

FYI Resources Ltd

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FYI Resources works toward a September quarter BFS for kaolin project

- A Cadoux Kaolin Project bankable feasibility study (BFS) is expected in late September quarter 2019
- Funded pilot plant studies of Cadoux ore are due to be completed in late June quarter 2019
- Process refinements are taking place before pilot plant studies are launched
- Test work successes announced yesterday show 99.999% (5N) high-purity alumina (HPA, Al₂O₃) can be produced from the company's process
- 4N purity (99.997%) has already been achieved
- Demand for HPA is expected to accelerate dramatically

What does FYI do?

FYI Resources Ltd (ASX:FYI) specialises in kaolin exploration and high-purity alumina (HPA) project development in Western Australia.

The company is run by Roland Hill, a mining analyst and equity fund portfolio manager with 18 years mining and exploration industry experience.

Hill has been FYI's chief executive officer for eight years and was previously managing director and chairman of producer Crescent Gold Limited over a 7-year period.

A science and commerce graduate, Hill was a senior analyst at stockbroking firms and investment banks and managed a portfolio of investments for Deutsche Bank's Australian and international resources equity fund.

What does FYI own?

The key asset is the Cadoux Kaolin Project which lies northeast of the city of Perth and southeast of Geraldton port in WA.

FYI's vision is to use the high-quality aluminous clay, or kaolin, from the Cadoux deposit as feedstock for high-purity alumina (HPA) production using its process.

The company has argued the clay is a model feedstock and has ideal metallurgical characteristics.

FYI's kaolin is also an inexpensive low-impurity feedstock with certainty of supply and a grade of 24.4% aluminium oxide.

Cadoux's reserve, prepared by CSA Global and announced in late October 2018, could effectively support a 52-year mine producing 8,000 tonnes a year of HPA.

Price: A\$0.06

Market Cap: A\$11.79M

1 Year Share Price Graph



March 2018 September 2018 March 2019

Share Information

Code: FYI

Listing: ASX

52 week High Low
A\$0.19 A\$0.05

Sector: Mining

Website: www.fyiresources.com.au

Company Synopsis:

FYI Resources Ltd (ASX:FYI) is listed on the Australian Securities Exchange.

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Global HPA demand is expected to increase from about 35,000 tonnes in 2017 to 125,000 tonnes in 2025, driven primarily by strong growth in demand for lithium-ion battery (LIB) separator coating.

Electric vehicle (EV) market growth is expected to contribute to HPA demand, with some researchers tipping year-on-year HPA demand growth of about 17%.

Yesterday the company revealed it had achieved a grade recovery of 99.999% purity alumina (5N), an achievement independently analysed and verified by Ultra Trace Pty Ltd in Perth.

The company's flowsheet previously exceeded an HPA target grade of 99.997% purity (4N) during independent metallurgical testing.

4N HPA is a high-value product with broad traditional applications that is increasingly a critical component for the electric vehicle, battery and power storage markets.

5N is a subset of the HPA sector and is generally tailor-made to the special requirements of each customer and has smaller market applications.

Applications include the LEDs that are used in traffic lights, outdoor displays and high-performance back-lit units.

The quality attracts a significant premium over 4N as the applications tend to be complex.

FYI's flowsheet design is based on a standard hydrochloric acid leach and precipitation technology developed in the 1940s.

This design has been modified to suit Cadoux feedstock and current HPA market purity requirements.

The locked cycle and concentrate test work is expected to provide a basis for possible process improvements to be made to FYI's process ahead of funded pilot plant studies.

FYI hopes to then refine and implement its process during pilot studies and increase confidence in project capital and operating costs, to further build a business case for its project in its BFS.

FYI's September 2018 pre-feasibility study (PFS) valued Cadoux project at US\$560 million (\$793.5 million) using a net present value (NPV10) calculated at a 10% discount.

The corresponding internal rate of return (IRR) was 46% while project payback was a short 3.6 years.

Capital costs were US\$179 million, or US\$22,344 a tonne, while forecasted average operating costs were US\$6,467 a tonne, comparing favourably to the US\$24,000 a tonne forecasted revenue the company views as realistic.

FYI is preparing a BFS for the project, expected in the September 2019

financial quarter.

The BFS was formally started in November 2018 and is being led by GR Engineering. It will include a process refined with the latest metallurgical test work.

FYI expects to wrap up subsequent pilot study work in late June quarter 2019.

The Cadoux BFS is, therefore, now expected in late September quarter 2019.

The company had \$1.9 million cash on December 31, 2018, and expects \$849,000 of cash outflows in March quarter 2019.

A \$1.1 million advance of 80% of the company's 2018-19 Australian Government Research & Development (R&D) tax credit will fund the upcoming pilot plant studies in June quarter 2019.

Inflection points

- Funded pilot plant studies expected to be completed in the June quarter
- A BFS tipped for the September quarter
- Financing successes and a final investment decision
- Offtake agreements, production take commitments and production plant milestones

Managing director & CEO Roland Hill highlights "world-class potential"

"While focusing on the 4N as the predominant HPA market segment, FYI sought to produce 5N HPA to demonstrate the flowsheet effectiveness, as well as to develop an additional product line that could supply a market that displays forecasted long-term growth at a significant premium to the 4N market," managing director & CEO Roland Hill said.

"Demonstrating the strong premium to the 4N market, Allied Market Research estimates 4N HPA product to sell in a range from US\$30,000-\$35,000/tonne in 2018-19 versus over US\$50,000 a tonne for 5N.

"We believe the ability to generate such an ultra-high-purity product continues to demonstrate the Cadoux Kaolin Project's world-class potential and we look forward to progressing discussions with possible end-use customers."

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