

SHEFFIELD RESOURCES LIMITED (SFX)

Heading into another high news flow period

Sheffield Resources Limited's Thunderbird deposit is a very significant mineral sands project. The Company has three important catalysts over the next 4-6 months.

- An updated resource estimate for Thunderbird expected before Christmas;
- Results from the 15t metallurgical test work Q1 15
- The PFS for Thunderbird expect late Q1 2015.

We expect PFS will improve on scoping study

The scoping study was based on 20.8Mtpa, mine life 32 years, capex \$309m including contingency, 118ktpa zircon, 545ktpa ilmenite and A\$252/t average cash costs. We expect that the PFS could improve on the scoping study. Possibilities include:

- reducing start-up capex (eg incremental ramp-up, leasing equipment, lowering product specs);
- reducing opex (eg using local gas, better recoveries and higher grades in early years grades at surface, more detailed mine plan scheduling);
- Increasing mine life (infill drilling to increase M&I categories, transition to dredge mining).

Fraser Range Nickel exploration...new target identification

SFX plans to undertake moving loop EM (Mar Qtr.) over the northern prospect at the Red Bull project in the Fraser Range. While no formal timeframe has been committed, we expect that drilling the Hook and northern prospects may occur mid-2015.

Hartleys expects first 10 year EBITDA \$163m pa

Our model is slightly more conservative than the scoping study, and certainly does not include potential improvements to the PFS. This is to err on the side of conservatism given experience with other listed companies suggests subsequent studies rarely improve on the scoping study. We are quietly hopeful that SFX will be an exception given, to date, the Company has exceeded our expectations several times over the past three years.

Our model (assumes avg zircon selling prices US\$1309/t, ilmenite US\$187/t, AUDUSD 0.91) estimates first 10 year EBITDA of \$163m pa and life of mine EBITDA of \$129m pa. At spot prices assumes avg zircon selling prices US\$1050/t, ilmenite US\$159/t, AUDUSD 0.87), we estimate 10 year EBITDA of \$116m pa and life of mine \$88m pa.

Retain Buy

Thunderbird is a significant mineral sands project that can add considerable global supply of sulphate ilmenite and zircon (circa 5-10%). Such a large addition would surely reduce selling prices below what they would otherwise settle at, and hence SFX is a strategic asset valuable to both customers and other producers. Back-of-the envelop calculations suggest every \$100/t reduction in zircon prices reduces the NPV₈ of a 300ktpa zircon producer by ~\$300m, and adds ~\$1.2b of value to the ~1.2mtpa zircon end user base. We have twelve month price target of \$1.83 and have Buy recommendation.

	4 Nov 2014
Share Price	\$0.82
reliminary valuation	\$1.53
Price Target (12 month)	\$1.83

Brief Business Description:

Mineral sands developer plus an exciting multicommodity exploration portfolio (Fraser Range Ni, Oxley potash, Nth Pilbara iron ore).

Hartleys Brief Investment Conclusion

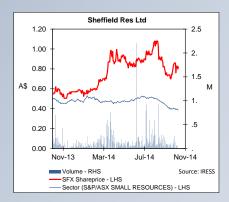
The Dampier project is large (could add 5-10% pa of global zircon supply) and scoping study economics to develop are very compelling.

Chairman & MD

Will Burbury (Exec-Chairman)

Bruc	eΝ	1cQui	tty	(MD)
_	.			

Top Shareholders			
Will Burbury - The Burbury	5.9%		
Bruce McQuitty			5.8%
David Archer Family Supe	r Fund		5.8%
Company Address			
Level 1, 57 Havelock Stree	ət		
West Perth, WA 6005			
Issued Capital			134.4m
- fully diluted (itm)			142.1m
Market Cap			A\$110.2m
- fully diluted			A\$116.5m
Cash (30 Sep 14a)			A\$8.7m
Debt (30 Sep 14a)			A\$0.0m
EV			A\$101.5m
	FY17e	FY18e	FY19e
EBITDA	-8.4	141.7	160.8
Op Cash Flw	-8.2	192.7	141.4
Norm NPAT	-22.4	96.0	97.8
CF/Share (cps)	-3.3	78.3	57.4
EPS (cps)	-9.1	39.0	39.7
P/E	-9.0	2.1	2.1



Trent Barnett

Head of Research Ph: +61 8 9268 3052

E: trent_barnett@hartleys.com.au

Hartleys has assisted in the completion of a capital raising for Sheffield Resources Limited ("Sheffield") in the last 12 months for which it has earned fees. Hartleys has also provided corporate advice within the past 12 months and continues to provide corporate advice to Sheffield, for which it has fees and continues to earn fees. Analyst has a beneficial interest in SFX shares.

