5% gross royalty to Jervois on all mineral products, which was part of the royalty package sold to Cobalt27 in late June 2018 for US\$1.5 million in cash and 422,856 ordinary shares of Cobalt27. Consequently, closing of the Cobalt27 royalty sale is now also expected to occur before the end of Q4 2018.

Jervois ended the September quarter with A\$3.8 million in cash, A\$6.5 million in public securities and no debt. Subsequent to the quarter end, the company's shareholding in Elementos (ASX:ELT) was also divested for cash proceeds of A\$0.6 million. No profit or loss will be recorded on the sale.

Expenditure on exploration and development for the quarter was A\$1.7 million.

### **Notice of Annual General Meeting ("AGM")**

Jervois' AGM will be at the offices of Baker McKenzie, Level 19, 181 William Street, Melbourne, Victoria, Australia on Wednesday 31 October 2018 at 1400 AEDT.

Jervois has sent its Notice of Meeting and Proxy Form to shareholders, and the documents are also available on the Company's website at [www.jervoismining.com.au](http://www.jervoismining.com.au).

## **PROJECT UPDATES**

### **Nico Young Cobalt/Nickel, NSW, Australia**

#### **Background**

The Nico Young deposit comprises two distinct bodies of mineralization held under separate but adjacent exploration licenses 5527 ("Ardnaree") and 5571 ("Thuddungra"). The Mineral Resource is in an established mining and farming region of central west New South Wales, Australia, around 300 kilometres due west of Wollongong and Sydney ports. The Nico Young deposit is a laterite nickel-cobalt deposit and extends along a 15km NNE-SSW strike. Jervois holds 100% of the licenses with no private royalties or other encumbrances over title. The Mineral Resource is favourably located geographically and is proximate to key infrastructure such as rail and major highways. The deposit is approximately 25 kilometres north west of the township of Young which has a permanent population of 7,000 people.

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## PFS Update

During the quarter Jervois completed a planned drilling programme of both diamond core PQ (85mm diameter) and aircore drilling on the Thuddungra deposit. A total of 62 aircore holes for 3,400 m and 17 diamond core holes for 1,000 metres were drilled. In addition to resource infill drilling, this programme provided further samples for metallurgical testwork and bulk density determinations.

Heap leach metallurgical testwork underway as part of Jervois' PFS for Nico Young continued during the quarter, with samples from the Ardnaree resource at Nico Young undergoing geo-metallurgical testing at Nagrom to determine total acid-soluble nickel and cobalt contents and acid consumption characteristics. Composites representing the three major ore types: limonite, saprolite and weathered serpentinite were subjected to bottle rolls and column leach testing at SGS. Jervois also sent composites to HydroGeoSense for agglomeration and stacking testing.

At the end of August, Jervois reported interim results from this testwork. These positive interim results led the company to raise expected commercial heap leach cobalt recoveries to 80-85%, while nickel was expected to produce recoveries of 70-75%. Latest trends are indicating overall process recoveries of 80% for cobalt and 70% for nickel with more advanced results from column testing guiding to a higher than originally targeted acid consumption of 550kg per tonne of ore. Further crushing tests and bottle rolls have commenced at SGS; the company remains optimistic that these acid consumption levels and recoveries can be improved upon, particularly for nickel.

Results to date have led to an adjustment of the mining and processing schedule at Nico Young to selectively mine lithologies and preferred leaching characteristics, with limonite largely stockpiled for future processing as economics or operations determine.

Site layout and associated material storage points including mine waste, topsoil and process residues (both liquid and solid) have largely been finalized, as have civil and geotechnical plans for heap leach facility design, residue storage facility and evaporation ponds. These designs are now undergoing peer review.

Indications are leading to the 3.0Mtpa production case having improved economics, despite a rise in initial capital. As a consequence, Snowden has been requested to continue pit optimization, sequencing and scheduling associated with both the 1.0Mtpa and 3.0Mtpa production cases, with a focus on the latter.

Lycopodium continued its work as engineering lead for Process Plant and Site Design, with overall process engineering complete for 1.0Mtpa and well advanced for 3.0Mtpa. Metsim mass balances were finalised, and process and mechanical design and equipment selection on both production rates was completed. Major equipment specifications and data sheets have been prepared, with budget quotations solicited. Layouts have been prepared and formal capital and operating cost estimation well advanced.

Metallurgical (neutralisation and mixed hydroxide (“MHP”) production) tests were completed at Nagrom, with an initial MHP sample successfully prepared. Key initial MHP specifications are 34.0% nickel and 4.6% cobalt with acceptable impurity levels. The cobalt is particularly encouraging given the unrepresentatively low cobalt levels in the composites prepared for initial columns and bodes well commercially where payabilities are typically linked to cobalt grade in the product. Despite these positive MHP samples, Jervois has decided to expand Lycopodium’s PFS scope and to incorporate a scoping study on a refinery, that would produce nickel sulphate and cobalt sulphide. Whilst Jervois currently has reservations on the strategic benefits of further processing within Australia, the company acknowledges these concerns are not universally shared by all battery raw material investors. Expectations are that applying consensus commercial terms for nickel sulphate, together with likely capital and operating costs – a refinery will contribute positively to Nico Young investment returns. Lycopodium will complete the refinery study to retain greatest optionality moving into DFS.

