

JUPITER MINES LTD (JMS)

Tshipi to distribute ~A\$71m net to JMS

Jupiter Mines Ltd (JMS) has announced that it expects Tshipi to pay a dividend distribution of ZAR1500m (~A\$150m), less withholding taxes, in September 2018, of which JMS will receive 49.9%. JMS expects to distribute well in excess of 70% income received to shareholders. We calculate this implies a 1H DPS of ~2.7-3.5cps (unfranked), payable in September / October 2018.

We had assumed a 1H DPS of 4.5cps. Note though, JMS announced today that it expects Tshipi cash at end August is ZAR2b, versus ZAR0.2b at end February, which implies ~ZAR1.8b cash generation (equivalent to ~4.5cps JMS). Additionally, cash generation between end May (based on announcement 17 April) and August (based on today's announcement) is only ZAR500m, which appears conservative.

We have lowered our DPS assumption to 3.5cps, but given the cash generation, and given the dividend won't be declared until September, we believe that there is still some upside risk to the upper end 3.5cps assumption.

No change to underlying earnings estimates

We have not changed our Tshipi earnings estimates. The Company says that production to date is above 3.3Mtpa run-rate, but we have maintained our production estimate for FY19 at 3.3Mt. We assume Mn prices continue to decline in our earnings estimates. The distribution is lower than we had expected, but implied cash generation is in-line, production is better and selling prices remain robust. Hence, we see no reason to change our Tshipi FY19 earnings estimates and presumably the cash balance at Tshipi is being increased for an eventual larger distribution to shareholders.

Maintain our Buy recommendation with 55cps target

JMS has a strong history of capital management. Guidance is for DPS "in excess of 70%" and we interpret that to mean close to 100% of income received. We maintain our Buy recommendation and have a \$0.55 twelve month target + 6cps DPS.

Tshipi (49.9%)	Unit	28 Feb 18		28 Feb 19			29 Feb 20	
			Old	New	% chg	Old	New	% chạ
Production (100%)	Mtpa	3.4	3.3	3.3	0.0%	3.3	3.3	0.0%
Received Price	US\$/dmtu	4.6	5.5	5.5	0.0%	4.2	4.2	0.0%
Tshipi Revenue (49.9%)	A\$m	372.0	430.5	430.5	0.0%	332.7	332.7	0.0%
	ZARm	3659.7	4007.9	4007.9	0.0%	3460.6	3460.6	0.09
Tshipi Cash Costs (49.9%)	A\$m	-214.5	-217.8	-217.8	0.0%	-205.5	-205.5	0.0
	ZARm	-2110.8	-2027.4	-2027.4	0.0%	-2137.2	-2137.2	0.09
Tshipi EBITDA (49.9%)	A\$m	157.4	212.7	212.7	0.0%	127.2	127.2	0.09
- margin			49%			38%		
Tshipi, 100%, EBITDA	A\$m	315.5	426.3	426.3	0.0%	255.0	255.0	0.0
Tshipi, 100%, Cash dist	A\$m	161.2	315.1	271.9	-13.7%	195.6	195.6	0.0
% of EBITDA		51%	74%	64%	-13.7%	77%	77%	0.0
Tshipi, 100%, EBITDA	ZARm	3104.0	3968.9	3968.9	0.0%	2652.1	2652.1	0.0
Tshipi, 100%, EBITDA	US\$	244.6	324.0	324.0	0.0%	194.3	194.3	0.09
Pro forma D&A	A\$m	-11.7	-11.7	-11.7	0.0%	-11.7	-11.7	0.0
Tshipi EBIT	A\$m	133.9	191.7	191.7	0.0%	106.5	106.5	0.0
Tshipi Net Interest	A\$m	1.1	0.0	0.0		0.0	0.0	
Pro Forma PBT	A\$m	135.0	191.7	191.7	0.0%	106.5	106.5	0.0
Tshipi Tax Expense	A\$m	-38.6	-53.7	-53.7	0.0%	-29.8	-29.8	0.0
Tshipi NPAT (49.9%)	A\$m	96.4	138.0	138.0	0.0%	76.7	76.7	0.0
payout		84%	114%	99%	-13.6%	128%	128%	0.09
DPS		-	0.07	0.06	-14.3%	0.04	0.04	0.0%

