



15 DECEMBER 2021

ASX:FYI | OTCQX:FYIRF

# OUTSTANDING RESULTS FROM JOINT HPA TRIAL

- FYI and Alcoa joint HPA development pilot plant trial samples achieve an average of 99.9974% Al<sub>2</sub>O<sub>3</sub>, purity, meeting operational and quality expectations
- Trial outcomes continue to demonstrate effectiveness of FYI's innovative HPA refining process aligning with potential customer quality specifications
- Results underpin the progress of the HPA project development between FYI and Alcoa

FYI Resources Ltd (“FYI” or “the Company”) (ASX:FYI; OTCQX:FYIRF; FSE:SDL), is pleased to announce that an average purity of 99.9974% was achieved during the first week of operations of the extended high purity alumina (HPA) pilot plant production campaign undertaken in collaboration with Alcoa of Australia (Alcoa) in November.

Selected samples across all stages of the process were analysed by EAG Laboratories in New York, USA using high level Glow Discharge Mass Spectrometry (GDMS) to provide independent, high accuracy confirmation of the HPA grades.

The results indicate high quality grades were consistently achieved across the series of samples ranging in purity from 99.999% to 99.996% Al<sub>2</sub>O<sub>3</sub>, further validating FYI's innovative HPA flowsheet design.

		Sample 1	Sample 2	Sample 3	Sample 4
HPA (Al <sub>2</sub> O <sub>3</sub> ) Grade	%	99.997%	99.996%	99.998%	99.999%
Total Impurities	ppm	31.1	43.3	19.5	12.0

Results from week one of the extended pilot plant trial conducted from 16<sup>th</sup> to 23<sup>rd</sup> November 2021 in joint development with Alcoa.



Images of the pilot plant in operation – week one of joint extended production



The pilot plant program is in alignment with the joint HPA development project between FYI and Alcoa announced on 1st October 2021 for the development and commercialisation of FYI's innovative process for refining high quality HPA. The development program includes the optimizing of the process flowsheet and variability of feedstocks to improve project economics. Whilst feedstocks variations and blends continue to be assessed, this trial run feedstock was supplied by Alcoa.

Commenting on the joint pilot plant HPA analysis results, **FYI Managing Director, Roland Hill**, said "The results are clearly outstanding and a positive endorsement for our innovative HPA refining process. The quality of the results also speaks to the excellent project development work undertaken to date. Importantly, the high consistent quality of the results provides an insight as to the future potential and direction of our HPA project development as our incremental improvements are incorporated into our flowsheet design. We see the independent HPA results as being significant as the achievement not only places our HPA at the forefront of HPA quality, but the results may also have a positive impact to the project economics (capex and opex improvements) as well as continuing to demonstrate the ability to deliver consistent and reliable high quality HPA product".

### **Next steps**

FYI, in collaboration with Alcoa, will continue the schedule for the extended pilot plant trials. Week two was completed on Tuesday 14th December. Samples from the operations will be sent for independent analysis following internal assessment.

Trials three and four will be scheduled for operations in January 2022 and will focus on product generation for customer assessment purposes.

### **Project Progress**

With key milestones being achieved under the joint development schedule, FYI and Alcoa are progressing the joint development plan set out in the signed Term Sheet Agreement. Whilst the pilot plant operations are not a conditional item to the joint development Term Sheet, the positive results contribute to the further improvement of the process flowsheet and potential increase in the overall project economics. It is a joint objective for continual improvement and optimizing of the flowsheet, by incorporating learnings from previous pilot plant trials and integrating them into the process design.

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This announcement is authorised for release by Roland Hill, Managing Director

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### **About FYI Resources Limited**

FYI's is positioning itself to be a significant producer of 4N and 5N HPA in the rapidly developing high-tech product markets.

FYI applies both an ESG and economic overlay of the Company and its operations to ensure long-term sustainable and shareholder value is created via the development of the Company's innovative, high quality, ultra-pure HPA project.

HPA is increasingly becoming the primary sought-after input material for certain high-tech products principally for its unique properties, characteristics and chemical properties that address those applications high specification requirements such as LED's and other sapphire glass products.

The longer-term driver for HPA, with forecasts of >17% CAGR\*, is the outlook for the burgeoning electric vehicle and static energy storage markets where the primary function is in the use as a separator material between the anode and cathode in batteries to increase power, functionality and safety of the battery cells.

The foundation of the HPA strategy the Company's moderate temperature, atmospheric pressure innovative process flowsheet. The strategy's quality attributes combine resulting in world class HPA project potential.

\* CRU HPA Industry Report 2021