

SHEFFIELD RESOURCES (SFX)

Upgrading Price Target ~30% to \$2.20

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We say

BUY

Price

0.76

Target

2.20

Strategic Target

3.00

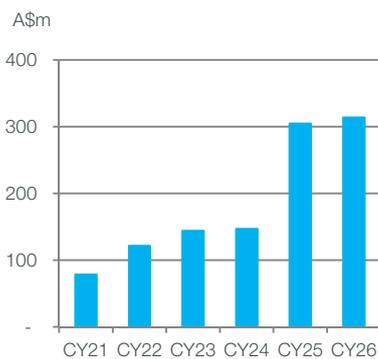
Sheffield remains our Top Pick in the ASX mining space given the strong macro outlook for mineral sands and major catalysts due this quarter, being Native Title and Environmental approvals. We believe the company's share price should rally at *least* 50% when Native Title approvals land, but believe it could even double. Sheffield's Thunderbird project in WA is Tier 1 on scale, costs and mine life... in a market expecting material deficits over the next few years. We maintain our conviction Buy.

SHARE PRICE CHART



Source: IRESS, Blue Ocean Equities

FORECAST OPERATING CASHFLOW



Source: Company Blue Ocean Equities

COMPANY DATA & RATIOS

Enterprise value	\$163m
Diluted market cap*	\$186m
Diluted shares*	244m
Free float	100%
12 month price range	\$0.41-0.94
GICS sector	Materials
Board & Management hold	~12% (FD)
*Diluted for 15.4m options	

IMPLIED RETURN

Implied all-in return	~190%
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A COMPELLING MACRO OUTLOOK FOR ZIRCON

Iluka lifted premium zircon prices by 15% to US\$1,410/t in Feb and **we expect another 10-15% increase within ~4 weeks (in late August) to US\$1,550-1,620/t**, given Tronox is already selling premium zircon for US\$1,600-1,640/t. **The outlook for premium zircon is particularly compelling with a ~30% supply deficit being forecast by TZMI over the next few years** on mine closures and declining grades.

THUNDERBIRD: A BEST-IN-CLASS PROJECT

In our view Thunderbird has the right combination of world-class scale (3.2bn tonnes), very high grades (0.9% zircon, 3.1% ilmenite), low strip (0.78:1) and long life (42 years) that make it a Tier 1 development project. When you add the proximity to port (140km) and low-risk jurisdiction, we believe it is probably best-in-class.

IMPLIED RETURN OF OVER 190%

We upgrade our Price Target 29% to \$2.20 (from \$1.70) on higher zircon prices of US\$1,450/t (from US\$1,381/t), higher ilmenite prices of US\$200/t (in line with spot prices) and weaker long term A\$ forecasts from 0.73 to 0.70 on the growing differential in cash rates between the US and Australia. We maintain our high conviction buy on Sheffield and our \$2.20 Price Target represents and implied return of over 190%.

SHAPING UP FOR A *BIG* FEW MONTHS

In our view, the planets appear to be lining up for SFX to have a *BIG* few months:

- **Zircon prices rallying:** We expect Iluka to lift its zircon prices 10-15% in a few weeks (late August) from US\$1,410/t to ~US\$1,550-1,620/t.
- **Major zircon supply disruption confirmed:** Media reports have confirmed that Rio's Richards Bay Minerals (RBM) mine in South Africa has been shut again after violent community protests and the death of a security guard. RBM represents a very material:
 - ~33% of global zircon production; and
 - ~25% of global titanium slag and rutile production
- **Sheffield expects Native Title/Environmental Approvals this quarter** as per its June quarterly report. At end June SFX had \$23m in cash.