Hartleys Limited ABN 33 104 195 057 (AFSL 230052) 141 St Georges Terrace, Perth, Western Australia, 6000 Hartleys does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Further information concerning Hartleys' regulatory disclosures can be found on Hartleys website www.hartleys.com.au

4 November 2014

Sheffield Res Lt	d			Sh	are Price
SFX					\$0.820
Key Market Information					
Share Price					\$0.820
Market Capitalisation - or Net Debt (cash)	dinary				A\$110m -\$9m
Market Capitalisation - ful	lv diluted				A\$116m
EV	,				A\$104m
EV inc. assumed new cap	oital				A\$479m
ssued Capital					134.4m
Dptions ssued Capital (fully dilute	d inc. all antion	(a)			7.6 142.1m
ssued Capital (fully dilute ssued Capital (fully dilute			I)		254.8m
Valuation 12month price target					\$1.53 \$1.83
P&L	Unit	30 Jun 16	30 Jun 17	30 Jun 18	30 Jun 19
let Revenue	A\$m	0.0	0.0	276.3	332.3
Total Costs	A\$m	-8.0	-8.4	-134.6	-171.5
BITDA	A\$m	-8.0	-8.4	141.7	160.8
- margin	A.C	-	-	51%	48%
epreciation/Amort	A\$m A\$m	-4.1 -12.1	-14.0 -22.4	-20.9 120.8	-21.1 139.7
et Interest	A\$m A\$m	-12.1	-22.4	0.0	139.7
Pre-Tax Profit	A\$m	-12.1	-22.4	120.8	139.7
ax Expense	A\$m	0.0	0.0	-24.8	-41.9
lormalised NPAT	A\$m	-12.1	-22.4	96.0	97.8
bnormal Items	A\$m	0.0	0.0	0.0	0.0
Reported Profit	A\$m	-12.1	-22.4	96.0	97.8
linority	A\$m	0.0	0.0	0.0	0.0
rofit Attrib	A\$m	-12.1	-22.4	96.0	97.8
alance Sheet	Unit	30 Jun 16	30 Jun 17	30 Jun 18	30 Jun 19
Cash	A\$m	243.8	31.6	220.3	357.7
other Current Assets	A\$m A\$m	0.0 243.8	0.0 31.6	3.8 224.1	4.6 362.3
roperty, Plant & Equip.	A\$m A\$m	243.8 95.3	281.2	260.4	239.3
xploration	A\$m	30.3	34.3	38.3	42.3
vestments/other	A\$m	0.0	0.0	0.0	0.0
ot Non-Curr. Assets	A\$m	125.6	315.6	298.7	281.6
otal Assets	A\$m	369.4	347.2	522.8	643.9
hort Term Borrowings	A\$m	-		-	
Other	A\$m	5.2	5.4	85.1	108.4
otal Curr. Liabilities	A\$m	5.2	5.4	85.1	108.4
ong Term Borrowings	A\$m	200.0	200.0	200.0	200.0
Other	A\$m	-	-	-	-
otal Non-Curr. Liabil.	A\$m	200.0	200.0	200.0	200.0
otal Liabilities	A\$m	205.2	205.4	285.1	308.4
let Assets let Debt	A\$m A\$m	164.2 -43.8	141.8 168.4	237.7 -20.3	335.5 -157.7
	Unit A\$m	30 Jun 16 -3.8	30 Jun 17 -8.2	30 Jun 18 217.5	30 Jun 19 183.3
perating Cashflow	Unit A\$m A\$m	30 Jun 16 -3.8 0.0	30 Jun 17 -8.2 0.0	30 Jun 18 217.5 -24.8	
perating Cashflow come Tax Paid	A\$m	-3.8	-8.2	217.5	183.3
perating Cashflow ncome Tax Paid nterest & Other	A\$m A\$m	-3.8 0.0	-8.2 0.0	217.5 -24.8	183.3 -41.9
perating Cashflow acome Tax Paid aterest & Other perating Activities	A\$m A\$m A\$m A\$m	-3.8 0.0 0.0 -3.8	-8.2 0.0 0.0 -8.2	217.5 -24.8 0.0 192.7	183.3 -41.9 0.0 141.4
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip.	A\$m A\$m A\$m	-3.8 0.0 0.0	-8.2 0.0 0.0	217.5 -24.8 0.0	183.3 -41.9 0.0
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel.	A\$m A\$m A\$m A\$m A\$m	-3.8 0.0 0.0 -3.8 -100.0	-8.2 0.0 0.0 -8.2 -200.0	217.5 -24.8 0.0 192.7 0.0	183.3 -41.9 0.0 141.4 0.0
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther	A\$m A\$m A\$m A\$m A\$m A\$m	-3.8 0.0 -3.8 -100.0 -8.0	-8.2 0.0 0.0 -8.2 -200.0 -4.0	217.5 -24.8 0.0 192.7 0.0 -4.0	183.3 -41.9 0.0 141.4 0.0 -4.0
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther vestment Activities	A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m	-3.8 0.0 -3.8 -100.0 -8.0 0.0 -108.0	-8.2 0.0 -8.2 -200.0 -4.0 0.0 -204.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 -4.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 - 4.0
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther vvestment Activities orrowings	A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m	-3.8 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0	-8.2 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 -4.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 - 4.0 0.0
perating Cashflow ucome Tax Paid uterest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther uvestment Activities orrowings quily or "tbc capital"	A\$m A\$m A\$m A\$m A\$m A\$m A \$m A\$m A\$m A\$m	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8	-8.2 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 -4.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 -4.0 0.0 0.0 0.0
