



21 February 2018

FYI Resources announces outstanding metallurgical test results, validating HPA flowsheet being used in the PFS

Additional JORC Information

Highlights:

- Excellent leach extractions of up to 97.2% Al₂O₃ at the Cadoux Kaolin Project in Western Australia;
- The combination of achieving 99.99% grade at a 97.2% recovery demonstrates Cadoux as being an ideal feedstock and validates the HPA flowsheet being designed and tested under the PFS.
- Rapid leach kinetics indicate an excellent metallurgical response to feedstock;
- Leach results demonstrate ideal selective leaching of aluminium;
- The results highlight the use of atmospheric pressure and low temperatures is very encouraging and provides the framework for favourable project economics in the PFS;
- Further testing and process refinement continues.

FYI Resources (ASX: FYI) (the "Company" or "FYI"), project developer of High Purity Alumina (HPA) in Western Australia is pleased to release outstanding metallurgical test results for its Pre-feasibility study (PFS) for HPA.

The objective of the PFS testwork program is designed to determine the economic parameters of commercial production of HPA from the Cadoux Kaolin Project.

FYI recently announced that it had accomplished the key proof of concept for the HPA strategy by achieving a purity of 99.99% alumina (refer ASX announcement 23 October 2017). The success of the strategy has now overwhelmingly been demonstrated with the achievement of 97.2% extraction of leached product. The combination of a 99.99% grade at a 97.2% extraction demonstrates Cadoux as being an ideal HPA feedstock validating the flowsheet currently being designed and tested under the PFS.

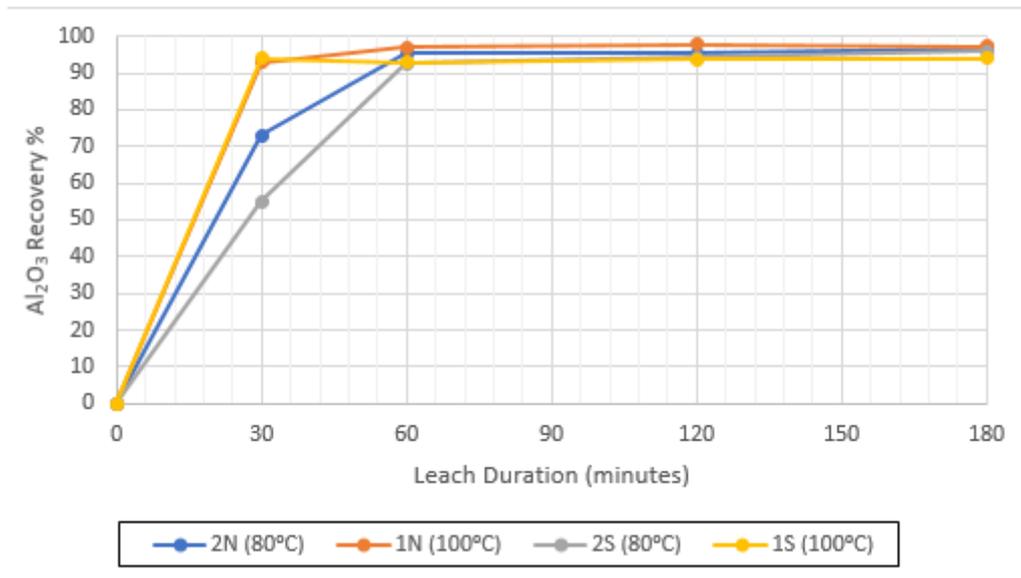
FYI Managing Director, Mr Roland Hill commenting on the latest results said "The remarkable metallurgical leach results continue to impress. The combined attributes of a high grade and excellent recovery of the alumina product should have a significant impact on the project's economic metrics. Cadoux continues to demonstrate its superior qualities, amenability and suitability to the production of commercial high purity alumina using conventional processing techniques and equipment.

"We look forward to progressing the current PFS work and anticipate further positive results increasing our confidence that commercial HPA can be generated from the high-grade kaolin at Cadoux."

Results from the leach testwork are shown in the following graph and table below:

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Figure 1: Al₂O₃ Kinetic Leach Curves

The impressive leach recovery results based on the use of atmospheric pressure and low temperatures are very encouraging and provide the framework for very favourable potential project economics – both in terms of capital costs and operating costs.

Table 1: Summarised Al₂O₃ Leach Recovery Results

Time (minutes)	Units	North Composite		South Composite	
		2N (80°C)	1N (100°C)	2S (80°C)	1S (100°C)
0	%	0.0	0.0	0.0	0.0
30	%	73.1	92.8	55.0	93.9
60	%	95.3	97.1	92.6	92.7
120	%	95.3	97.8	94.1	93.8
180	%	96.7	97.2	95.7	94.1
Feed Grade	%	39.58	39.58	38.74	38.74
Calculated Feed Grade	%	35.76	32.39	35.76	36.30

The metallurgical testwork samples were selected from composited intervals from the last drilling programme (refer to ASX Company announcement dated 14 June 2017). A range of variable samples were used in the testing and are considered to be representative of the deposit and centred at N6606100 and E518800.

