

9<sup>th</sup> October 2019

## FYI'S HPA PILOT PLANT TRIAL SUCCESSFULLY COMPLETED

### Highlights:

- FYI has successfully completed its designated continuous pilot plant trial production run
- Pilot plant performance matched modelled expectations
- All anticipated operating parameters met with final product (HPA) appearing to be of excellent quality
- The trial HPA will be sent to the US for independent analysis
- Commercial samples will be made available to potential customers for testing and application qualification following confirmation of the target grade analysis
- Pilot plant results appear to support the Pre-feasibility Study (PFS) assumptions and confirm the potential to deliver lowest-quartile production costs

FYI Resources Ltd (**ASX: FYI**) ("**FYI**" or "**the Company**") is pleased to announce it has successfully achieved a significant step in progressing the Company's high purity alumina (HPA) development strategy with the completion of trial production at its dedicated pilot plant located in Welshpool, Western Australia.

FYI's HPA pilot plant operated continuously "end to end" from the 2<sup>nd</sup> to 9<sup>th</sup> October on a 24/7 basis. During that time, the pilot plant met or exceeded FYI's modelled operational performances, demonstrating the potential for commercial production of HPA as per the PFS assumptions (refer announcement 25 September 2018).

A short video of the pilot plant in operation may be accessed on the [homepage](#) of the Company's website.

The pilot plant demonstrated that FYI's unique HPA flowsheet could operate on a continuous basis.

FYI undertook the pilot study using the best scale up practices to replicate commercial production. The manually observed results from the pilot plant were consistent with the previously reported testwork.

The successful trial production provides FYI with a complete metallurgical assessment of the product behaviour and characteristics through the refining process. An energy balance has also been developed to determine the requirements for heating and cooling inputs, along with a model for all other inputs (costs) used in the process including providing projections for reagent consumptions and losses of solvent extraction reagents. These results will form the core information for developing the final design and engineering of process plant equipment in the Company's definitive feasibility study (DFS).

Preliminary bench scale metallurgical testwork was carried out to support the initial flowsheet and engineering designs at PFS level. However the Company has demonstrated discipline through completing the pilot-scale testing, as it significantly reduces the risk of commercialising a process and therefore will result in the project being de-risked and a success. Most pilot programs are filled with challenges, especially as the work undertaken during laboratory development often fails to consider important production-scale process factors such as material handling, solid-liquid separations, stream recycling, and waste stream handling. Ultimately, the process development and refinements of pilot-scale testing

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highlights the effectiveness or inefficiencies in the production process that may determine the success of a project.

**Commenting on the completion of trial production from the Company's pilot plant, FYI Managing Director, Roland Hill, said:** "We are really happy with the outcomes of our trial production run from our purpose-built HPA pilot plant. We continue to systematically progress the development of our HPA strategy towards the goal of commercial production of this ultra-pure, in demand product. To do that we needed not only to demonstrate our ability to produce an outstanding product, but also prove long-term ability, consistency and capacity to supply HPA to the many interested offtake partners. The pilot plant results go a long way in validating this objective with the purpose of supplying, what market forecasters such as CRU point to, as an eight-fold increase in demand.

"Through completing the pilot plant trial, we have identified we can further optimise our process, which we expect to have benefit capital and operating cost in the DFS.

"With the trial production now successfully completed, we will progress to our next phase of project development being detailed customer engagement. Following receipt of final quality assessment, we will forward our manufactured product to groups that we have been speaking to regarding commercial sale arrangements."

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**About FYI Resources Limited**

FYI's is positioning itself to be a significant producer of high purity alumina (4N or HPA) in the rapidly developing LED, electric vehicle, smartphone and television screen as well as other associated high-tech product markets.

The foundation of FYI's HPA strategy is the superior quality aluminous clay (kaolin) deposit at Cadoux and positive response that the feedstock has to the Company's innovative and integrated processing flowsheet utilising uncomplicated moderate temperature and atmospheric pressure technologies. The strategy's quality attributes combine resulting in world class HPA project potential.

FYI is progressing positively with its DFS supporting a planned production of 4N and 5N HPA.



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## **Cautionary Statement**

### **Substance of PFS**

The PFS referred to in this announcement is a study of the potential viability of the Cadoux Project. It has been undertaken to understand the technical and economic viability of the Project.

The PFS is based on the material assumptions outlined in the PFS announcement released to ASX on 25 September 2018 and summarised in the Summary of Material Assumptions and Modifying Factors description and tables (appendix 2 and 3) attached to the PFS document. These include assumptions about the availability of funding. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by this PFS will be achieved.

To achieve the range of outcomes indicated in the PFS funding in the order of US\$197 million will likely be required. Investors should note that there is no certainty that the Company will be able to raise the amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares.

It is also possible that the Company could pursue other "value realisation" strategies such as a sale, partial sale or joint venture of the Project. If it does, this could materially reduce the Company's proportionate ownership of the Project.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the PFS.

### **General and forward-looking statements**

The contents of this announcement reflect various technical and economic conditions, assumptions and contingencies which are based on interpretations of current market conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly and without notice over relatively short periods of time. Consequently, actual results may vary from those detailed in this announcement.

Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Such forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. When used in this announcement, words such as, but are not limited to, "could", "planned", "estimated", "expect", "intend", "may", "potential", "should", "projected", "scheduled", "anticipates", "believes", "predict", "foresee", "proposed", "aim", "target", "opportunity", "nominal", "conceptual" and similar expressions are forward-looking statements. Although the Company believes that the expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

The contents of this release are also subject to significant risks and uncertainties that include but are not limited to those inherent in mine development and production, geological, mining, metallurgical and processing technical problems, the inability to obtain and maintain mine licences, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of projects and acquisitions, changes in commodity prices and exchange rates, currency and interest rate fluctuations and other adverse economic conditions, the potential inability to market and sell products, various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, environmental, native title, heritage, taxation and other legal problems, the potential inability to secure adequate financing and management's potential inability to anticipate and manage the foregoing factors and risks.

All persons should consider seeking appropriate professional legal, financial and taxation advice in reviewing this announcement and all other information with respect to the Company and evaluating the business, financial performance and operations of the Company. Neither the provision of this announcement nor any information contained in this announcement or subsequently communicated to any person in connection with this announcement is, or should be taken as, constituting the giving of investment or financial advice to any person. This announcement does not take into account the individual investment objective, financial or tax situation or particular needs of any person.