perating Cashflow ncome Tax Paid nterest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther ivestment Activities orrowings quity or "bc capital" ividends Paid	A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m	-3.8 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0	-8.2 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 -4.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 - 4.0
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther vvestment Activities orrowings quity or "tbc capital" ividends Paid inancing Activities	A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8	-8.2 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 -4.0 0.0 -4.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther ivestment Activities orrowings quity or "tbc capital" ividends Paid inancing Activities et Cashflow	A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m	-3.8 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0	-8.2 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 -4.0 0.0 -4.0 0.0 -4.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 - 4.0 0.0 0.0 0.0 0.0
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther veestment Activities orrowings quity or "tbc capital" inancing Activities et Cashflow hares rdinary Shares - End	A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m	-3.8 0.0 0.0 -3.8 -100.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0	-8.2 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 -4.0 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 188.7 30 Jun 18 246.2	183.3 -41.9 0.0 141.4 -4.0 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 137.4 30 Jun 19
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip, wolpration and Devel, ther vestment Activities orrowings quity or "tbc capital" vividends Paid nancing Activities et Cashflow hares et Cashflow	A\$m M M m m	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 246.2 189.8	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 -4.0 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 188.7 30 Jun 18 246.2	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 137.4 20 Jun 19 246.2 246.2
perating Cashflow come Tax Paid terest & Other perating Activities operty. Plant & Equip. oploration and Devel. ther vestment Activities prrowings uitly or "tbc capital" vidends Paid nancing Activities et Cashflow hares trdinary Shares - End rdinary Shares - Wited	A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m A\$m Dir m m	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 246.2 189.8 189.8	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 137.4 30 Jun 19 246.2 246.2 246.2
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther vestment Activities orrowings quity or "tbc capital" ividends Paid nancing Activities et Cashflow hares trdinary Shares - End rdinary Shares - Wited luted Shares - Wited attio Analysis	A\$m Dirit m Unit Unit	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 349.8 238.0 30 Jun 16 30 Jun 16	-8.2 0.0 -8.2 -200.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther vestment Activities orrowings quity or "tbc capital" ividends Paid inancing Activities et Cashflow hares rdinary Shares - End rdinary Shares - Wited atio Analysis ashflow Per Share	A\$m Unit Unit A\$ cps	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 246.2 189.8 189.8 189.8 189.8 189.8	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Apperating Cashflow ncome Tax Paid nterest & Other roperta Activities roperty, Plant & Equip. xpoloration and Devel. ther twestment Activities orrowings quily or "tbc capital" ividends Paid inancing Activities let Cashflow hares brdinary Shares - End ridniary Shares - W'ted atlo Analysis ashflow Per Share iashflow Multiple	A\$m A\$m	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 246.2 189.8 189.8 30 Jun 16 -2.0 -2.0 -41.0x	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 -4.0 0.0 -4.0 0.0 0.0 0.0 0.0 188.7 30 Jun 18 246.2 246.2 246.2 246.2 246.2 246.2 30 Jun 18 78.3 3.1.0x	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Apperating Cashflow ncome Tax Paid iterest & Other roperta Activities roperty, Plant & Equip. xploration and Devel. ther ivestment Activities orrowings quity or "tbc capital" ividends Paid inancing Activities let Cashflow hares Indinary Shares - Wited illuted Shares - Wited illuted Shares - Wited iteshflow Per Share iashflow Nultiple V (+ cap.)/EBIT	A\$m Dift m m M Unit A\$cps X	-3.8 0.0 0.0 -3.8 -100.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 246.2 189.8 189.8 189.8 30 Jun 26 -2.0 -41.0x	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