 18 Jun 2018

 Share Price
 \$0.370

 Valuation
 \$0.47

 12mth price target
 \$0.55

 Brief Business Description:
 \$

Manganese producer in Sth Africa (via 49.9% interest in Tshipi mine)

Hartleys Brief Investment Conclusion

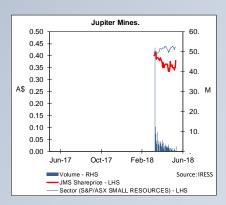
Long mine life, low cost and highly incentivised management for shareholder friendly capital management. Risk is Sth Africa sovereign risk & manganese price volatility.

Chairman & MD

Brian Gilbertson (Chairman)	
Priyank Thapliyal (CEO)	
Top Shareholders	
Stichting Pensioenfonds	14.8%
Investec	13.4%
Pallinghurst	7.5%
Posco	6.9%
HJM Jupiter LP	5.0%

Company Address

•••••			
Level 10, 16 St Georg	es Terrace		
Perth WA, 6000, Aust	ralia		
Issued Capital			1948.3m
- fully diluted			1948.3m
Market Cap			A\$720.9m
- fully diluted			A\$720.9m
Cash (31 May 18p)			A\$93.0m
Debt (31 May 18p)			A\$0.0m
EV			A\$627.9m
	Mt	Mn grade	
Resources (Mt)	459.5	33%	
Reserves (Mt)	86.41	36.32	



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Hartleys has assisted Jupiter Mines Limited ("Jupiter") in the completion of its Initial Public Offering, for which it has earned fees.

Source: Hartleys Estimates.

