

6th March 2019

## FYI'S HPA LOCKED CYCLE TESTWORK COMMENCES IN SUPPORT OF BFS

- FYI commences key HPA testwork stage with Locked Cycle and concentrate test work to further support the Company's strategy to produce high grade alumina (HPA)
- The Locked Cycle tests target high grade alumina production for increased recoveries and operating efficiencies which may reduce process plant capital and operating costs
- Results from the testwork will provide the basis for possible process improvements in the upcoming
  Pilot Plant test program
- The test results will provide fundamental technical and economic inputs into the on-going bankable feasibility study (BFS)

FYI Resources Ltd (ASX: FYI) is pleased to announce the commencement of its Locked Cycle testwork as a critical step in the Company's on-going metallurgical examination of the Company's flagship HPA project.

As a precursor to the Pilot Plant test work program (please see FYI ASX announcement dated 14<sup>th</sup> February 2019), the Locked Cycle tests will be used to affirm the capability of the refined process flowsheet to produce high grade alumina at efficient and commercial rates. These tests should validate the mineral process parameters adopted in the Cadoux Pre-Feasibility Study (please see FYI ASX announcement dated 25<sup>th</sup> September 2018) and provide a basis for potential improvements in the process design in the Company's BFS.

## **Locked Cycle Testwork**

A Locked Cycle test is repetitive batch testing conducted at laboratory level to assist in implementing improvements to the HPA process flowsheet design. The testwork has 5 main functions:

- assess the suitability of the flowsheet design;
- produce and then calculate a metallurgical projection for the HPA produced;
- gauge process recovery rates and efficiencies;
- o provide valuable metallurgical data and information; and
- o determine if the process reagent suite is stable and suitable for commercial production purposes.

In simulating a continuous flotation circuit on a laboratory scale, the basic Locked Cycle test procedure performs a complete batch test in the first cycle, followed by similar batch tests that contain "intermediate" material from the previous cycle added at the appropriate location in the current cycle. These batch tests, or cycles, are continued in this iterative manner. The final concentrate and final tailings from each cycle are filtered and thus removed from further processing. At the end of the test, all the final and intermediate products are dried, weighed and subjected to chemical analysis. The test results are then calculated and balanced and a metallurgical projection is made.

The locked cycle test is very well accepted in the metallurgical industry, however, to confirm the flowsheet and produce a metallurgical projection, it is crucial that steady state of production is reached to determine:

- The number of cycles to perform;
- The best method by which to assess if the test has truly achieved steady state;
- The best method by which to produce a metallurgical projection; and
- The validity of the metallurgical projection.



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FYI's Managing Director, Mr Roland Hill, explains the significance of the test work "The Locked Cycle test work is an integral component to the development and refinement of the HPA process design flowsheet. We consider this phase to be very important in the lead up to the Pilot Plant and then ultimately into the BFS in demonstrating the effectiveness of our HPA flowsheet and then of course the economic impact to the overall project economics. We look forward to the results of the Locked Cycle testwork and to the continued improvement of the HPA flowsheet that the testing should provide".

## For more information please contact:

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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 a rapidly developing: LED, electric vehicle, smartphone and television screen as well as other associated high-tech product markets.

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

FYI is progressing with its Bankable Feasibility Studies and Pilot Plant production studies as part of developing its integrated high purity alumina strategy.