perating Cashflow ncome Tax Paid titerest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther nvestment Activities orrowings quity or "bc capital" ividends Paid inancing Activities let Cashflow hares hares Hidea Shares - Wited attio Analysis ashflow Multiple V (+ cap.)/EBIT V (+ cap.)/EBIT	A\$m Unit M Unit A\$ cps x x	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 246.2 189.8 30 Jun 16 -2.0 -41.0x -39.5x -59.8x	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
perating Cashflow come Tax Paid terest & Other perating Activities roperty, Plant & Equip. xploration and Devel. ther vestment Activities orrowings quity or "the capital" vidends Paid inancing Activities et Cashflow hares rdinary Shares - End rdinary Shares - Wted atio Analysis ashflow Per Share ashflow Multiple V (+ cap.)/EBITD A amings Per Share	A\$m A\$m	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 -2.0 -41.0x -59.8x -6.4	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
perating Cashflow ncome Tax Paid nterest & Other roperta Qativities roperty, Plant & Equip. xploration and Devel. ther nvestment Activities orrowings quily or "tbc capital" ividends Paid inancing Activities let Cashflow hares let Cashflow hares - W'ted lidted Shares - Share rise to Earnings Ratio	A\$m M Unit A\$cps X X A\$cps	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 246.2 189.8 30 Jun 16 -2.0 -41.0x -39.5x -59.8x	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Apperating Cashflow ncome Tax Paid iterest & Other roperta Activities roperty, Plant & Equip. xploration and Devel. ther ivestment Activities orrowings quity or "tbc capital" ividends Paid inancing Activities let Cashflow hares Indriany Shares - Wited illuted Shares - Wited illuted Shares - Wited illuted Shares - Wited ashflow Nultiple V (+ cap.)/EBITDA arnings Per Share rice to Earnings Ratio ividends Per Share	A\$m A\$m	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 -2.0 30 Jun 16 -2.0 -41.0x -39.5x -59.8x -6.4 -12.8x	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 137.4 30 Jun 19 246.2 246.2 246.2 246.2 246.2 246.3 30 Jun 19 57.4 1.4 x 3 x 3 x 3 x 3 x 3 x 3 x 3 x
Cashflow Deperating Cashflow Deperating Cashflow come Tax Paid nterest & Other Operating Activities Property, Plant & Equip. Exploration and Devel. Dther Investment Activities Corrowings Guity or "tbc capital" Dividends Paid Inancing Activities Let Cashflow Contany Shares - End Ordinary Shares - Wited Didued Shares - Wited Cashflow Multiple EX (+ cap.)/EBIT EX (+ cap.)/EBITDA Carnings Par Share Vice to Earnings Ratio Dividends Per Share Dividends Pield	A\$m A\$m	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 -2.0 -41.0x -39.5x -59.8x -6.4	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 -204.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 137.4
perating Cashflow iccome Tax Paid iterest & Other perating Activities orperty, Plant & Equip. xploration and Devel. ther ivestment Activities orrowings quity or "tbc capital" ividends Paid inancing Activities et Cashflow hares et Cashflow hares et Cashflow hares ituled Shares - Wited attio Analysis ashflow Per Share ashflow Multiple V (+ cap.)/EBIT V (+ c	A\$m A\$m	-3.8 0.0 0.0 -3.8 -100.0 -8.0 0.0 -108.0 200.0 149.8 0.0 349.8 238.0 30 Jun 16 246.2 189.8 30 Jun 16 -2.0 -41.0x -39.5x -59.8x -6.4 -12.8x 0.0%	-8.2 0.0 0.0 -8.2 -200.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	217.5 -24.8 0.0 192.7 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	183.3 -41.9 0.0 141.4 0.0 -4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