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Buy

Jupiter Mines Ltd JMS					
Key Market Information					
Share price					A\$0.37
Issued Capital Options, performance rights and	d partly paid s	hares ITM			1948.3m 0.0m
Options, performance rights and					0.0m
Issued Capital (fully diluted inc.					1948.3m
Issued Capital (fully diluted inc.	all options an	id new capital)			1948.3m
Net Cash Twelve month price target					\$93.0m A\$0.55
Valuation					A\$0.47
Tshipi (49.9%)	Unit	28 Feb 17a	28 Feb 18a	28 Feb 19f	29 Feb 20f
Tshipi Revenue (49.9%)	A\$m	181.1	372.0	430.5	332.7
Tshipi Cash Costs (49.9%)	ZARm	1884.8 -116.2	3659.7	4007.9 -217.8	3460.6
Tshipi Cash Costs (49.9%)	A\$m ZARm	-116.2 -1209.2	-214.5 -2110.8	-217.8 -2027.4	-205.5 -2137.2
Tshipi EBITDA (49.9%)	A\$m	64.9	157.4	212.7	127.2
- margin		36%	42%	49%	38%
Tshipi, 100%, EBITDA	A\$m	130.1	315.5	426.3	255.0
Tshipi, 100%, Cash dist	A\$m	95.0	161.2	271.9	195.6
% of EBITDA		73%	51%	64%	77%
Tshipi, 100%, EBITDA	ZARm	1354.0 97.4	3104.0	3968.9 324.0	2652.1 194.3
Tshipi, 100%, EBITDA	US\$	97.4	244.6	324.0	194.3
Pro forma D&A	A\$m	-7.5	-11.7	-11.7	-11.7
Tshipi EBIT	A\$m	50.0	133.9	191.7	106.5
Tshipi Net Interest	A\$m	0.8	1.1	0.0	0.0
Pro Forma PBT	A\$m	50.7	135.0	191.7	106.5
Tshipi Tax Expense	A\$m	-8.0	-38.6	-53.7	-29.8
Tshipi NPAT (49.9%)	A\$m	42.7 111%	96.4 84%	138.0 99%	76.7 128%
payout JMS	Unit	111% 28 Feb 17a	84% 28 Feb 18a	99% 28 Feb 19f	128% 29 Feb 20f
JMS Reported Revenue	A\$m	155.6	-0.4		00.401
JMS Reported COGS	A\$m	-146.3	0.3		
JMS Reported GP	A\$m	9.3	-0.1		
JMS Reported Profit	A\$m	200.1	92.2		
JMS Balance Sheet	Unit	28 Feb 17a	28 Feb 18a	28 Feb 19f	29 Feb 20f
Cash Dther Current Assets	A\$m A\$m	84.7 39.4	76.5 45.9	83.2 45.9	86.5 45.9
Total Current Assets	A\$m	39.4 124.1	45.9 122.5	45.9 129.2	45.9 132.4
Property, Plant & Equip.	A\$m	0.3	0.0	0.0	0.0
Exploration	A\$m	11.6	8.7	8.7	8.7
nvestments/other	A\$m	346.4	386.6	386.6	386.6
Tot Non-Curr. Assets	A\$m	358.4	395.3	395.3	395.3
Fotal Assets	A\$m	482.5	517.8	524.5	527.8
Short Term Borrowings Other	A\$m A\$m	-	- 49.1	- 49.1	- 49.1
Total Curr. Liabilities	A\$m	3.5	49.1	49.1	49.1
ong Term Borrowings	A\$m	-	-	-	-
Dther	A\$m	3.5	2.6	2.6	2.6
Fotal Non-Curr. Liabil.	A\$m	3.5	2.6	2.6	2.6
Total Liabilities	A\$m	7.1	51.6	51.6	51.6
Net Assets	A\$m	475.4	466.2	472.8	476.1
Net Debt (net cash)	A\$m	-84.7	-76.5	-83.2	-86.5
JMS Cashflow	Unit	28 Feb 17a	28 Feb 18a	28 Feb 19f	29 Feb 20f
Operating Cashflow	A\$m	47.6	90.6	133.2	94.8
Income Tax Paid	A\$m	0.0	0.0	-6.9	-3.8
Interest & Other	A\$m	0.7	0.3	0.0	0.0
Operating Activities	A\$m	48.3	90.9	126.3	91.0
		a -			
Property, Plant & Equip. - off JMS b/s (ie Tshipi)	A\$m	-0.9 0.0	0.0 -8.0	0.0 -6.5	0.0 -6.5
Exploration and Devel.	A\$m	0.0	-8.0	-6.5	-6.5
Other	A\$m	0.0	3.1	0.0	0.0
nvestment Activities	A\$m	-0.8	2.2	0.0	0.0
Borrowings	A\$m	0.0	0.0	0.0	0.0
Equity or "tbc capital"	A\$m	0.0	-102.4	-51.1	0.0
Dividends Paid	A\$m A\$m	0.0 0.0	0.0 -102.4	-68.5 -119.7	-87.7 -87.7
inancing Activities	ΑφΠΙ	0.0	-102.4	-119.7	-01.1
Net Cashflow	A\$m	47.4	-9.3	6.7	3.3
Shares	Unit	28 Feb 17a	28 Feb 18a	28 Feb 19f	29 Feb 20f
Ordinary Shares - End	m	2281.8	2064.5	1948.3	1948.3
,		2281.8	2173.2	1958.0	1948.3
Ordinary Shares - Weighted	m			1958.0	1948.3
Ordinary Shares - Weighted Diluted Shares - Weighted	m	2281.8	2173.2		20 E-L-CO
Ordinary Shares - Weighted Diluted Shares - Weighted Ratio Analysis	m Unit	2281.8 28 Feb 17a	28 Feb 18a	28 Feb 19f	29 Feb 20f
Ordinary Shares - Weighted Diluted Shares - Weighted Ratio Analysis Cashflow Per Share	m	2281.8			29 Feb 20f 4.7
Ordinary Shares - Weighted Diluted Shares - Weighted Ratio Analysis	m Unit	2281.8 28 Feb 17a	28 Feb 18a	28 Feb 19f	
Ordinary Shares - Weighted Diluted Shares - Weighted Ratio Analysis Cashflow Per Share	m Unit A\$ cps	2281.8 28 Feb 17a 2.1	28 Feb 18a 4.2	28 Feb 19f 6.5	4.7
Ordinary Shares - Weighted Diluted Shares - Weighted Ratio Analysis Cashflow Per Share Earnings Per Share Dividends Per Share	m Unit A\$ cps A\$ cps	2281.8 28 Feb 17a 2.1	28 Feb 18a 4.2	28 Feb 19f 6.5 nm	4.7 nm
Ordinary Shares - Weighted Diluted Shares - Weighted Ratio Analysis Cashflow Per Share Earnings Per Share	m Unit A\$ cps A\$ cps	2281.8 28 Feb 17a 2.1 8.8	28 Feb 18a 4.2 nm	28 Feb 19f 6.5 nm 0.060	4.7 nm 0.040

