

30<sup>th</sup> April 2019

Australian Securities Exchange Announcement

## **March 2019 Quarterly Update**

### **Highlights:**

- **Engineering Design Study (IDS) finalisation in Holland, with data generated to support FEL3 program**
- **Strong ongoing interest from potential offtake partners**
- **Adjustments to timeline following review of product mix, optimal market opportunities and scale requirements**

Leaf Resources Limited (ASX: LER) ('Leaf' or 'the Company') is pleased to provide an update on its activities for the quarter ended 31 March 2019 and an outlook on the business for the balance of 2019.

During the past quarter the Company, with the support of project development JV partner Claeris, has continued to progress towards the path of establishing the first Malaysian biorefinery project using Leaf's proprietary Glycell™ technology.

### **Operational Update**

Work associated with the final integrated demonstration study (IDS) was conducted in Holland during the quarter. Relevant equipment and processes were optimised on an integrated basis to achieve Performance Qualification. Tonne quantities of sample material is in storage awaiting potential offtake groups call for material in their feedstock evaluation.

Following a review of these engineering trials, it was determined that sufficient data and technical information have been generated to support the FEL3 program (Front End Loading level 3) currently underway in Malaysia. The FEL3 work is being undertaken by TechnipFMC and commenced in January. TechnipFMC is a UK-based international engineering company which operates in 40 countries and has a strong presence in Malaysia where it works closely with Petronas.

The FEL3 study is anticipated to be completed in third quarter 2019 and will provide critical input to the bankable feasibility study which will support final due diligence and project financing for the proposed biorefinery.

## **Biomass supply and industrial sugar offtake negotiations**

Biovision and Greenergy (B&G) has reaffirmed its commitment to supply Leaf with empty fruit bunch as the key biomass input to the Glycell™ process. B&G – which is located adjacent to the Johor biorefinery site where Leaf has an option to purchase site land - has logistics in place to efficiently transport biomass from nearby palm mills. A Memorandum of Understanding is in place between Leaf and B&G, with negotiations continuing towards a definitive supply agreement.

During the quarter, positive negotiations continued with several potential offtake partners. These companies have expressed a strong interest in securing supply of clean industrial sugars for use in their own downstream manufacturing operations.

Petronas Chemicals group, one of the largest integrated chemicals producers in South East Asia, has been in regular discussion with the Company and continues to assess its potential offtake requirements for its selected renewable chemical projects in development.

Several other potential offtake partners are also in discussions with the Company.

## **Potential change in current timetable**

Following recent discussions with potential offtake partners, the Company has been able to refine planning relating to the anticipated volume and mix of industrial sugars that may be required by those companies. This has enabled a review of the staged construction of the biorefinery to better meet those needs, while managing the capital risk.

The project timeline is likely to be three to four months later than previously anticipated with commencement of construction (subject to final feasibility and financing) moving into the first quarter of 2021.

The Board and management believe this amended plan will deliver improved economic outcomes and a more certain outlook in respect of project structure, commercial arrangements and financing pathway.

Discussions, negotiations and new information coming to hand with a number of key groups that were expected in the first half of 2019 have changed the pace and pushed the project timeframe out by 3-4 months. The board and Management believe the reframed approach should deliver improved outcomes for Leaf's position in respect to the project structure, commercial arrangements, and financing pathway.

## **Patents granted for Glycell™ technology**

IP Australia (the Australian Patent Office) has granted Leaf patents which will protect the core intellectual property associated with Leaf's Glycell™ biorefinery technology. The patents cover methods for producing the hydrolysing lignocellulosic

material that is pivotal in the output of useful products from Glycell™, such as fermentable sugars.

The certificates issued are for patent number 2015286230, Methods for hydrolysing lignocellulosic material, and patent number 2015286229, Methods for treating lignocellulosic material. They will provide exclusive commercial rights in Australia through to 2035.

Leaf is pursuing the grant of corresponding patent applications in other key territories including Malaysia, USA and Europe.

Adding strength to the cellulosic intellectual property package developed by Leaf Resources, the company has filed additional patent applications in collaboration with Amalgamated Research Inc. (ARi) for applying simulated bed chromatography (SMB) processes in cellulosic biorefineries. The US-based SMB engineering company has entered into an assignment and license deed with Leaf, whereby Leaf owns the IP rights and ARi has an option as vendor of first choice in the commercial development of SMB equipment.