					. N	004.4
				4	Novemb	
						Buy
irectors					Company Inf	
ill Burbury (Exec-Chairm	an)				1, 57 Havel	
ruce McQuitty (MD) avid Archer (Technical Di	irector)				West Perth, +61.8 f	WA 6005 6424 8440
and Alones (Toesance						M27 0
				www.sh	neffieldresou	rces.com
op Shareholders					m shares	%
ill Burbury - The Burbury	Family A/C				8.0	5.9%
ruce McQuitty	- ·				7.8	5.8%
avid Archer Family Super eserves & Resources	7 Fund		Bt	Grade	7.7 Metal (Mt)	5.8% Attr.
ampier			2.62	6.5%	72.0	100.0%
high grade			0.74	12.1%	35.9	100.0%
neabba			0.30	2.2%	5.8	100.0%
cCalls roduction Summary		Unit	4.43 Jun 16	1.2% Jun 17	53.0 Jun 18	100.0% Jun 19
ill Throughput		Mt		0.00	15.90	20.80
trip Ratio		x			0.24	0.24
M grade		%			10.2% 71.0%	10.2% 71.0%
rcon Recovery otal VHM production		% kt			71.0% 536.0	71.0% 701.1
production		kt			103.6	135.6
-Ti production		kt			16.3	21.4
ulph. Ilmenite production		kt			416.0	544.2
evenue to Cost ratio ine Life		yr Mt			2.4 31.3	2.1 30.3
nenite		% rev.			31.3	30.3 34.6%
rcon		% rev.			58.9%	59.6%
-Ti production		% rev.			5.9%	5.8%
osts		Unit	Jun 16	Jun 17	Jun 18	Jun 19
ev milled tonne		\$A/t			17.4	16.0
ost per milled tonne		\$A/t			7.1	7.1
BITDA / tonne milled ore 1: Operating Cash Cost =		\$A/t \$A/t final product			8.9 220	7.7 217
1: Operating Cash Cost = a) + Royalty = (b)	= (a)	\$A/t final product \$A/t final product			220 235	217 231
2: (a) + depreciation & ar	nortisation = (c)	\$A/t final product			258	231
a) + actual cash for devel		\$A/t final product			220	217
3: (c) + Royalty d) + Royalty		\$A/t final product \$A/t final product			274 235	262 231
d) + Royalty rice Assumptions		\$A/t final product	Jun 16	Jun 17	235 Jun 18	231 Jun 19
UDUSD		A\$/US\$	0.94	0.91	0.90	0.93
nenite		US\$/t	215.3	214	208	195
rcon utile		US\$/t US\$/t	1299.8 1281.4	1360 1233	1407 1200	1365 1133
eucoxene		US\$/t	961.0	925	900	850
vg selling price / VHM pro	oduced	A\$/t			515	474
ensitivity Analysis	Valuation		FY18 NPAT			
ase Case	Valuation 1.55		FY18 NPAT 96.0			
pot Prices 0.75 (-51.5	i%)			(-44.3%)		
oot USD/AUD 0.87, Ilmer						
UDUSD +/1(1.07 / 2.12 nenite +/10(1.74 / 1.36			′ 116.8 (-17.8% 2.8 / 89.1 (7.1%			
nenite +/10% 1.74 / 1.36 rcon +/10% 1.85 / 1.25			2.8 / 89.1 (7.1% / 85.1 (11.3%			
utile +/10% 1.55 / 1.55	(0.0% / 0.0%)	9	6.0 / 96.0 (0.0	% / 0.0%)		
eucoxene +/ 2.09 / 1.00			76.4 (20.6%			
perating Cost 1.28 / 1.81	(-17.3% / 17.2%)	ō <i>ı</i> .	7 / 104.2 (-8.69	% / 8.6%)		
npaid Capital						
ear Expires No. (m)	<u>\$m</u>	Avg price	% ord			
· · · 00	2.0	0.00	00/			
)-Jun-14 0.0)-Jun-15 0.0	0.0 0.0	0.00	0% 0%			
-Jun-15 0.0)-Jun-16 1.9	0.0	0.00	0% 1%			
)-Jun-17 1.7	1.0	0.59	1%			
)-Jun-18 0.5	0.3	0.53	0%			
)-Jun-19 1.9 TOTAL 6.0	1.5 3.5	0.81 0.58	1% 4%			
	•	6.00	7,0			
			\$m	/shr		
aluation			0	0.00		
00% Eneabba (pre-tax N/		2%)	649 0	2.55 0.00		
00% Eneabba (pre-tax NA 00% Dampier (pre-tax NA		40/ \	v	0.00		
00% Eneabba (pre-tax N/		4%)	5	0.02		
00% Eneabba (pre-tax NA 00% Dampier (pre-tax NA 00% McCalls (pre-tax NA		4%)	5 0	0.02		
00% Eneabba (pre-tax N/ 00% Dampier (pre-tax NA 00% McCalls (pre-tax NA ther Assets/Exploration prwards orporate Overheads		4%)	0 -89	0.00 -0.35		
00% Eneabba (pre-tax NA 00% Dampier (pre-tax NA 00% McCalls (pre-tax NA ther Assets/Exploration orwards orporate Overheads et Cash (Debt)		4%)	0 -89 9	0.00 -0.35 0.03		
00% Eneabba (pre-tax N/ 00% Dampier (pre-tax NA 00% McCalls (pre-tax NA ther Assets/Exploration prwards orporate Overheads		4%)	0 -89	0.00 -0.35		
00% Eneabba (pre-tax N/ 00% Dampier (pre-tax NA 00% McCalls (pre-tax NA ther Assets/Exploration orwards orporate Overheads et Cash (Debt) ax (NPV future liability)			0 -89 9 -187	0.00 -0.35 0.03 -0.73	_	
00% Eneabba (pre-tax N/ 00% Dampier (pre-tax NA 00% McCalls (pre-tax NA ther Assets/Exploration onwards orporate Overheads et Cash (Debt) ax (NPV future liability) ptions & Other Equity			0 -89 9 -187 2	0.0 -0.3 0.0 -0.7	0 5 3 3 1	5 3 3 1

