

Thursday 5<sup>th</sup> September, 2019

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### Portfolio Stock Developments

**Sheffield Resources** - (ASX: SFX, Share Price: \$0.49, Market Cap: \$128m, coverage initiated @ \$0.50 in Sep 2015)



### Key Catalyst

***Securing of additional binding offtake volume for premium zircon from Thunderbird Mineral Sands Project in Western Australia, with CFM Minerals.sa for 1,000 tonnes of premium zircon annually.***

Since its 2010 listing, SFX has remained focused on exploration, appraisal and commercialisation of its 100%-owned Thunderbird deposit in Western Australia. Thunderbird is a remarkable and rather unique asset, representing one of the world's largest and highest-grade undeveloped zircon-rich mineral sands deposits. SFX was in the right place at the right time to acquire the project when RIO sold it in the wake of the GFC. During 2017, SFX completed a high-quality Bankable Feasibility Study (BFS) on the project, highlighting its robust economics, low technical risks and long operating life of 42 years. Then, in July 2019 the company released an enhanced BFS, featuring a material reduction in project capital requirements and execution risk, increased zircon production and a 30% lift in project revenue – which has substantially enhanced overall project financial metrics and significantly improved funding prospects. SFX has also now secured offtake for approximately 100% of all Stage 1 zircon and ilmenite production volumes at Thunderbird, significantly reducing market and revenue risk.

## Recent Activity

### **Additional Zircon Offtake Agreement**

SFX has secured additional binding offtake volume with respect to the production of premium zircon from its Thunderbird Mineral Sands Project.

The offtake agreement is with CFM Minerales.sa (CFM), a global mineral sands processor with operations in Spain, Mexico and Indonesia. The deal represents a 25% increase in annual supply of a further 1,000 tonnes of premium zircon, in addition to the agreement executed and disclosed during October 2017 that comprised annual supply of 4,000 tonnes of premium zircon.

CFM's total offtake volume therefore represents ~8% of the total Stage 1 estimated production volume at Thunderbird.

### Technical Significance

The enhanced offtake agreement with CFM represents another positive step for Thunderbird, whilst reinforcing the robust demand outlook for future premium zircon. With the finalisation of this agreement, SFX's marketing team has now secured offtake for approximately 100% of all Stage 1 zircon and ilmenite production volumes at Thunderbird. The rapid uptake of the additional BFS volume is further confirmation of concern regarding future supply of premium zircon from customers, whilst also significantly reducing market and revenue risk for SFX.

SFX has commented: "With the consensus view that significant supply shortages and strong pricing is expected to continue in the mid-long term, the mineral sands industry looks to be in a robust position. The majority of our revenue from Thunderbird is derived from zircon products. Zircon pricing has steadily increased over the years and with the long-term inducement price unchanged from previous reports at US\$1,469 per tonne FOB (real 2018 dollars as per TZMI Market study June 2019) the industry appears very stable moving forward".

SFX has also commented: "Current Australian premium zircon production is estimated to be significantly reduced by 2027 as the present operations, heavily contributing to the global supply of premium zircon, are mined out. The supply threat is further exacerbated by output, quality and costs from older and mature African operating mines. The timing of this significant supply decline bodes well for the Thunderbird project production post construction".

### **Mineral Sands Markets Overview**

Demand has stabilised during 2019, following two years of steady and robust pricing growth. Demand moderated in the short term due to uncertainty surrounding global trade tensions, however over the past two months in China demand has significantly improved after what appears to be de-stocking by consumer groups during the months of February to May (Figure 1). Long-term growth in zircon demand is predicted to rise steadily over the coming years at 2.4% year on year. Premium zircon demand has

remained strong as a result of decreased supply from mature operations globally due to falling product quality, grade and rising costs. There has been an increase in supply of lower quality zircon in the form of standard grade zircon or zircon in concentrate to balance supply in the short-term.



**Figure 1:** Supply volumes of zircon into China Jan-Jul 2019 (Ferro Alloy.net Trade Statistics, Zircon 2019) P= premium, S = standard, ZiC = zircon in concentrate (Courtesy of SFX)

Subdued demand during 2019 and market commentary by some producers has impacted market sentiment even though pricing remains robust and consensus predicts significant supply deficits from 2020. Stable zircon pricing in the range from US\$1,400 to \$1,600 should be considered as strongly positive for the industry and at a level that should generate strong revenues at low cost operations. The current benchmark price for zircon has been confirmed at US\$1,580 until 31 March 2020. This should be considered a very robust price in the current market. TZMI has forecast strong pricing out to 2023, with the base case price estimated to remain over US\$1,600 from 2020.



