

31 January 2017

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

Dear Sir/Madam

RE: AUSTPAC RESOURCES N.L.  
QUARTERLY REPORT FOR PERIOD ENDED 31 DECEMBER 2016

We are pleased to provide Quarterly Report for the period ended 31 December 2016 for immediate release.

Yours faithfully

N.J. Gaston  
Company Secretary

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## QUARTERLY REPORT TO 31 DECEMBER 2016

### HIGHLIGHTS

- The Newcastle Zinc & Iron Recovery Plant (NZIRP) has been redesigned to recycle iron oxide and iron chloride by-products from the primary steel industry (mill scale, furnace dust and spent pickle liquor), as well as the dusts from electric arc furnaces used in secondary steel-making which generally contain high levels of zinc. The Plant will initially produce pig iron, zinc oxide and strong hydrochloric acid (HCl) for sale to industry. This configuration will significantly reduce the capital cost and process risk for the project. Once the first stage is operational, a second stage can be added to convert the zinc oxide product into higher value zinc metal by incorporating the well-proven zinc electrolysis process currently used in global zinc refineries into the Plant.
- In November 2016, Austpac lodged a patent application to protect this new recycling process.
- In October 2016, Mr Colin Iles was appointed a consultant to Austpac Resources N.L. Colin is a metallurgist with over 35 years' experience in international trade, sales and business development and the commercial management of technical projects at plant level. Colin was previously General Manager for Cometals Australia; a subsidiary of the Commercial Metals Company headquartered in Texas, U.S.A. He is experienced in metals marketing and was responsible for key objectives of profit, production and marketing for CMC Cometals Australia. Colin has been intimately involved with supply and offtake contracts with the Australian and international iron and steel industry and is an expert in international metals sourcing and trading. Since October 2016, Colin has been closely involved in the commercialization of the Newcastle Zinc Iron & Recovery Plant and he will be assisting with the testwork program to produce iron and zinc products for marketing purposes.
- Austpac's management and technical team, assisted by Colin Iles, has developed a plan to implement stage 1 of the NZIRP, which will include a pilot scale test program to produce pig iron and zinc oxide to prove the marketability of these products. It is envisaged this program will commence in March 2017. Mass and energy balances and costs for stage 1 are also 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.
- Over 60% of the 87 million tonnes of steel produced in the USA each year is made using EAF's. They produce hundreds of thousands of tonnes of EAFD, so the potential for Austpac's zinc-iron-HCl recycling process is significant. Austpac has for some time been in contact with an influential group of industrialists which is encouraged by the recent upswing in the US steel industry and who has identified a number of suitable sites for a commercial zinc-iron-HCl recovery plant in North America. They have recently been approached by a US steel producer interested in Austpac's technology and this will be followed up in the coming quarter.

- 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 is still being advanced. The company plans to benefitiate the heavy minerals and produce ilmenite, rutile and zircon and to add value to the project by using Austpac's ERMS SR process to produce high grade synrutile to sell as feedstock for the titanium sponge industry. The company has advised Austpac that project funding has been progressed and that it anticipates this will be finalised during the first quarter of 2017.
- Austpac continues to investigate alternative sources of project capital for the NZIRP and is discussing options with a number of Australian and US corporations and finance houses.
- Austpac anticipates receiving a significant R+D tax concession refund during the coming quarter.

### **NEWCASTLE ZINC & IRON RECOVERY PLANT (NZIRP)**

Blast furnaces (BF) and basic oxygen furnaces (BOF) used in primary steel-making emit fine dusts which predominantly contain iron oxide with some minor contaminants, including zinc. In 2010, Austpac combined these dusts with spent pickle liquor (SPL) from the steel industry and produced marketable iron pellets with very low levels of contaminants, together with strong HCl. Zinc and other volatile metal contaminants were removed during the iron reduction stage and captured as oxides, though levels were economically insignificant.

The iron scrap used by electric arc furnaces (EAF) in secondary steel-making generally contains other metals, including zinc derived from galvanised iron. EAF dust (EAFD) contains as much as 40% Zn, occurring as zinc oxides and other zinc minerals. Austpac's early testwork at Newcastle on high-zinc EAFD had also shown that an acceptable iron pellet could be produced, but at that time the zinc oxide was unmarketable due to contamination from carbon and other impurities.

