

ASX Code: PUA, PUAOC 1 April 2019

# Interview with Pure Alumina Managing Director Martin McFarlane

The following is an *Inside Briefing* interview with **Pure Alumina Managing Director Martin McFarlane** 

In this interview, Martin McFarlane discusses Pure Alumina's agreement to acquire Canadian high purity alumina producer Polar Sapphire. Key points in this interview include:

- Pure Alumina's agreement to acquire Polar Sapphire provides a low cost way to fast track the Company's strategy to become the world's premier supplier of high purity alumina (HPA)
- Polar Sapphire's patented process produces the highest commercial-grade HPA, known as 5N HPA, at its Toronto pilot plant. 5N HPA commands a premium in the market
- On completion of the Polar acquisition, Pure Alumina will move to rapidly expand HPA
  production capacity to 1,000tpa within a year and 5,000 tpa in 3 years to capitalise on
  the exceptional growth forecast for HPA stemming from its use in LED lighting and lithium
  batteries for electric vehicles

Inside Briefing: Pure Alumina has agreed to acquire Canadian company Polar Sapphire. What attracted Pure Alumina to this deal?

Martin McFarlane: The fundamentals of the HPA market are very strong, with its exceptional growth arising from the global adoption of LED lighting and HPA's use as a coating on lithium battery separators for electric vehicles. The Polar acquisition enables Pure Alumina to be in commercial HPA production in less than a year. This is several years earlier than previously planned and at a substantially lower capital cost.

Inside Briefing: Under the terms of the deal, Pure Alumina will pay C\$25.7m (A\$27.1m) for the acquisition. How will your Company fund this? Will funding be difficult given that Pure Alumina currently has a market capitalisation of \$7m?

Martin McFarlane: The consideration for Polar Sapphire consists of C\$13.75m in Pure Alumina shares and C\$12m in cash. Pure Alumina is seeking to raise A\$30m in a combination of debt and equity. We believe that with the Company expected to be in production and cashflow within a year, it can support a robust debt capacity. Raising money is nearly always a challenge, however the amount we need to raise is considerably smaller than some other listed HPA aspirants, which will require significantly more to build their commercial scale operations.



Inside Briefing: Pure Alumina already had plans to establish itself as an HPA producer using its extensive Yendon kaolin resources as a feed stock? Why has it switched its focus to Polar Sapphire?

Martin McFarlane: The Yendon pre-feasibility study found that Pure Alumina's plan to use its kaolin to produce HPA would deliver robust financial and technical outcomes. However, some investors had concerns about the size of the initial capex and the timeframe of 3+ years to production. Acquiring Polar addresses these market concerns, with total cost to commercial production reduced by more than 90%, including acquisition costs, and the timeline to commercial production reduced to less than a year. The blue sky is that our processes are compatible and our plan is to integrate them over the next three years, once we have initiated and expanded HPA production and revenue, so that eventually we plan to use kaolin instead of aluminium as the feed material, further reducing the already low forecast operating costs

Inside Briefing: If Polar Sapphire's process is so good, why are its owners selling the company?

**Martin McFarlane**: Polar Sapphire's major shareholders are venture capital funds whose mandates are limited to start-ups. As Polar is now entering commercial operation, the VC funds are looking to set up the funding and development of the project in the best way possible for future success.

Inside Briefing: The Polar Sapphire team obviously has the knowledge and expertise when it comes to this world-leading technology. What role will they play in the Company once the acquisition is completed?

**Martin McFarlane**: A key part of the acquisition is that all the Polar team will be retained to construct and operate the commercial HPA facility. I am delighted to say that as part of this, Polar MD Scott Nichol will take up the Managing Director's role to lead Pure Alumina once the acquisition is complete.

Inside Briefing: What is Polar Sapphire's current HPA production capacity? How does Pure Alumina plan to expand that capacity to capitalise on the growing demand for HPA?

Martin McFarlane: Polar's pilot plant has a capacity of approximately 150 tonnes per annum of HPA. But as it is a pilot plant, it is used for both R&D and HPA production. Once the acquisition is completed, we plan to build a new 1000tpa HPA facility in Toronto. This is expected to cost ~US\$12m and be commissioned within a year. New HPA capacity will then be added in line with the growth in sales. The Polar patented process is modular so expansions are all stand alone and won't impact existing production.

*Inside Briefing: What is HPA and what is it used for?* 

**Martin McFarlane**: HPA is an abbreviation of high purity alumina or aluminium oxide. High purity means its purity exceeds 99.9% for 3N, 99.99% for 4N and 99.999% for 5N, which is typically the grade Polar makes. As the purity increases, so does the price in the market. By comparison, smelter grade alumina, used to make aluminium, is typically 98.5% purity.

Today, more than 80% of HPA is used to make synthetic sapphire, which is a diamond-like substance that is very hard, chemically inert and stable at high temperatures. Synthetic sapphire is used in many products, the biggest of which is LED lighting. But it is also used in scratch-proof watch faces and mobile camera lenses, semi-conductor tools and optical equipment. The fastest



growing use of HPA is as a coating on lithium battery separators to reduce the risk of them overheating and catching fire. Within a few years, this is expected to be the largest use of HPA as electric vehicles replace combustion engines and batteries for energy storage roll out.

Inside Briefing: What is the outlook for HPA demand? What will be the driving forces for this demand?

**Martin McFarlane**: HPA is a boutique, high-value market that is growing rapidly. A decade ago, demand was only a few thousand tonnes per annum and today it is estimated at 30,000 tpa. This growth is being driven by LED lighting, a much more energy efficient form of lighting. However, growth is projected to further escalate to 100,000 tpa or more within the next decade due to the strong growth in batteries for vehicles and energy storage.

# **Inside Briefing: What happens next?**

**Martin McFarlane**: Completing the acquisition is the current focus for both Pure Alumina and Polar Sapphire. We are currently in the process of appointing brokers and advisors to raise the necessary capital and to work through the steps to completion of the deal. We are aiming to reach completion in June, subject to regulatory and other approvals.

Simultaneously, we are working on the integration strategy and continuing to market our product. There is a high level of interest in Polar's HPA from sapphire producers and we have sent battery material to separator manufacturers for testing.

#### **ENDS**

Further information:
Pure Alumina
Martin McFarlane
Managing Director
T: +61 (0)467 749 759

Investor Relations
Paul Armstrong
Read Corporate
T: +61-8 9388 1474

E: paul@readcorporate.com.au

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