

Tuesday 23rd July, 2019

Portfolio Stock Developments

Sheffield Resources - (ASX: SFX, Share Price: \$0.63, Market Cap: \$164m, coverage initiated @ \$0.50 in Sep 2015 – *current gain of 26%*)



Key Catalyst

Additional binding offtake volume secured for the future sale of zircon concentrate from its Thunderbird Mineral Sands Project in Western Australia, with enhanced BFS underway.

Since its 2010 listing, SFX has remained focused on exploration, appraisal and development 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. SFX during 2017 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. Once in full production, Thunderbird could provide the market with approximately 6% of the world's zircon and approximately 3% of the world's ilmenite. SFX's share price has suffered in share price terms since late 2018 as the company continues to seek the project funding that will allow Thunderbird to become a commercial reality.

Recent Activity

Additional Binding Offtake Agreement

SFX has secured additional binding offtake volume with respect to the future sale of zircon concentrate from its Thunderbird Mineral Sands Project in Western Australia.

The agreement with Hainan Wensheng High-Tech Materials Company Limited, China’s largest mineral sands processor, is based on the annual supply by SFX of 25,000 tonnes of zircon concentrate. This complements the pre-existing agreement executed during December 2017, for the supply of 27,000 tonnes of zircon concentrate annually. In all, SFX will supply a total contracted volume of 52,000 tonnes annually.

Technical Significance

The binding offtake agreement with Wensheng is another positive step for Thunderbird and further evidence of the project’s world-class status. Wensheng is one of the largest mineral sands processors in the world sign, with the fact that it has signed up for additional volume providing a big vote of confidence in the project.

Furthermore, with the finalisation of this latest agreement, SFX’s marketing team has now secured offtake for 100% of Thunderbird’s Stage 1 zircon and ilmenite production volumes, in turn significantly reducing market and revenue risk.

Binding Ilmenite Offtake Agreement

SFX has also recently secured a binding cornerstone offtake agreement for the sale of unroasted primary ilmenite from its Thunderbird Mineral Sands Project, which is transformational for the project.

Key terms of the Agreement include:

Contracted Volume:	650,000 tonnes per annum
Term:	7 years (subject to annual contract extensions thereafter)
Take or Pay Provisions:	Applicable
Pricing:	Thunderbird primary ilmenite pricing linked to a market reference ilmenite and its prevailing \$USD market price, negotiated quarterly and based on agreed specifications of the delivered product;
Conditions Precedent:	Positive final investment decision (FID) in respect of Thunderbird
Incoterms:	CIF
Other:	<ul style="list-style-type: none"> - Force Majeure and other customary commercial arrangements included - Customary payment and product logistics terms included - Agreed product quality and specifications within defined parameters

The agreement, with Bengbu Zhongheng New Materials S&T Co Ltd, is based on an annual supply contract of 650,000 tonnes of primary ilmenite over a seven-year period. This represents all of the estimated volume of primary ilmenite to be produced during Thunderbird Stage 1. The binding offtake agreement with Bengbu is for 100% of Stage 1 ilmenite.

Technical Significance

The agreement enhances Thunderbird's economics by generating additional revenue from primary ilmenite sales, whilst complementing the strategy identified in the BFS update announcement during June 2019. The BFS update strategy targets a material reduction in project capital by deferring the low temperature roast (LTR) ilmenite circuit, whilst maintaining overall revenue by replacing LTR ilmenite revenue with increased zircon production. This approach targets significant reductions to the project equity funding requirement.

Bengbu is a globally significant mineral sands research, development and production company. It is the world's largest producer of fused zirconia, supplying state-of-the-art products globally and has targeted chloride pigment production as part of its future growth plans. SFX's primary ilmenite is suited to the production of chloride slag, which is in demand in a growing market for chloride pigment production.

BFS Update

SFX is also undertaking an update of its original Thunderbird Bankable Feasibility Study (BFS), following a detailed technical assessment over the past six months by SFX and GR Engineering Services, with the primary focus of reducing capital expenditure and increasing zircon production. The updated BFS is expected to be finalised during early Q3 2019. It will focus on increasing zircon production and deferring the low temperature roast (LTR) ilmenite circuit to the Stage 2 development.

The BFS update is targeting deferral of the LTR ilmenite circuit and focusing on increased zircon production to deliver lower capital and operating costs, lower construction risk and a financially stronger project. Essentially, SFX is seeking to replace LTR ilmenite revenue with revenue from additional zircon production. The revenue from the primary ilmenite sales is an added benefit, which will further enhance project economics.

Technical Significance

The updated BFS sets out to defer capital expenditure and replace ilmenite revenue with zircon revenue, whilst targeting an optimisation of debt carrying capacity. Preliminary investigations indicate potential for substantial improvements to Thunderbird's project economics, enabling a material reduction to the Stage 1 capital expenditure and a significant reduction to the projected equity funding requirement.

This study work also addresses updates to Ore Reserves, commodity pricing, consumables, EPC contract and other commercial elements, many of which have moved positively since the BFS was completed more than two years ago.

Summary

SFX's share price since late 2018 has been negatively impacted by question marks over the company's capacity to finalise project funding, in what is a challenging environment. Accordingly, SFX is undertaking a revised BFS with the aim of reducing project capex and thus making project financing easier.

Thunderbird is a tier 1 asset in a tier 1 jurisdiction in an increasingly positive mineral sands sector. Since completion of the original BFS during Q1 2017, SFX has delivered a construction-ready project with binding offtake agreements, secured finance, necessary permitting and most key contracts in place. The market is now focused on the opportunities emerging from the updated BFS, which is being undertaken in parallel to the strategic partner process.

The BFS update is set for conclusion over the coming weeks will target the deferral of its planned LTR ilmenite circuit to focus on increased zircon production – ultimately delivering lower capital and operating costs, lower construction risk and a financially stronger project.

SFX has risen from a recent low of \$0.30 in June to a current price of \$0.63 – a 110% gain in a little over a month. SFX remains firmly held within our coverage Portfolio.

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