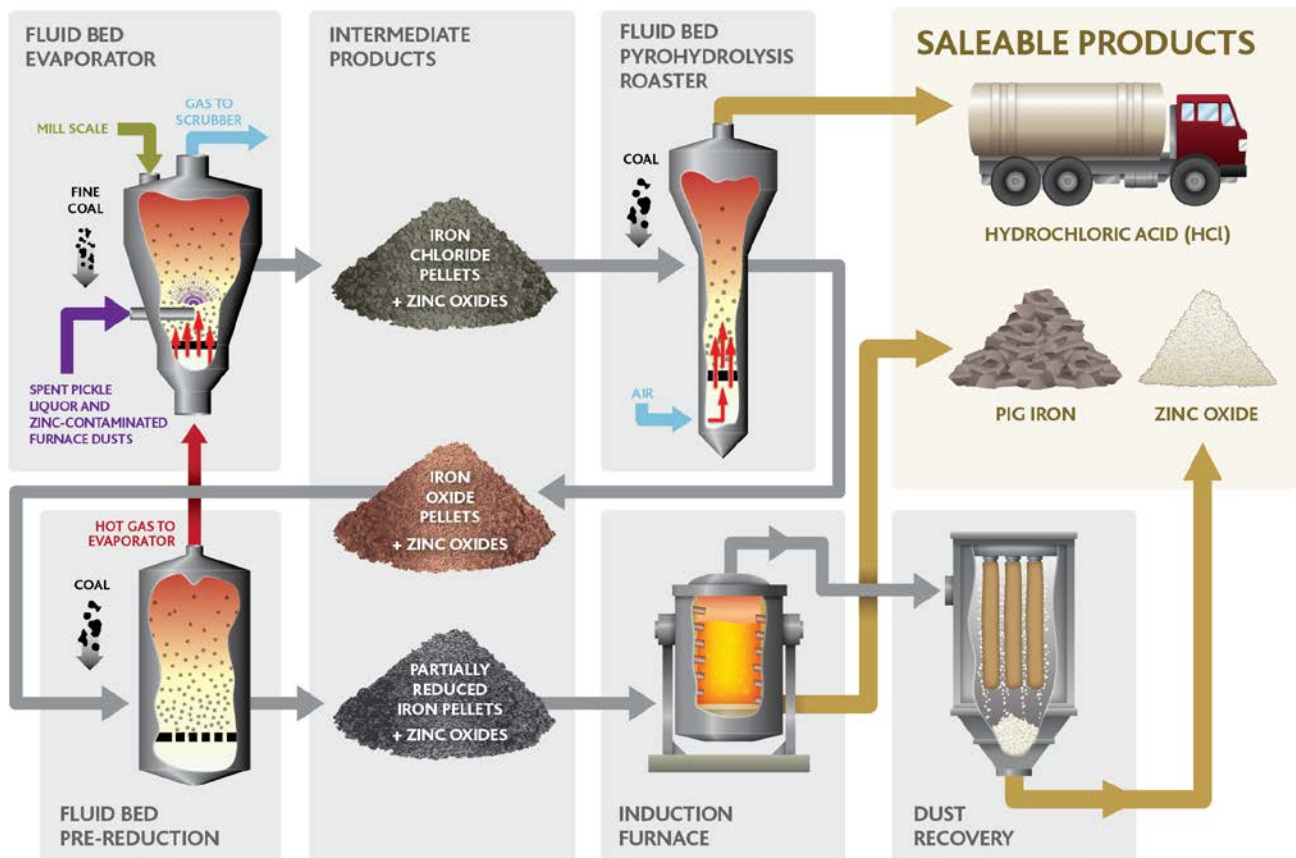
In 2015, Austpac decided to replace its planned two-stage fluid bed iron reduction oxide process with a single fluid bed stage to produce partially reduced iron pellets which will be fed to an electric induction furnace (EIF) to make pig iron. Pig iron is a higher value product compared with the briquetted iron previously contemplated. Any volatile metal components from the EAFD contained in the partially reduced iron pellet feed to the EIF will be removed with the furnace exit gases and be captured in a baghouse.

Recognising that EAFD is a significant zinc resource and that the use of an EIF enables its capture as an oxide, during the second half of 2016, Austpac investigated adding a zinc sulphate electrolysis circuit as a final process step so that the NZIRP could produce zinc metal, pig iron and strong hydrochloric acid. While this option was potentially viable it significantly increased to the capital cost, so it was decided to focus first on the production of pig iron and strong acid for recycling to industry, and zinc oxide which could be sold as a high grade feedstock to a zinc refinery. This first stage simplifies the flowsheet, reduces process risk by using proven technology, and reduces the initial capital cost.

