6 November 2019

FYI DELIVERS 99.99% PURITY HPA FROM PILOT PLANT TRIAL

Key points

- *HPA grades of 99.99% achieved from FYI's first round of "end to end" continuous pilot plant production trials*
- *The pilot plant successfully demonstrated with results meeting FYI's operational expectations*
- *The key importance of the pilot plant is to validate and to improve HPA flowsheet for technical and economic purposes*
- *A distinct "optimised" phase of the pilot plant trial has the potential to produce higher grade HPA*
- *Analysis of the samples from the optimised phase of pilot plant testwork is underway*
- *Analyses of product conducted by an independent, specialist laboratory in the USA*

FYI Resources Ltd (**ASX: FYI**) is pleased to announce the first round of results from the Company's recently completed high purity alumina (**HPA**) pilot plant trial (see ASX announcement 9th October 2019). These results achieved the target grade, averaging 99.99% Al_2O_3 in addition, the pilot plant operations exceeding FYI's expectations.

Commenting on the pilot plant HPA analyses, FYI Managing Director, Roland Hill, said "We are very pleased with the initial round of pilot plant results which demonstrated "four nines" purity in the material produced. The achievement is outstanding and is a fundamental validation that our flow sheet design and our long-term strategy to refine feedstock from our Cadoux project to produce high quality HPA is based on sound technical principles. We see the results as being critical to the broader development of the flowsheet, particularly in light of several possible improvements that were noted during trial production which we are eager to see how this develops with follow up analysis of the optimised phase of production".

Pilot plant test results

FYI's pilot plant trial production was designed to test functional operations of its innovative HPA flowsheet design and to observe and analyse the continuous "end to end" process operation for scale up factors for inclusion into the proposed full-scale commercial plant.

Using feedstock from Cadoux, FYI completed two pilot plant trial product phases: one phase comprised a standard process, the second phase included an optimised trial which included flowsheet and materials handling modifications to the plant which may have the potential to improve upon the targeted 4N HPA.

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Samples of the final HPA product from the first phase of trial production were submitted for high level Glow Discharge Mass Spectrometry (**GDMS**) analysis to EAG Laboratories in New York, USA for independent, high accuracy, confirmation of product grades. The second, or optimised, phase is currently being retained for internal review and will be sent to EAG shortly.

EAG Laboratories confirmed the first phase samples achieved an average grade of over 99.99% Al_2O_3.

EAG laboratories GDMS results:

GDMS	
Sample #	Al_2O_3 %
1	99.993
2	99.994
3	99.989
4	99.993
5	99.987
6	99.989
Average	**99.991**

Pilot plant results implications

The first phase pilot plant results were very encouraging, providing a sound interpretation of batch, locked cycle and variability testing for incorporation into the design and construction of the continuous pilot plant.

In addition to demonstrating that the target grade of 99.99% Al_2O_3 could be produced on a continuous basis from kaolin feed material, the pilot plant provided information that will be used to enhance engineering design criteria for a full-scale plant.

The first pilot plant run has improved the level of understanding of the various unit processes, recycle streams, mass balances and materials of construction. Minor modifications to the pilot plant could potentially yield HPA in excess of 99.99% Al_2O_3.

FYI HPA

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About FYI Resources Limited

FYI's is positioning itself to be a significant producer of high purity alumina (HPA) in the rapidly developing light emitting diode (LED) and phosphor applications and the electric vehicle and static power storage markets 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 definitive Feasibility Studies (DFS) supporting a planned production of 4N and 5N HPA following the successful pilot plant trial achieving the targeted production grade of 99.99% Al_2O_3.

Competent Persons Statements

Metallurgy

The information in this report that relates to metallurgy and metallurgical test work is based on information reviewed and compiled by Mr Daryl Evans, a Competent Person who is a Fellow of the Australian Institute of Mining and Metallurgy (AusIMM).

Mr Evans is an employee of Independent Metallurgical Operations Pty Ltd, and is a contractor to FYI. Mr Evans has sufficient experience that is relevant to this style of processing and type of deposit under consideration, and to the activity that he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves". Announcements in respect to previous metallurgical results are available to view on the Company's website at www.fyiresources.com.au .