**Figure 2:** Historical zircon pricing June 2017 - June 2019 (Courtesy of SFX)

Significant supply shortages of premium zircon are forecast to emerge in the mid-long term. Consumer groups are looking to secure their supply over this period through binding supply agreements and have indicated their strong support for new supply options in a heavily constrained and managed market. Interest from offtake groups for the additional BFS Update product volumes was very strong with 100% of volume secured in binding agreements in Europe and China, within a short time frame. Without considering new supply, TZMI has forecast a rapid decline in supply for the period to 2028 (Figure 3). TZMI indicate that significant mine depletion is anticipated from 2020 onwards, with new projects required to make a large contribution to supply.

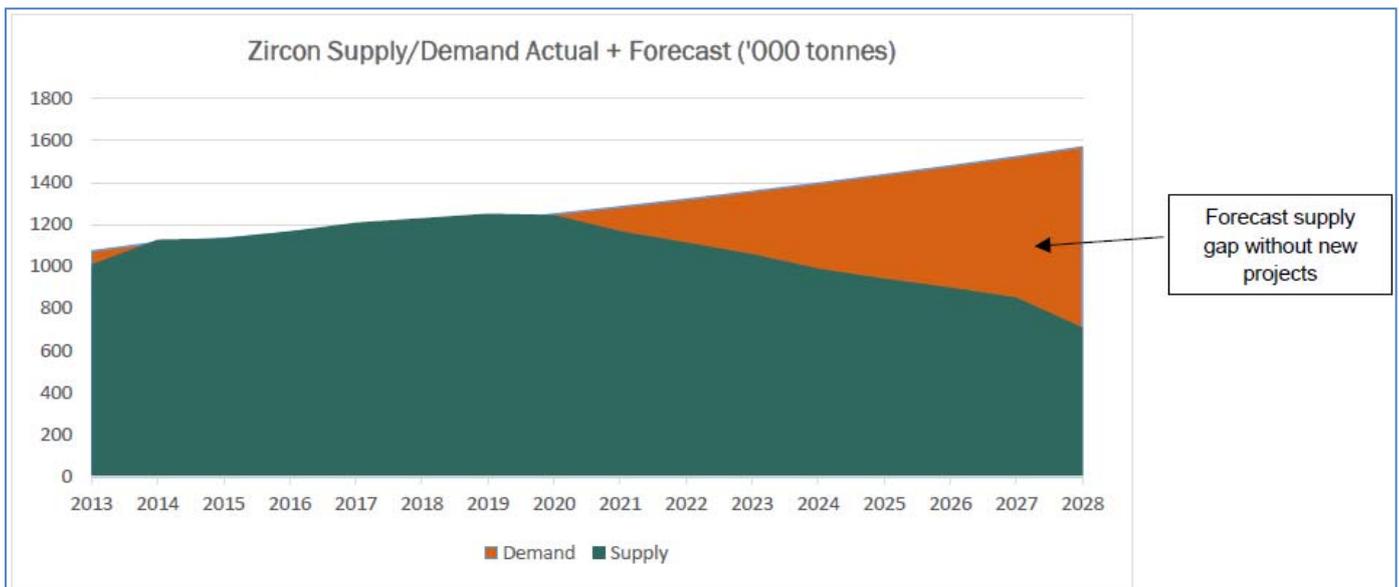


Figure 3: Zircon supply-demand forecast (TZMI estimates May 2019) (Courtesy of SFX)

### Summary

**SFX has released further positive news, related to additional premium zircon offtake volume with one of its key customers, along with a detailed overview of the mineral sands market. Long-term growth in zircon demand is predicted to rise steadily over the coming years at 2.4% year on year. Premium zircon demand has remained strong as a result of decreased supply from mature operations globally due to falling product quality, grade and rising costs.**

**SFX’s share price performance since late 2018 had been negatively impacted by question marks over the company’s capacity to finalise project funding for Thunderbird, in what has proven to be a challenging environment. This was reflected in a share price fall from an all-time high of \$1.27 in October 2018 to a 12-month low of \$0.30 in June 2019. Accordingly, SFX was committed to a revised BFS, with the aim of reducing project capex, enhancing project economics and making project financing easier. The updated BFS has deferred the planned LTR ilmenite circuit to focus on increased zircon production – delivering lower capital and operating costs, lower construction risk and a financially stronger project. SFX has rebounded from its \$0.30 low in June to a recent high of \$0.73. SFX remains firmly held within our coverage Portfolio.**

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