The ability to recover pig iron, strong HCl and zinc oxide from zinc-contaminated dusts from the steel industry is unique. Accordingly in November 2016, Austpac lodged a patent application entitled "Processing of Zinc-Containing Waste Materials" to protect this new recycling process

Austpac's management and technical team has been augmented by Colin Iles, who joined the Company as a consultant in October 2016. Colin is a metallurgist with over 35 years' experience in international trade, sales and business development and the commercial management of technical projects at plant level. Since October he has been closely involved in planning the commercialization of the Newcastle Zinc Iron & Recovery Plant. The team has been developing a strategy to fund and implement stage 1 of the NZIRP, and it has recognised that before construction can recommence it will be necessary to demonstrate that the pig iron and zinc oxide can be produced in the pilot scale plant at Newcastle. This will prove the marketability of these products. A test program has been designed to achieve this and it is envisaged this will commence in March 2017.

Mass and energy balances and costs for stage 1 are being revised and re-estimated 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. Several outside groups have indicated an interest in the outcome of the testwork and marketing program, the success of which will financially assist the Plant's development.



**NZIRP STAGE 1 – PROCESS FLOW DIAGRAM**

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

During the first quarter of 2016, Austpac was approached by and commenced discussions with an influential group of industrialists in the USA who recognised that Austpac’s technologies created an immediate opportunity to recycle EAFD in that country. The US steel industry produces 87 million tonnes of steel, over 60% of which comes from electric arc furnaces that generate large volumes of EAFD. The group has been waiting for Austpac to finalise plans for the zinc-iron-HCl recovery process at Newcastle. They have identified a number of sites in the steel producing region in the northeast of the country, and was recently been approached by a US steel producer interested in Austpac’s technology. The proposed testwork and marketing program will assist the follow up of this opportunity.

### **ERMS SR SYNRTLITE 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 intends to sell 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 now only awaits 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 government-assisted financially to undertake a geophysical and drilling program within the Company's Exploration Licence 5291. The Grant includes three milestones; an initial program of ground magnetic and gravity surveys, followed by a drill hole to test the basement below the younger Murray Basin sediments for porphyry copper-gold and volcanic-hosted massive sulphide systems, and final technical and financial reporting.

Milestone One has been completed, along with the required reporting to the Department. This entailed new detailed ground magnetic data and new close spaced gravity data, followed by computer modelling of both sets of the new field data.

Current work is focused on the selection of the location for the proposed vertical diamond drill hole under Milestone Two of the Grant Agreement. Drilling is planned during the first half of 2017.

### **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. [ [www.austpacresources.com](http://www.austpacresources.com) ] is a minerals technology company currently focused on recycling waste chloride solutions and iron oxides produced by steelmaking to recover hydrochloric acid and iron metal. 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.

## 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")

31 DECEMBER 2016

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts – R+D Tax Concession Refund	267	267
1.2 Payments for		
(a) exploration	-	-
(b) NIRP Mineral Technology Development	(91)	(153)
© ERMS- other	-	-
(d) Murray Basin		
(e) Gold	(30)	(50)
(f) Administration	(322)	(776)
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)		
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(176)</b>	<b>(712)</b>

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

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

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (6 months) \$A'000</b>
	(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)		
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>		

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	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)		
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>-</b>	<b>250</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>	<b>(176)</b>	<b>(462)</b>
4.1	Cash and cash equivalents at beginning of period	326	612
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(176)	(712)
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

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (6 months) \$A'000</b>
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>150</b>	<b>150</b>

<b>5.</b>	<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	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	150	326
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>150</b>	<b>326</b>

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

<b>Current quarter \$A'000</b>
47.5

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

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

<b>Current quarter \$A'000</b>

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

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

**8. Financing facilities available**

*Add notes as necessary for an understanding of the position*

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.

Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000

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<b>9. Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1 Exploration and evaluation	90
9.2 Development- N.I.R.P	450
9.3 N.I.R.P funding	(1,500)
9.4 Staff costs	
9.5 Administration and corporate costs	380
9.6 Other – Vic Govt funding Exploration	(60)
<b>9.7 Total estimated cash outflows</b>	<b>(640)</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: .....31.1.2017.....

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.