The metallurgical test work program is being undertaken and managed by Independent Metallurgical Operations Pty Ltd (IMO) in Perth.

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The ongoing metallurgical test work is designed to understand leaching outcomes over a series of variables including feedstock variances, varying operating temperatures and leach durations to determine optimal recovery and operating ranges.

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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 (EV), smartphone and television screen as well as other associated high-tech product markets.

The foundation of the FYI Resources' HPA strategy is the superior quality aluminous clay (kaolin) deposit at its 100%-owned Cadoux Kaolin Project in Western Australia and the positive reception the feedstock has to the Company's moderate temperature, atmospheric pressure HCl flowsheet. The Company's strategy has superior quality attributes that when combined result in a potential world class HPA project.

Competent Person statement

Metallurgy:

The information in this release 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). Announcements in respect to metallurgical results are available to view on the Company's website at www.fyiresources.com.au.

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 (The JORC Code). Mr Evans consents to the inclusion of the information in the form and context in which they appear. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the findings in the relevant market announcements continue to apply and have not materially changed.

Appendix A February 2018

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	<p>Drilling sampling was previously reported (14 June 2017).</p> <p>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.</p>
Drilling techniques	Previously reported (14 June 2017).
Drill sample recovery	Previously reported (14 June 2017).
Logging	Previously reported (14 June 2017).
Sub-sampling techniques and sample preparation	<p>Drilling sampling was previously reported (14 June 2017).</p> <p>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.</p> <p>The sampling procedures were under the control of qualified and experienced IMO employees and considered adequate for the intended metallurgical test work.</p> <p>Sizes and representative nature of the samples is considered appropriate.</p> <p>Details of sampling techniques are described in the “Other substantive exploration data” section in Table 2.</p> <p>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 Daryl Evans.</p>
Quality of assay data and laboratory tests	<p>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.</p> <p>Metallurgical reviews and testwork has been overseen and approved by the Metallurgical Competent person – Mr Daryl Evans (Independent Metallurgical Operations).</p>

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Verification of sampling and assaying	<p>The metallurgical test work was supervised by suitably qualified personnel under laboratory conditions.</p> <p>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.</p> <p>No adjustments are made to any assay data.</p>
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: 14 June and 26 July 2017).
Exploration done by other parties	Previously reported (ASX: 14 June and 26 July 2017).
Geology	<p>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 granitoid 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 granitoids 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 22m. Fresh granitoids are found at depths of between 10 and 30m. All kaolin resources are within 4 to 11 metres of the surface. 47 air core drillholes were completed with a total of 824m drilled. All holes were drilled vertically. Intersected kaolin thickness ranged from 4-11m.</p>

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Criteria	Commentary
Drill hole Information	Sample and drill hole coordinates are provided in market announcements (14 June 2017).
Data aggregation methods	The nature of the metallurgical testwork did not require data aggregation, however all data points were noted and recorded in the appropriate data base to be used in follow up test work.
Relationship between mineralisation widths and intercept lengths	Previously reported (14 June and 26 July 2017).
Diagrams	Project related diagrams are presented in various previous ASX announcements (14 June, 26 July and 5 September 2017).
Balanced reporting	The reporting is considered to be balanced.
Other substantive exploration data	<p>Metallurgical test-work is being conducted on composite kaolin samples by Independent Metallurgical Operations (IMO). IMO are following a standard diagnostic flowsheet template to determine aluminium leaching and precipitation characteristics of the kaolin.</p> <p>The test work involves the following procedure of composited samples of the recent drilling program (see FYI ASX announcement dated 14 June and 26 July 2017). The sample was calcined at 700°C for one hour to convert the Kaolin to an acid soluble species. The sample was then leached in 26% (w/w) Hydrochloric acid at 20% solids and 100°C for 180 minutes with samples being collected to provide kinetic leach recoveries.</p> <p>Leach testing was conducted in a glass leach vessel containing concentrated feed sample scalped at 106 µm and concentrated analytical grade hydrochloric acid. Leach testing was conducted at the stated temperatures (80 and 100 C) controlled by a thermocouple (calibrated against an alcohol thermometer) with the heating source of a heat plate.</p> <p>The glass leach vessel utilised for testing incorporated a reflux condenser to allow leach testing to be conducted at ambient pressure whilst maintaining the water balance. Solids assays were conducted utilising sodium peroxide fusion XRF of pulverised material with duplicate samples, standards and blanks by Nagrom in Perth. Solution assays were conducted by ICP-MS on diluted leach samples with duplicate samples, standards and blanks by Nagrom in Perth.</p>
Further work	Continued metallurgical variability test work is ongoing and will be announced to the market as appropriate.

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