## **Financials**

Two Directors provided working capital funding to Leaf by way of promissory notes during the quarter (see ASX announcement of 29 March).

Noting the Company's cash position of \$173k at the end of the period, Leaf expects to secure additional funds in the near term and has taken measures to minimise outgoings in the interim period. Leaf also has access to an additional \$400k of funding through R&D Financing.

The Company is progressing discussions with potential Malaysian investors that may result in an investment and ownership structure that provides a more beneficial position for Leaf Malaysia and its shareholders. Additional details will be provided when and if those discussions are progressed to a point of more certainty.

Discussions are also continuing in relation to the potential sale of equipment assets which were purchased to conduct the engineering studies in Holland and are now surplus to requirements. The Company is confident of completing the sale of these items in due course.

## **ENDS**

### **About Leaf Resources Ltd (ASX: LER)**

Leaf Resources is one of the world's leading companies in converting plant biomass into industrial sugars. Our proprietary process for converting biomass-to-functional industrial sugars enable a myriad of downstream technologies for the production of renewable chemicals that will substitute petrochemicals used in manufacturing today. With our project development and continued technical innovation we are building a robust global business



centered on renewable carbon containing products to deliver environmental and economic benefits to our shareholders and our planet. More on [www.leafresources.com.au](http://www.leafresources.com.au)

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## Appendix 4C

### Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

**Name of entity**

LEAF RESOURCES LIMITED

**ABN**

18 074 969 056

**Quarter ended ("current quarter")**

31 March 2019

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (9 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) research and development	(415)	(3,119)
(b) product manufacturing and operating costs	-	-
(c) advertising and marketing	-	-
(d) leased assets	-	-
(e) staff costs	(333)	(1,114)
(f) administration and corporate costs	(311)	(1,428)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	-	-
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	941
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,059)</b>	<b>(4,720)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	(701)
(b) businesses (see item 10)	-	-
(c) investments	(102)	(1,060)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.2	Proceeds from disposal of:		
	(a) property, plant and equipment	-	-
	(b) businesses (see item 10)	-	-
	(c) investments	-	-
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(102)</b>	<b>(1,761)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	4,983
3.2	Proceeds from issue of convertible notes	165	165
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	(307)
3.5	Proceeds from borrowings	595	1,255
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>760</b>	<b>6,096</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 quarter/year to date	574	588
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,059)	(4,720)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(102)	(1,761)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	760	6,096

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	<b>Cash and cash equivalents at end of quarter</b>	<b>173</b>	<b>173</b>

5.	Reconciliation of cash and cash equivalents 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	173	574
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>173</b>	<b>574</b>

**6. Payments to directors of the entity and their associates**

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 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

**Current quarter  
\$A'000**

156

-

Payments to Directors consist of directors' salaries, fees and consulting fees for the quarter, including superannuation. This excludes any amounts that were unpaid as at the end of the quarter.

**7. Payments to related entities of the entity and their associates**

- 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

**Current quarter  
\$A'000**

-

-

8. <b>Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	1,255	1,255
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.		

R&D Financing – advancement of future R&D tax incentive receipts. Lender – Radium Capital. Interest rate 15% per annum for initial \$660k. Interest rate 14% per annum for additional drawings. Security over the future R&D tax incentive cash receipts.

9. <b>Estimated cash outflows for next quarter *</b>	\$A'000
9.1 Research and development	109
9.2 Product manufacturing and operating costs	-
9.3 Advertising and marketing	-
9.4 Leased assets	-
9.5 Staff costs	136
9.6 Administration and corporate costs	89
9.7 Other (provide details if material) (further investment in overseas subsidiary (\$243))	-
<b>9.8 Total estimated cash outflows</b>	<b>334</b>

\* Note, the cash outflows will be offset by additional funds from anticipated R&D Financing of \$400k.

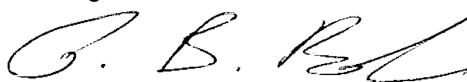
10. <b>Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)</b>	Acquisitions	Disposals
10.1 Name of entity		
10.2 Place of incorporation or registration		
10.3 Consideration for acquisition or disposal		
10.4 Total net assets		
10.5 Nature of business		



### 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)

Date: .....30 April 2019.....

Print name: ....Alex Baker.....

### 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 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 standard applies 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.