+61 8 9268 3052

"the capital could be equity or debt. Our valuation is risk-adjusted for how this may be obtained. Sources: IRESS, Company Information, Hartleys Research

Fig. 1: Scoping study and Hartleys assumptions

	Scoping Study (14 April 2014)	Hartleys	Hartleys Difference v. scoping	Hartleys using spot prices	g Hartleys Spot v. Hartleys Base
Mining inventory			T		<u></u>
Mining inventory	669.0Mt	697.1Mt	4.2%		
Mining inventory grade	10.2%	10.2%	0.0%		
Zircon in-situ mining inventory grade	0.83%	0.81%	-2.9%		
- first 10 years	n/a	0.92%	nm		
Leuc. in-situ mining inventory grade	0.27%	0.21%	-21.3%		
- first 10 years	n/a	0.21%	nm		
Ilmenite in-situ mining inventory grade	2.92%	2.89%	-1.2%		
- first 10 years	n/a	2.91%	nm		
Mined Zircon	n/a	167.7kt pa	nm		
- first 10 years	n/a	190.4kt pa	nm		
Mined Leuc./HiTi	n/a	44.2kt pa	nm		
- first 10 years Mined Ilmenite	n/a n/a	44.6kt pa	nm		
- first 10 years	n/a	600.2kt pa 605.5kt pa	nm nm		
Mining & processing Average Mining Rate	20.8Mt pa	20.8Mt pa	0.0%		
Strip ratio LOM	0.64x	0.65x	1.5%		
- first 10 years	0.04x	0.24x	0.0%		
Mine Life	32.0yrs	32.0yrs	0.0%		
HMC processed	2132kt pa	2222kt pa	4.2%		
HMC production	1477kt pa	1539.5yrs	4.2%		
- recovery	69%	69%	0.0%		
Recoveries Zircon	n/a	71%	nm		
Recoveries Leuc./HiTi	n/a	48%	nm		
Recoveries Ilmenite	n/a	90%	nm		
Production Zircon	118.2kt pa	119.0kt pa	0.7%		
- first 10 years	135.1kt pa	135.2kt pa	0.1%		
Production Leuc./HiTi	21.7kt pa	21.2kt pa	-2.2%		
- first 10 years	n/a	21.4kt pa	nm		
Production Ilmenite	545.0kt pa	540.2kt pa	-0.9%		
- first 10 years	n/a	545.0kt pa	nm		
Total production saleable product	684.9kt pa	680.5kt pa	-0.6%		
Financials					
Zircon selling price	US\$1475/t	US\$1309/t	-11.3%	US\$1050/t	-19.8%
Leuc/Hiti selling price	US\$870/t	US\$795/t	-8.6%	US\$713/t	-10.4%
Ilmenite selling price	US\$185/t	US\$187/t	1.0%	US\$159/t	-14.7%
AUD/USD	0.90cents	0.91cents	1.0%	0.87cents	-3.9%
Zircon contribution to revenue	62%	57%	-5.0% pts	55%	-1.7% pts
Leuc/Hiti contribution to revenue	2%	6%	3.9% pts	7%	0.5% pts
Ilmenite contribution to revenue	36%	37%	1.1% pts	38%	1.2% pts
LOM revenue	\$10,010m	\$9,633m	-3.8%	\$8,283m	-14.0%
Unit Revenue	\$456.7/t	\$442.4/t	-3.1%	\$380.4/t	-14.0%
EBITDA	\$140m pa	\$128.8m	-8.0%	\$88.0m	-31.6%
- first 10 years	\$187m pa	\$162.7m	-13.0%	\$115.9m	-28.8%
Unit cash costs	\$252.3/t	\$253.1/t	0.3%	\$251.0/t	-0.8%
Unit EBITDA margins	44.8%	42.8%	-4.4%	34.0%	-20.5%
Rev./Cost Ratio	1.8x	1.7x	-3.4%	1.5x	-13.3%
Pre-production capex (inc conting. & studies)	\$309.2m	\$321.2m	3.9%	\$321.2m	0.0%
Valuation					
Decision to mine	CY16	CY16		CY16	
First production	CY17	Sep gtr 2017		Sep qtr 2017	
Discount rate	n/a	12%		12%	
Capital requirement	n/a	\$374m		\$374m	
pre-tax <u>NPV</u> unfunded, dec. to mine	n/a	\$657m		\$352m	-46.4%
pre-tax IRR, dec. to mine	n/a	42.1%		29.0%	
New shares	n/a	112.7m		139.1m	23.4%
- assumed raising price	n/a	\$1.33/shr		\$1.08/shr	
pre-tax <u>NAV</u> funded, today	n/a	\$649m		\$394m	-39.3%
per diluted share	n/a	\$2.55/shr		\$1.40/shr	-45.0%
corporate o/head, tax	n/a	-\$1.02/shr		-\$0.65/shr	-35.9%
SFX valuation NPV12	n/a	\$1.53/shr		\$0.75/shr	-51.0%
SFX valuation NPV8	n/a	\$2.64/shr	1	\$1.44/shr	-45.5%