A strong focus within the project team is now on value-adding engineering and strategic vendor sourcing, particularly from China. At the 1.0Mtpa production rate, an extremely competitive alternative to a Western supplied acid plant was obtained from a Chinese supplier. Jervois and Lycopodium are now working with the manufacturer to determine if the supplier can assist at the 3.0Mtpa production level.

Soil, heritage, biodiversity, noise and air quality workstreams progressed as part of environmental studies coordinated by RW Corkery & Co. Water consultant AQ2 commenced a site aquifer exploration and bore monitoring drilling programme.

Assessment of logistics continues, with site visits completed to relevant port infrastructure at Newcastle, Botany and Port Kembla, all in New South Wales. Road and rail assessment to site also progressed.

The second hand agglomerator, stacker and conveying heap leach equipment purchased from Fox Resources will be relocated to Mt Isa during Q4 2018. It is currently located at the Mt Cuthbert Copper Project in Queensland, approximately 170km north east of Mt Isa by road.

Jervois expects the Nico Young PFS to be complete in Q4 2018.

## **NON-CORE ASSETS**

### **Flemington / Syerston Scandium/Cobalt/Nickel Project, Fifield, NSW, Australia**

In 2016, Jervois granted an option over its Flemington project (EL 7805 and EL 8546) to a wholly-owned subsidiary of Australian Mines Limited (ASX:AUZ) – Flemington Mining Operations Pty Ltd. This option was exercised in Q3 2018, with completion scheduled for the final quarter of the year.

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## **Khartoum Tin Project, Herberton, Queensland, Australia**

The Khartoum Tin Project comprises six tenements in the Mt Garnet / Herberton area of the Atherton Table Lands, North Queensland, Australia. The area was historically mined for tin and dominated by highly deformed greisen / skarn.

Although the properties are promising, Jervois has determined they are no longer core to its revised strategy to focus on lithium ion battery cathode raw materials. Jervois has established a data room and a process to exit these interests continues.

By Order of the Board

Bryce Crocker  
Chief Executive Officer

### **Australian Tenements**

<b>Description</b>	<b>Tenement number</b>	<b>Interest owned %</b>
Ardnaree (NSW)	EL 5527	100.0
Thuddungra (NSW)	EL 5571	100.0
Syerston (NSW)	EL 7805	100.0
Kingsgate (NSW)	EL 8203	100.0
Area 1 (NSW)	EL 8474	100.0
6 Block (NSW)	EL 8546	100.0
West Arunta (WA)	E80 4820	49.0
West Arunta (WA)	E80 4986	49.0
West Arunta (WA)	E80 4987	49.0
Old Khartoum (QLD)	EPM 14797	100.0
North Khartoum (QLD)	EPM 15570	100.0
Khartoum (QLD)	EPM 19112	100.0
Three Mile Creek (QLD)	EPM 19113	100.0
Carbonate Creek (QLD)	EPM 19114	100.0
Mt Fairyland (QLD)	EPM 19203	100.0

*The information in this report that relates to Exploration Results is based on information compiled by David Selfe (MAusIMM), a full-time employee of Jervois. David Selfe has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. David Selfe consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.*

## Appendix 5B

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

### Name of entity

JERVOIS MINING LIMITED

### ABN

52 007 626 575

### Quarter ended ("current quarter")

30 September 2018

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	600	600
1.2 Payments for		
(a) exploration & evaluation	(1,686)	(1,686)
(b) development	-	-
(c) production	-	-
(d) staff costs	(210)	(210)
(e) administration and corporate costs	(407)	(407)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	14	14
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other (provide details if material)	1	1
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,688)</b>	<b>(1,688)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(1)	(1)
(b) tenements (see item 10)	-	-
(c) investments	-	-
(d) other non-current assets	-	-

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	597	597
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>596</b>	<b>596</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	200	200
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other – Security bonds	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>200</b>	<b>200</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	4,715	4,715
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,688)	(1,688)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	596	596
4.4	Net cash from / (used in) financing activities (item 3.10 above)	200	200
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>3,823</b>	<b>3,823</b>



5. <b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1 Bank balances	3,708	4,600
5.2 Call deposits	115	115
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)*</b>	<b>3,823</b>	<b>4,715</b>

6. <b>Payments to directors of the entity and their associates</b>	Current quarter \$A'000
6.1 Aggregate amount of payments to these parties included in item 1.2	118
6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

Fees paid to Directors on normal commercial terms.

7. <b>Payments to related entities of the entity and their associates</b>	Current quarter \$A'000
7.1 Aggregate amount of payments to these parties included in item 1.2	-
7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

## Mining exploration entity and oil and gas exploration entity quarterly report

<b>8. Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

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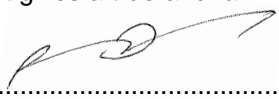
<b>9. Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1 Exploration and evaluation	2,290
9.2 Development	-
9.3 Production	-
9.4 Staff costs	220
9.5 Administration and corporate costs	300
9.6 Other (provide details if material)	-
<b>9.7 Total estimated cash outflows</b>	<b>2,810</b>

<b>10. Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	<b>Tenement reference and location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
10.1 Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced				
10.2 Interests in mining tenements and petroleum tenements acquired or increased				

**Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here:

  
.....  
(Director/Company secretary)

Date: 17 October 2018

Print name: Alwyn Davey

**Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.