

31 October 2019

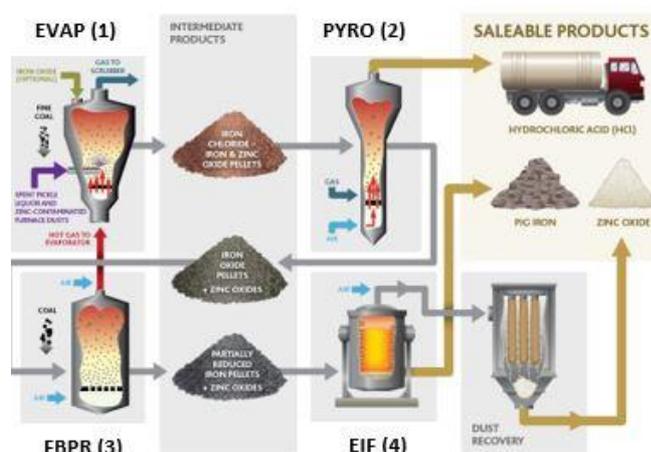
## QUARTERLY REPORT TO 30 SEPTEMBER 2019

### AUSTPAC'S ZINC & IRON RECOVERY PROCESS (ZIRP) PROOF OF CONCEPT TESTWORK PROGRAM SIGNIFICANTLY ADVANCED DURING THE QUARTER AND PRODUCTION RUN NOW UNDERWAY

The ZIRP Proof of Concept ("PoC") program progressed well during the quarter and during October 2019, the finishing touches were made to the equipment at Newcastle that were modified to undertake the first three stages of the process; EVAP, PYRO, and FBPR (see Process Diagram below).

#### Austpac's Zinc-Iron Recovery Process

Austpac's four-stage process Zinc Iron Recovery Process (ZIRP) was developed to recover zinc and iron and hydrochloric acid from zinc-contaminated furnace dusts and spent pickle liquor (SPL), both by-products of steelmaking. The first three stages are proven, and the Company is presently well advanced with a testwork program at Newcastle to prove the fourth stage; the use of an induction furnace to produce samples of pig iron and zinc oxide for market evaluation. A large sample of furnace dust filtercake dust and SPL is being used at Newcastle to produce FBPR pellets for off-site melting tests using an induction furnace.



The ZIRP Process for Recycling Zinc-Contaminated Furnace Dust

#### Current Status of the PoC Testwork Program

##### ZIRP Stage 1

Initial commissioning of the EVAP unit commenced in August 2019 as planned, and a number of further modifications were necessary to ensure the smooth operation of the equipment used for furnace dust slurry preparation have been completed. This included revising the solids delivery feed system to the ball mill to obtain a constant feed rate to the mill, changing the pipework and pumping system for the slurry tank to ensure solids remain in

suspension, raising the fluid bed along with the adjacent gas scrubber by 300mm to accommodate the longer plenum.

During October 2019, the hot gas ducts were installed connect to the EVAP fluid bed with the EVAP gas scrubbing system and the EVAP unit was wrapped with insulation. The slurry preparation area has been tested and as planned, the EVAP fluid bed is being hot-commissioned and it is expected that the production of iron-zinc oxide/iron chloride pellets will commence shortly. These pellets will then be campaigned through Stage 2; PYRO.

### **ZIRP Stages 2 (PYRO) and 3 (FBPR)**

The dual-duty fluid bed roaster for the PYRO and FBPR stages has been installed, as have the hoppers and solids screw feeders for pellets and coal and the hot solids discharge screw. Acid-resistant PVDF piping to connect the roaster with the off-gas scrubbing system and to transfer the scrubbed gases to the exhaust stack has also been installed. The fluid bed roaster is now being insulated and once complete it will be ready for commissioning as soon as the EVAP pellet production run has been completed.

The production runs for the PoC testwork program is now underway at Newcastle. It is expected that the EVAP campaign will be finished in early November, and it will be followed sequentially by the PYRO and the FBPR campaigns, with the objective of completing the first three process stages in November.

Plans are being finalised to undertake the EIF fourth process stage; melting the FBPR pellets in an induction furnace. This will be undertaken off site at a well-equipped independent facility where the experienced personnel will validate the melting results and hence the PoC program and the ZIRP technology.

### **Sale of a Technology Package to Lido Holdings**

In mid-September 2019, Austpac Resources announced that a synthetic rutile technology package developed by the Company in 2006, had been sold to Lido Holdings Limited (British Virgin Islands) for \$1.5 million.

The sale is solely related to the use of information contained in an internal conceptual scoping study undertaken by Austpac in 2006 (the Study).

Lido has the right to use the Study information for its own purposes in China. It is not a licence and the transaction does not represent the sale of any of Austpac's technologies or the transfer of ownership of any Intellectual Property to Lido.

#### **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 furnace dusts produced by steelmaking to recover hydrochloric acid, pig 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.