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31 October 2016

The Manager Company Announcements Australian Stock Exchange Limited Exchange Centre Level 6 20 Bridge Street SYDNEY NSW 2000

Dear Sir/Madam

## <u>RE: AUSTPAC RESOURCES N.L.</u> <u>QUARTERLY REPORT FOR PERIOD ENDED 30 SEPTEMBER 2016</u>

We are pleased to provide Quarterly Report for the period ended 30 September 2016 for immediate release.

Yours faithfully

N.J. Gaston Company Secretary

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# QUARTERLY REPORT TO 30 SEPTEMBER 2016 HIGHLIGHTS

- Austpac continues to progress the draft licence and investment agreement with a company which has a significant heavy mineral resource in Asia to use the ERMS SR synrutile process. The company plans to beneficiate the heavy minerals and produce ilmenite, rutile and zircon. It also plans to add value to the ilmenite by producing high grade synrutile which it proposes to sell as feedstock for the titanium sponge industry. Minor modifications were made to the agreement during the quarter and it is anticipated it will be signed once final approvals are obtained.
- The original Newcastle Iron Recovery Plant (NIRP) was designed to recycle iron oxide and iron chloride by-products from the steel industry (mill scale, furnace dust and spent pickle liquor) and recover iron and hydrochloric acid (HCl). An electric arc furnace (EAF), which smelts scrap iron to make steel, produces dusts (EAFD) which contain iron oxide and also have high levels of zinc. Recovery of the zinc has been problematic as EAFD is difficult to recycle. Over the past year, Austpac investigated the possibility of combining zinc recovery with the Company's iron and acid recovery processes and has developed a novel way to integrate the well-proven zinc electrolysis currently used in global zinc refineries into the Newcastle Zinc & Iron Recovery Plant (NZIRP).
- A mass balance of inputs and outputs for the integrated process has been developed and preliminary estimates of the capital and operating costs for an integrated flowsheet indicate this option will be viable. The use of proven technology will lower commercial risk.
- Detailed estimates of capital and operating costs are now being refined and potential sources of raw materials for the NZIRP are being reviewed to develop an economic model to fit the requirements of the current Australian steel industry. An option under consideration is to complete the iron and acid recovery plant, which would significantly reduce the initial capital requirement, and once the plant is cash flow positive, the zinc recovery circuit would be added.
- A patent application to cover Austpac's new recycling process to recover zinc, iron and hydrochloric acid is in the final stages of preparation and will be lodged in November 2016.
- Over 60% of the 87 million tonnes of steel produced in the USA each year is made using EAFs, so the potential for a process to recycle hundreds of thousands of tonnes of waste EAFD is significant. Austpac continues to advance discussions with a group of influential companies in the USA who recognise that Austpac's technologies create an immediate business opportunity and who are awaiting confirmation that Austpac's zinc recovery technology is viable. The group is in contact with a number of steel mills and has identified a number of suitable sites for a commercial zinc-iron-HCl recovery plant in North America. We are now jointly developing a preliminary economic model for plants sited in the steel-producing areas of the northeast of the country.
- Austpac continues to discuss alternative sources of project capital for the NZIRP with a number of Australian and US corporations and finance houses.
- In October 2016, Austpac received a \$266,865 R+D tax concession refund.



### **NEWCASTLE ZINC & IRON RECOVERY PLANT**

Primary steel is produced from iron ore by using a blast furnace (BF) and a basic oxygen furnace (BOF). The fine dust emitted from these furnaces contains predominantly iron oxide with some minor contaminants, including zinc. Testwork by Austpac before 2010 indicated it was possible to produce marketable iron with very low levels of contaminants together with strong HCl, while zinc could be removed during the iron reduction stage and captured as zinc oxide. The NIRP was designed to incorporate this process.

Steel can also be produced by melting scrap iron in an electric arc furnace (EAF). Iron scrap generally contains other metals, including zinc derived from galvanised iron, and the dust from an arc furnace contains as much as 40% Zn in the dust, occurring as zinc oxides and other zinc minerals. EAF dust (EAFD) is a hazardous waste from which it is difficult to recover the zinc. Testwork on high-zinc EAFD in the pilot plant at Newcastle showed that while an acceptable iron pellet could be produced it was not possible at that time to produce marketable zinc oxide due contamination from carbon and other impurities.

Recognising that EAFD is a significant zinc resource, Austpac has investigated hydrometallurgical zinc recovery processes that potentially could be integrated with the Company's iron and hydrochloric acid process in the Newcastle plant. It was concluded this would be possible by using zinc sulphate electrolysis used by zinc refineries worldwide and the flowsheet was modified so that the NZIRP will be able to produce zinc metal, pig iron and strong hydrochloric acid. Preliminary capital and operating costs for the NZIRP indicate that the plant will be viable and the use of proven technology will reduce the commercial risk.

The current sources and amounts of raw materials for the NZIRP from the Australian steel industry are being reviewed to develop an economic model for the project. One option being considered is a two-stage development, whereby the iron and acid recovery section of the plant would be completed first to reduce the initial capital cost, and once the plant is generating a positive cash flow, the zinc recovery section would be added.