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JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Drilling sampling was previously reported *(ASX: 9.7.2018)*. Metallurgical test work applied to the recovered drilling samples is intended to determine aluminium leach and precipitation characteristics of the kaolin. Sample preparation and metallurgical test work was performed by Independent Metallurgical Operations Pty Ltd (IMO) in Perth, Western Australia.
Drilling techniques	Previously reported *(ASX: 9.7.2018)*.
Drill sample recovery	Previously reported *(ASX: 9.7.2018)*.
Logging	Previously reported *(ASX: 9.7.2018)*.
Sub-sampling techniques and sample preparation	Drilling sampling was previously reported *(ASX: 13.3.2019)*. The sampling techniques for the metallurgical test work was in line with industry standards in determining composite samples representative of the resource. This included drying and splitting of individual samples and then compositing into representative samples. The sampling procedures were under the control of qualified and experienced IMO employees and considered adequate for the intended metallurgical test work. Master composite samples were prepared representing the average Cadoux life of mine resource. The composites underwent a stage of attritioning with the products screened to generate fine and coarse size fractions. The fine attritioned product underwent one stage of calcination to convert kaolin clay to metakaolin. The calcined product was leached with hydrochloric acid at temperature. The leach liquor underwent a series of precipitation stages, involving hydrogen chloride gas being sparged through the leach liquor allowing the precipitation of solid aluminium chloride. Conversion of the final solid aluminium chloride to alumina involved a two-stage calcination process with the final product achieving an average of 99.99% Al_2O_3 purity. Sizes and representative nature of the samples is considered appropriate. All procedural work and preparation was conducted under strict controls and supervision. All testwork was conducted under test conditions by qualified and experienced technicians and overseen by qualified managers including Mr Alex Borger and Mr Daryl Evans (Independent Metallurgical Operations Competent Person).
Quality of assay data and laboratory tests	Analysis for the leach test work was deemed appropriate for the detailed test work as it was undertaken in laboratory environment with precision equipment and included worldwide accepted controls. Metallurgical reviews and testwork has been overseen and approved by Mr Alex Borger – Metallurgical Project Manager and Metallurgical Competent Person – Mr Daryl Evans.

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Criteria	Commentary
Verification of sampling and assaying	The metallurgical test work was supervised by suitably qualified personnel under laboratory conditions. Primary data is captured on paper in the laboratory and then re-entered into spreadsheet format by the supervising metallurgist, to then be loaded into the company's database. No adjustments are made to any assay data.
Location of data points	All samples used in the metallurgical test work have been accurately recorded by the laboratory technician and checked by the supervising metallurgist.
Data spacing and distribution	Industry standard sample distribution and source material representation methodology has been applied.
Orientation of data in relation to geological structure	Industry standard sample distribution and source material representation methodology has been applied. The risk of sample bias is considered to be low.
Sample security	All samples were under supervision at the laboratory. All residual sample material is stored securely in sealed bags.
Audits or reviews	Mr Evans has reviewed QAQC results and found these to be acceptable.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	Previously reported *(ASX: 9.7.2018)*.
Exploration done by other parties	Previously reported *(ASX: 9.7.2018)*.
Geology	The project area is underlain by weathered granitoid Archaean rock of the Yilgarn Granites is the likely parent material for the kaolin. Here, deep weathering of the feldspathic and ferromagnesian minerals within the metamorphosed granitic has resulted in the formation of kaolinite. There is no outcrop but recognizable granitoidal fragmental rocks are sometimes present just below surface. The crust of the overburden comprises gravel and sands over reddish to off white clay. White kaolin underlies the overburden followed by weathered, partial oxidised and then fresh ganitoids at depth. The recent drilling at the property has revealed a weathering profile which is very common in Western Australia with the granitoid rocks, deeply weathered forming a leached, kaolinized zone under a lateritic crust. Analysis at the Laboratory shows particle size distributions are typical of "primary style" kaolins produced from weathered granites. The crust of overburden comprises gravel and sands over reddish to off-white clay to an average depth of 5m. White kaolin then averages approximately 16 m before orange to yellow sandy and mottled clays are intersected which are followed by recognizable rounded granitoid material. The thickness of the kaolin profile varies from less than 1m to a maximum of 28m. Fresh granitoids are found at depths of between 10 and 30m. All kaolin resources are within 4 to 11 metres of the surface. All holes are drilled vertically. Intersected kaolin thickness ranges from 4-28m.
Drill hole Information	Sample and drill hole coordinates are provided in market announcements.
Data aggregation methods	The nature of the metallurgical testwork did not require data aggregation, however all data points where noted and recorded in the appropriate data base to be used in continued test work and product development.

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Criteria	Commentary
Relationship between mineralisation widths and intercept lengths	Previously reported *(ASX: 9.7.2018)*.
Diagrams	Project related diagrams are presented in various previous ASX announcements released to the market at the relevant time.
Balanced reporting	The reporting is considered to be balanced.
Other substantive exploration data	As per notice to the market (see FYI ASX announcement 14th February 2019) and Definitive Feasibility Study (DFS), IMO completed a pilot plant trial for the refining of HPA following the flowsheet design that has been proposed and innovated by FYI to produce and refine aluminium leaching and precipitation characteristics of the kaolin to produce > 99.99% HPA. The pilot plant trial involved the 7 day commissioning and training of the plant and equipment immediately followed by a 7 day continuous "end to end" production trial utilising feedstock of composited kaolin samples of the latest drilling program (see FYI ASX announcement dated 9th June 2018) The pilot trial run followed the exact flowsheet procedure (as has been previously reported) so as to replicate the final designed flowsheet. General analysis sampling was taken at set times throughout the 24 hour a day (2 shifts), on a 7 day a week schedule. Samples sent for GDMS analysis were selected on the basis of one sample per day following steady state of operations being achieved (ie day 2) at a set time each day. This provided a tracking of the grade on a non-random The HPA assays were conducted by GDMS analysis at EAG Laboratories in New York, USA. The results of the first phase of analysis is reported in this ASX release.
Further work	FYI is likely to continue metallurgical test work to further refine and improve the HPA process design with any work undertaken to be announced to the market as required.

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