MATERIAL DEFICITS IN ZIRCON PREDICTED

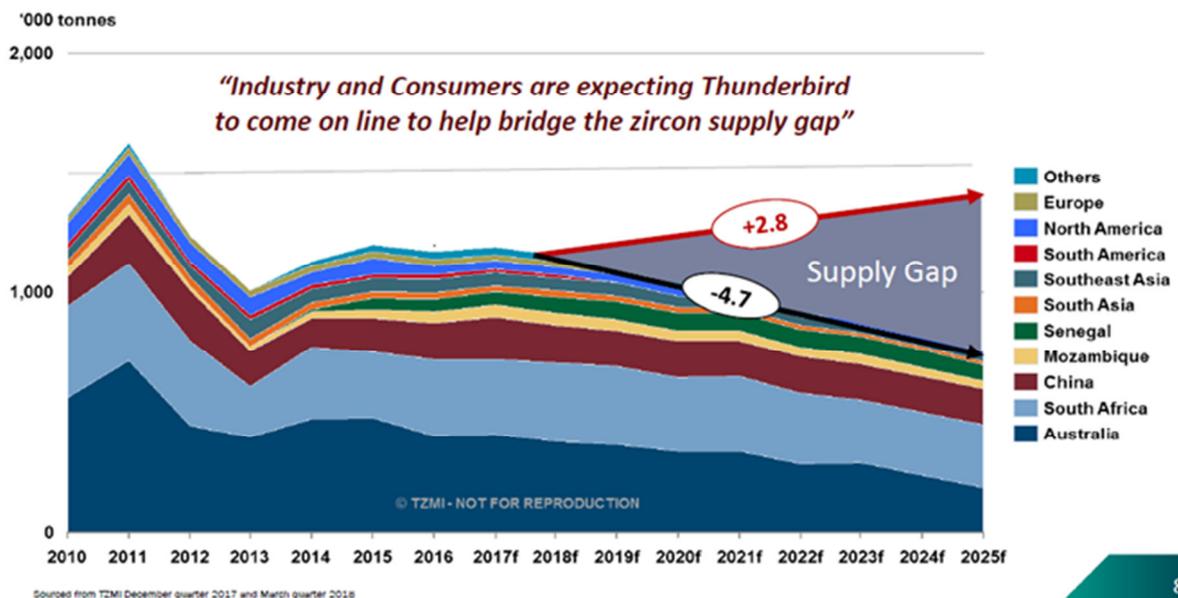
The chart below highlights the growing supply deficit in zircon, as forecast by TZMI, which is likely to be supportive of higher zircon prices:

ZIRCON - SIGNIFICANT SUPPLY SHORTFALL PREDICTED



Zircon – 62% of BFS Revenue

- Without new projects, global zircon supply is expected to decline significantly
- Demand growth forecast at a normal rate of 2.8% per annum to 2026
- Supply decline forecast at a rapid rate of 4.7% per annum to 2026
- Mature mines, declining grades, limited recent exploration success



Source: TZMI, Sheffield Resources Investor Presentation, 16 July 2018

BUT COULD ZIRCON DEFICITS BE UNDERSTATED?

Most of the light blue supply from South Africa shown the picture on the previous page represents supply from Rio's Richard Bay Minerals (RBM) operation, which represents a material ~33% of global zircon supply. But for a number of reasons we see a risk of further supply shocks at RBM:

- **RBM has already had several stoppages this year alone:**
 - **April 2018:** RBM shut by contractor protests seeking substantial pay rises who blocked access to the mine. Mineral sands insiders also suggested the protests escalated beyond road closures, with suggestions that a dredge at the operation was sunk and copper electricity lines cut¹.
 - **July 2018:** RBM was shut again after violent community protests and the death of a security guard².
- **South Africa is becoming much harder to do business for mining companies:**
 - **Ongoing labour issues:** 400 incidents of social unrest impacting mining operations since between the start of 2016 and April this year according to data compiled by Anglo American Platinum and reviewed by Reuters².
 - **Degrading Fiscal Framework:** Draft new changes to mining code:
 - Increasing BEE ownership from 26% to 30%.
 - Adding a new 1% royalty, which according to the South African chamber of mines would have consumed over 95% of the mining industries dividends if it had been in place during 2016.
 - Collectively, these new measures make it much more difficult for mining companies to generate the required return on capital to justify building development projects.
- **To maintain zircon production levels, RBM requires ~US\$500m in new capex to develop Zulti South¹.** Given the draft changes to the mining code and the ongoing labour issues in South Africa, we believe it is probably unlikely Rio Tinto wants to invest more money in South Africa.
- **We have heard anecdotally that RBM is for sale:** While not confirmed by Rio Tinto, we have heard anecdotally from several mineral sands industry players that RBM is for sale... which does not surprise us given the issues outlined above.