### **ONGOING DEVELOPMENTS IN THE USA**

During the first quarter of 2016, Austpac was approached by and commenced discussions with a group of influential companies in the USA who recognised that Austpac's technologies create an immediate opportunity to recycle EAFD in the US. The US steel industry produces 87 million tonnes of steel, over 60% of which comes from electric arc furnaces. The group has been waiting for Austpac to confirm that the new zinc recovery process was technically feasible, and has during the quarter been in contact with a number of mills and has identified a number of sites in the steel producing region in the northeast of the country.

The parties are now jointly developing a preliminary economic model for commercial zinc-iron-HCl recovery plants in North America.

### ERMS SR SYNRUTILE TECHNOLOGY LICENCE

During the first half of 2016, Austpac was approached by a company with a significant heavy mineral resource in Asia regarding a licence to use the Company's ERMS SR synrutile process. The company plans to develop a mine and a mineral separation plant to produce ilmenite, rutile and zircon, and is seeking technology to add value to the ilmenite. A draft licence and investment agreement has been negotiated under which the company can build a plant to beneficiate the ilmenite and produce high grade synrutile, which the company proposes to sell for use as feedstock for the production of titanium sponge, an intermediate process in the manufacture of titanium metal. The company plans to undertake a scoping study followed by a bankable feasibility study, and it will establish an entity to manage the construction and operation of an ERMS SR Plant.

Minor modifications were made to the agreement during the quarter and the company expects to obtain final approvals in order to sign the agreement.



### EL 5291 NHILL

In June 2016, Austpac executed a Grant Agreement with the State of Victoria as represented by its Department of Economic Development, Jobs, Transport and Resources. The grant is part of the Victorian Government's TARGET initiative to co-fund innovative exploration in the western part of the state. Austpac will be assisted financially to undertake a geophysical and drilling program within the Company's Exploration Licence 5291. Ground magnetic and gravity surveys have been completed and computer modelling is underway. This will be followed with a deep drill hole through over 100 metres of younger Murray Basin sediments to obtain core from deep within the basement to test for porphyry copper-gold and volcanic-hosted massive sulphide systems.

### Mining Exploration Entities:

EL 5291 (Nhill); Located between Nhill and Dimboola, Victoria; 100% Austpac Resources N.L.

#### For further information please contact:

Mike Turbott Managing Director - Tel (+61 2) 9252 2599

NOTE: This report is based on and accurately reflects information compiled by M.J. Turbott who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists and is a competent person as defined in the Australian Code for Reporting of Identified Mineral Resources and Ore Reserves.

#### About Austpac Resources N.L. (ASX code: APG)

Austpac Resources N.L. [<u>www.austpacresources.com</u>] is a minerals technology company currently focused on recycling waste chloride solutions and iron oxides produced by steelmaking to recover hydrochloric acid and iron and zinc. Austpac's technologies also transform ilmenite into high grade synthetic rutile, a preferred feedstock for titanium metal and titanium dioxide pigment production. The Company has been listed on the Australian Stock Exchange since 1986.

+Rule 5.5

# 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

AUSTPAC RESOURCES N.L.

#### ABN

87.002.264.057

Quarter ended ("current quarter")

30 SEPTEMBER 2016

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts		
1.2	Payments for		
	(a) exploration	-	-
	(b) NIRP Mineral Technology Development	(62)	(62)
	© ERMS- other	-	-
	(d) Murray Basin		
	(e) Gold	(20)	(20)
	(f) Administration	(454)	(454)
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	Research and development refunds		
1.8	Other (provide details if material)		
1.9	Net cash from / (used in) operating activities	(536)	(536)

2.	Cash flows from investing activities
2.1	Payments to acquire:
	(a) property, plant and equipment
	(b) tenements (see item 10)
	(c) investments

# Appendix 5B Mining exploration entity and oil and gas exploration entity quarterly report

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
	(d) other non-current assets		
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment		
	(b) tenements (see item 10)		
	(c) investments		
	(d) 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)		
2.6	Net cash from / (used in) investing activities		

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	250	250
3.2	Proceeds from issue of convertible notes		
3.3	Proceeds from exercise of share options		
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 (provide details if material)		
3.10	Net cash from / (used in) financing activities	250	250

4.	Net increase / (decrease) in cash and cash equivalents for the period	(286)	(286)
4.1	Cash and cash equivalents at beginning of period	612	612
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(536)	(536)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	250	250

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	326	326

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	326	612
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	326	612

# 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
- 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

Current quarter \$A'000
47.5

8.	Financing facilities available Add notes as necessary for an understanding of the position	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)		
8.4	Include below a description of each facility above, including the lender, interest rate and		

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.

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Exploration and evaluation	30
9.2	Development- N.I.R.P	150
9.3	N.I.R.P funding	(266)
9.4	Staff costs	
9.5	Administration and corporate costs	200
9.6	Other (provide details if material)	
9.7	Total estimated cash outflows	114

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
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:30.9.2016

Print name: ......N.J. GASTON .....

### 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.