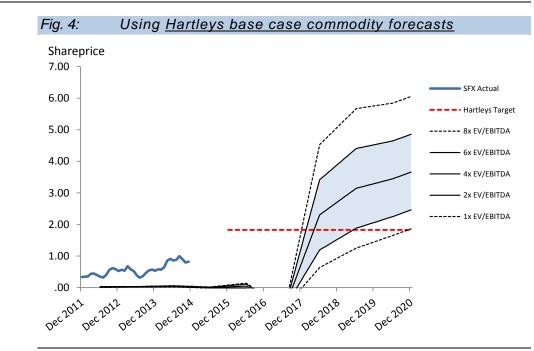
Source: Sheffield Resources, Hartleys Estimates

Fig. 2: SFX Price Target			
Price Target Methodology	Weighting	Spot	12 mth out
NPV12 consensus prices	48%	\$1.53	\$1.83
NPV12 at spot commodity and fx prices	15%	\$0.75	\$0.91
NPV8 consensus prices	20%	\$2.64	\$2.75
NPV8 at spot commodity and fx prices	3%	\$1.44	\$1.42
8.0x FY18 (EV + capital) / EBIT	5%	\$3.13	\$3.13
4.0x FY18 (EV + capital) / EBIT	5%	\$1.24	\$1.24
Net cash backing	4%	\$0.06	\$0.06
Risk weighted composite		\$1.64	
12 Months Price Target		\$1.83	
Shareprice - Last		\$0.820	
12 mth total return		123%	

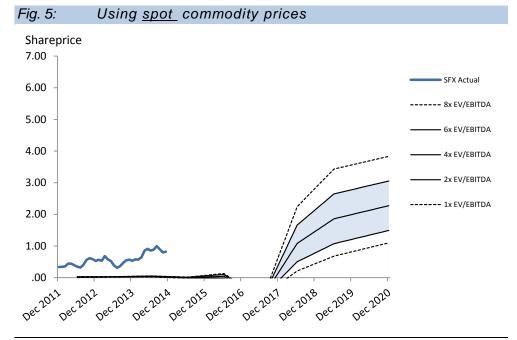
Source: Hartleys Estimates

Assumption	Risk of not realising assumption	Downside risk to valuation if assumption is incorrect	Comment
First production in late CY17 for Thunderbird	High	Moderate	The construction period for any future mine is expected to be long with significant approval and construction timeframes.
Mineral sands prices in line with sell-side consensus	Moderate	Significant	The consensus is for modestly improving prices
32 year mine life	Moderate to high	More likely to be upside	Our model assumes only the high grade resource is mined and none of the low grade resource. It's possible that mine life is too conservative.
Capex for Thunderbird is 50:40 debt/equity	Low to Moderate	upside/downside risk is equal as we are conservative on our assumption for equity dilution. Its also possible a much higher proportion of debt funding is available (80:20)	Capital requirements are large for a company of this size and there is risk that SFX will not be abl to raise sufficient funds, although as the studies have progressed and markets have improved slightly, it seems an increasingly lower risk that SFX will not be able to fund development
Operating costs	Moderate	Moderate	We are happy with our operating cost assumptions
No value for other projects	High	Upside	Our valuation is based only on the Thunderbird project. Although it seems difficult to see the equity market attributing much value for the othe projects in the near term, it should be remembere that potentially asset sales could fund a large proportion of the development studies.
Conclusion		nsequential reduction to c	able, we consider some assumptions as moderate t our valuation would be significant if they were not ieved.