¹ <https://www.afr.com/business/mining/rio-tinto-mineral-sands-operation-shut-by-protests-20180412-h0yojr>

² <https://www.moneyweb.co.za/news-fast-news/rio-tinto-says-minerals-sands-operation-in-sa-shut-by-protests/>

ZIRCON PRICES RALLYING

We recently had a detailed discussion with Sheffield's product marketing team. Based on discussions with industry players, Sheffield's marketing team believes current zircon markets remain tight (or at worst in balance). And that's before considering the recent news that RBM has again been shut down. Our takeaways from the conversation were:

- Iluka's latest 6-month premium zircon reference price in late Feb 2018 was US\$1,410/t (up 15% on US\$1,230/t)
- Tronox is already selling premium zircon for prices of ~US\$1,600-1,640/t
- While we believe Iluka is probably doing its best to try to keep a lid on prices, we expect a 10-15% increase in the zircon reference price in a few weeks (late August) to ~US\$1,550-1,620/t...
- ...and that's assuming production at RBM resumes quickly (i.e. within a week or two). If RBM is closed for over a month or more, we believe this would probably put upward pressure on prices (given RBM represents ~33% of global supply!)

NEAR-TERM CATALYSTS

In our view the key near term de-risking milestones for Sheffield are:

- **Environmental Approvals:** Sheffield expects both WA state and Federal environmental approvals **by the end of Q3 CY18**
- **Native Title Agreement:** Sheffield expects to have agreement on Native Title **by the end of Q3 CY18**
- **Potential sale of stake in project to Partner (if required):** We expect any deal with a potential partner to be finalised **by Q4 CY18**.

LIKELY TO BE A TAKEOVER TARGET IN OUR VIEW

We continue to believe that Sheffield is highly likely to be a takeover target given:

- **Supply shortages in Premium Zircon:** The significant ~30% supply deficit being predicted by TZMI over the next few years (~62% of Thunderbird's revenue is from zircon on BFS prices). The zircon market is tight and prices have already begun to rally. There is also a distinct lack of other projects which could fill this forecast supply shortfall.
- **Compelling valuation:** SFX's relatively modest ~A\$185m fully diluted market cap, relative to the A\$850m NPV for Thunderbird on our price forecasts.
- **Thunderbird's world class attributes:** Thunderbird is a large scale project (42 year mine life and will be 6-7% of zircon market), very high grade and low strip and is located in a safe jurisdiction (in Western Australia).

If there is a potential suitor out there planning to bid for Sheffield, we believe the most likely time would be post environmental and native title approvals, both of which the company expects to receive during the current quarter.

PRICE TARGET & RATING

We increase our Price Target for Sheffield by 29% to **\$2.20** (from \$1.70) based on an unchanged 30% discount to NPV until SFX receives its Environmental and Native Title approvals for Thunderbird (both due this quarter). Our NPV for Thunderbird has increased due to:

- **5% higher premium zircon prices of US\$1,450/t** (from BFS pricing of US\$1,381/t). In late Feb 2018, Iluka lifted its premium zircon reference price 15% to US\$1,410/t and we expect Iluka to announce another 10-15% increase in late August (~4 weeks) to US\$1,550-1,620/t. Tronox is already selling premium zircon for prices of ~US\$1,600-1,640/t.
- **9% higher ilmenite prices of US\$200/t** (from BFS pricing of US\$183/t). This is in line with ilmenite prices are ~US\$200/t and excludes the potential premium which we believe Sheffield's high quality ilmenite is likely to attract.
- **Weaker A\$ forecasts:** We reduce our long term A\$/US\$ forecasts from 0.73 to 0.70 to account for the growing differential in the cash rate between the US and Australia.
- **We have also pushed the development timetable for Thunderbird out by 12-months**, assuming major construction activities commence in Q1 CY19, allowing a few months buffer relative to company forecasts. We believe this buffer may be necessary if the company elects to sell a stake in Thunderbird post Native Title approvals.