Source: Hartleys Research



Source: Hartleys Research, IRESS



Source: Hartleys Research, IRESS

HARTLEYS CORPORATE DIRECTORY

+61 8 9268 2821

Research

Nesearch		
Trent Barnett	Head of Research	+61 8 9268 3052
Mike Millikan	Resources Analyst	+61 8 9268 2805
Scott Williamson	Resources Analyst	+61 8 9268 3045
Simon Andrew	Energy Analyst	+61 8 9268 3020
Alex Mazzega	Jnr Research Analyst	+61 8 9268 2837
Janine Bell	Research Assistant	+61 8 9268 2831
Corporate Finance		
Grey Egerton-	Head of Corp Fin.	+61 8 9268 2851
Warburton		
Richard Simpson	Director –Corp. Fin.	+61 8 9268 2824
Paul Fryer	Director–Corp. Fin.	+61 8 9268 2819
Dale Bryan	Director-Corp. Fin.	+61 8 9268 2829
Ben Wale	Snr Mgr–Corp. Fin.	+61 8 9268 3055
Ben Crossing	Snr Mgr – Corp.Fin.	+61 8 9268 3047
Stephen Kite	Snr Mgr- Corp. Fin.	+61 8 9268 3050

Snr Mgr- Corp. Fin.

Registered Office

Scott Weir

Level 6, 141 St Georges TcePostal Address:

 PerthWA
 6000
 GPO Box 2777

 Australia
 Perth
 WA
 6001

 PH:+61 8 9268 2888
 FX: +61 8 9268 2800
 info@hartleys.com.au

 www.hartleys.com.au
 info@hartleys.com.au

 Note: personal email addresses of company employees are structured in the following manner:firstname_lastname@hartleys.com.au

Hartleys Recommendation Categories

Buy Accumulate	Share price appreciation anticipated. Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell No Rating	Significant price depreciation anticipated. No recommendation.
Speculative Buy	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.

Disclaimer/Disclosure

The author of this publication, Hartleys Limited ABN 33 104 195 057 ("Hartleys"), its Directors and their Associates from time to time may hold shares in the security/securities mentioned in this Research document and therefore may benefit from any increase in the price of those securities. Hartleys and its Advisers may earn brokerage, fees, commissions, other benefits or advantages as a result of a transaction arising from any advice mentioned in publications to clients.

Hartleys has assisted in the completion of a capital raising for Sheffield Resources Limited ("Sheffield") in the last 12 months for which it has earned fees. Hartleys has also provided corporate advice within the past 12 months and continues to provide corporate advice to Sheffield, for which it has fees and continues to earn fees.

Any financial product advice contained in this document is unsolicited general information only. Do not act on this advice without first consulting your investment adviser to determine whether the advice is appropriate for your investment objectives, financial situation and particular needs. Hartleys believes that any information or advice (including any financial product advice) contained in this document is accurate when issued. Hartleys however, does not warrant its accuracy or reliability. Hartleys, its officers, agents and employees exclude all liability whatsoever, in negligence or otherwise, for any loss or damage relating to this document to the full extent permitted by law.

Institutional Sales

Carrick Ryan	+61 8 9268 2864
Justin Stewart	+61 8 9268 3062
Simon van den Berg	+61 8 9268 2867
Chris Chong	+61 8 9268 2817
Digby Gilmour	+61 8 9268 2814
Jayme Walsh	+61 8 9268 3053
Wealth Management	
Nicola Bond	+61 8 9268 2840
Bradley Booth	+61 8 9268 2873
Adrian Brant	+61 8 9268 3065
Nathan Bray	+61 8 9268 2874
Sven Burrell	+61 8 9268 2847
Simon Casey	+61 8 9268 2875
Tony Chien	+61 8 9268 2850
Tim Cottee	+61 8 9268 3064
David Cross	+61 8 9268 2860
Nicholas Draper	+61 8 9268 2883
John Featherby	+61 8 9268 2811
Ben Fleay	+61 8 9268 2844
James Gatti	+61 8 9268 3025
John Georgiades	+61 8 9268 2887
John Goodlad	+61 8 9268 2890
Andrew Gribble	+61 8 9268 2842
David Hainsworth	+61 8 9268 3040
Neil Inglis	+61 8 9268 2894
Murray Jacob	+61 8 9268 2892
Gavin Lehmann	+61 8 9268 2895
Shane Lehmann	+61 8 9268 2897
Steven Loxley	+61 8 9268 2857
Andrew Macnaughtan	+61 8 9268 2898
Scott Metcalf	+61 8 9268 2807
David Michael	+61 8 9268 2835
Damir Mikulic	+61 8 9268 3027
Jamie Moullin	+61 8 9268 2856
Chris Munro	+61 8 9268 2858
Michael Munro	+61 8 9268 2820
lan Parker	+61 8 9268 2810
Charlie Ransom	+61 8 9268 2868
Brenton Reynolds	+61 8 9268 2866
Conlie Salvemini	+61 8 9268 2833
David Smyth	+61 8 9268 2839
Greg Soudure	+61 8 9268 2834
Sonya Soudure	+61 8 9268 2865
Dirk Vanderstruyf	+61 8 9268 2855
Samuel Williams	+61 8 9268 3041