We rate Sheffield Resources a high conviction Buy and our \$2.20 Price Target represents an implied return of ~190%.

Key Valuation Assumptions for Thunderbird

	BFS	Blue Ocean	Comment
Premium zircon prices	US\$1,381/t	US\$1,450/t	We expect Iluka to lift premium zircon prices 10-15% to US\$1,550-1,620/t within ~4 weeks (in late August)
Ilmenite prices	US\$189/t	US\$200/t	Current ilmenite prices ~US\$200/t ignoring potential premium for SFX's high quality product
A\$/US\$	0.75	0.74 to 0.70 LT	Based on the growing differential in the cash rate between Australia and US
NPV ₁₀ post tax ¹	A\$620m	A\$850m	SFX is trading at a <i>huge</i> discount to NPV, with a FD mcap of ~A\$185m
IRR post tax	21%	25%	

Source: Company, Blue Ocean estimates. ¹Note: 10% nominal or 8% real

STRATEGIC TARGET

Our \$3.00 Strategic Target for Sheffield Resources is based on possibility Sheffield is able to sell 20% of Thunderbird for \$100m. Given Sheffield is trading at such a large discount to NPV, selling a stake in the project is a far dilutive funding approach than raising straight equity.

Our \$3.00 Strategic Target represents an implied return of ~300%. It is important to note that our Strategic Target does *not* account for upside mineral sands pricing scenarios *or* for further exploration success at the company's other mineral sands projects.

KEY RISKS

Sheffield Resources is exposed to all the normal risks associated with developing and operating mining projects, including permitting, funding and construction risk.

Assuming Sheffield makes the transition into production, its revenues will be derived from the sale of premium zircon (43% of revenue on BFS assumptions), zircon concentrate (19% of revenue), sulphate ilmenite (29% of revenue), Hi-Ti88 leucoxene (4% of revenue) and titano-magnetite (5% of revenue). Fluctuations in the prices of these products as well as the Australian dollar could impact the company's reported cash flow (in A\$), profitability and share price.

As Sheffield's Thunderbird project is based in Western Australia, an investment in Sheffield also carries Australian sovereign risk. However, it is worth noting that Australia is considered materially lower sovereign risk than many of the other jurisdictions which host mineral sands mines like South Africa (Rio Tinto), Mozambique (Kenmare) and Kenya (Base Resources).

MODEL SUMMARY: FINANCIALS & VALUATION
Stock Details

Recommendation:	BUY		
Target	\$2.20	Share Price	\$0.76
NAV	\$2.26	52 Week High	\$0.94
Implied Return	189%	52 Week Low	\$0.41

Enterprise Value	\$163m
Diluted MCap	\$186m
Diluted Shares	244m
Free Float	100%
Avg Daily Value	\$0.2m

Macro Assumptions	% of Rev	FY17	FY18E	FY19E	FY20E	FY21E
Exchange Rate (A\$/US\$)		0.75	0.78	0.73	0.72	0.71
Premium Zircon	43%	1,025	1,243	1,410	1,410	1,450
Zircon Concentrate	19%	513	621	705	705	725
Ilmenite	30%	135	190	200	200	200
	92%					

Profit & Loss (A\$m)	FY17	FY18E	FY19E	FY20E	FY21E
Revenue	-	-	-	-	97
Operating Costs	-	-	-	-	(58)
Operating Profit	-	-	-	-	39
Corporate & Other	(7)	(6)	(6)	(6)	(6)
Exploration Expense	(2)	(0)	-	-	(0)
EBITDA	(9)	(6)	(6)	(6)	33
D&A	(0)	(0)	(0)	(0)	(4)
EBIT	(9)	(6)	(6)	(6)	29
Net Interest Expense	0	0	2	5	(7)
Pre-Tax Profit	(9)	(6)	(4)	(2)	22
Tax Expense	1	-	-	-	(7)
Underlying Profit	(8)	(6)	(4)	(2)	15
Significant Items (post tax)	(2)	1	-	-	-
Reported Profit	(9)	(5)	(4)	(2)	15

Cash Flow (A\$m)	FY17	FY18E	FY19E	FY20E	FY21E
Operating Cashflow	(3)	(6)	(6)	(6)	33
Tax	-	-	-	-	-
Net Interest	0	0	2	5	(7)
Net Operating Cash Flow	(3)	(6)	(4)	(1)	26
Exploration	(10)	(2)	-	-	(2)
Capex	(0)	(3)	(76)	(169)	(101)
Acquisitions / Disposals	1	0	-	-	-
Other	-	-	-	-	-
Net Investing Cash Flow	(10)	(5)	(76)	(169)	(103)
Equity Issue	16	30	145	3	2
Borrowing / Repayments	-	-	117	117	-
Dividends	-	-	-	-	-
Other	-	-	-	-	-
Net Financing Cash Flow	16	30	262	119	2
Change in Cash Position	3	19	182	(51)	(75)
FX Adjustments	-	-	-	-	-
Cash Balance	8	27	209	158	84

Balance Sheet (A\$m)	FY17	FY18E	FY19E	FY20E	FY21E
Cash	8	27	209	158	84
Other Current Assets	0	1	1	1	1
PP&E	0	2	78	247	343
Exploration & Development	39	42	42	42	44
Other Non Current Assets	-	-	-	-	-
Total Assets	47	73	331	449	472
Debt	-	-	117	233	233
Other Liabilities	2	6	6	6	12
Net Assets	46	68	209	210	226

Ratio Analysis		FY17	FY18E	FY19E	FY20E	FY21E
Diluted Shares	m	196	240	434	441	445
EPS - Diluted	Ac	(4.1)	(2.5)	(1.2)	(0.4)	3.3
P/E	x	n.m.	n.m.	n.m.	n.m.	23.1x
CFPS - Diluted	Ac	(1.7)	(2.4)	(1.1)	(0.3)	5.9
P/CF	x	n.m.	n.m.	n.m.	n.m.	13.0x
FCF - Diluted	Ac	(1.8)	(3.8)	(18.9)	(39.7)	(15.2)
P/FCF	x	n.m.	n.m.	n.m.	n.m.	n.m.

Dividends	Ac	-	-	-	-	-
Dividend yield	%	-	-	-	-	-
Payout Ratio	%	-	-	-	-	-
Franking	%	-	-	-	-	-
Enterprise Value	A\$m	177	158	93	261	335
EV/EBITDA	x	(19.5x)	(26.3x)	(15.5x)	(43.5x)	10.2x
ROE	%	(17%)	(8%)	(2%)	(1%)	6%
ROA	%	(16%)	(8%)	(1%)	(0%)	3%
Net Debt / (Cash)		(8)	(27)	(93)	75	150
Gearing (ND/(ND+E))	%	n.m.	(68%)	(80%)	26%	40%
Gearing (ND/E)	%	n.m.	(40%)	(44%)	36%	66%

Reserves & Resources	Valuable HM Grade					
		HM	Zircon	Ilmenite	Hi-Ti	Lcx Leucos
	mt	%	%	%	%	%
Proved	236	13.3	1.00	3.55	0.29	0.26
Probable	445	10.2	0.80	2.85	0.26	0.26
Reserve	681	11.3	0.87	3.10	0.27	0.26
Measured	220	14.5	1.07	3.90	0.31	0.27
Indicated	640	11.8	0.90	3.30	0.28	0.25
Inferred	180	10.8	0.87	3.00	0.27	0.26
Resource	1,050	12.2	0.93	3.30	0.28	0.26

Earnings Sensitivity	FY21E		FY22E		
	A\$m	A\$m	%	%	
Premium Zircon Price	US\$/t +10%	4	9	27%	19%
Ilmenite Price	US\$/t +10%	2	5	13%	10%
Exchange Rate	A\$/US\$ -10%	7	17	48%	35%

Valuation	Discount	Stake	A\$m	A\$/sh
Thunderbird (unrisked)		100%	813	3.33
Thunderbird (risk-adjusted)	30%	100%	569	2.33
Exploration & Other Projects			30	0.12
Corporate & Other			(74)	(0.30)
Debt			-	-
Cash			23	0.09
Option Strikes			3	0.01
Risk adjusted NAV			551	2.26

Source: Company data, Blue Ocean Equities

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