				18 .	June 2018 Buy
Directors				Company	Information
Brian Gilbertson (Chairman)), 16 St Georg	es Terrace
Priyank Thapliyal (CEO)				Perth WA, 600	
Paul Murray (Non-exec) Andrew Bell (Non-exec)					8 9346 5500 8 9481 5933
Sungwon Yoon (Non-exec, Posco Non	ninee)		W	eb: www.jupit	
Melissa North - CFO					
Top Shareholders Stichting Pensioenfonds				m shares 289	% 14.8%
Investec				261	14.8%
Pallinghurst				146	7.5%
Posco				135	6.9%
HJM Jupiter LP				98	5.0%
Reserves & Resources	Mt	% Mn		Attribut	able to JMS
Measured	103	34.1			Atrib: 51Mt
Indicated Inferred	119 237	33.5 32.5			Atrib: 60Mt Atrib: 119Mt
TOTAL Resources	237 460	32.5 33.1			Atrib: 119Mt
Reserve	86	36.3		JMS	Atrib: 43Mt
Production Summary	Unit	28 Feb 17a	28 Feb 18a	28 Feb 19f	29 Feb 20f
Mill Throughput	Mt	2.6	3.8	3.6	3.6
Saleable Product - grade Mn	Mt Mt	2.3 36.5%	3.4 36.5%	3.3 36.5%	3.3 36.5%
Saleable Product (attrib to JMS)	Mt	30.5%	30.5%	30.5%	36.5%
Mass recovery		91.0%	91.0%	91.0%	91.0%
Mine Life	%	50.25	49.25	48.25	47.25
Assumed Mine Inventory (end) Costs	Mt Unit	142.5 28 Feb 17a	139.0 28 Feb 18a	135.4 28 Feb 19f	131.8 29 Feb 20f
Cost per milled tonne	A\$/t	109.0	112.0	119.4	112.5
EBITDA / tonne milled ore	A\$/t	50.7	83.7	118.2	70.7
Total cost / tonne product cfr	US\$/t A\$/t	37.9 100	64.9 126	89.8 133	53.9 126
Total cost / tolline product ch	ZAR/t	1,039	1,236	1,240	1,307
	ZAR\$/dmtu	28	34	34	36
	US\$/t	75	97	101	96
Price Assumptions	US\$/dmtu Unit	2.0 28 Feb 17a	2.7 28 Feb 18a	2.8 28 Feb 19f	2.6 29 Feb 20f
AUDUSD	A\$/US\$	0.75	0.78	0.76	0.76
USDZAR		13.90	12.69	12.25	13.65
AUDZAR		10.41	9.84	9.31	10.40
Manganese: 44% benchmark cfr Manganese: 44% benchmark cfr	US\$/dmtu US\$/t	5.64 248	6.32 278	6.19 272	4.81 212
Iron Ore 62% benchmark cfr	US\$/t	68.1	69.3	65.0	65.0
Tshipi received price cfr	US\$/t	116.5	168.8	200.1	155.1
	US\$/dmtu	3.2	4.6	5.5	4.2
	ZAR\$/dmtu A\$/dmtu	44.4 4.3	58.7 6.0	67.2 7.2	58.0 5.6
Valuation multiples	A\$/difitu	4.5 28 Feb 17a	28 Feb 18a	28 Feb 19a	29 Feb 20a
EV/EBITDA	х	9.7	4.0	3.0	4.9
Div Yield	%	0.0%	0.0%	16.2%	10.8%
Hedging	Unit	28 Feb 17a	28 Feb 18a	28 Feb 19f	29 Feb 20f
none					
none Sensitivity Analysis		Valuation	FY19 p	oro-froma EB	TDA
		Valuation 0.469	FY19 p	pro-froma EB 212.7	ITDA
Sensitivity Analysis Base Case Spot Prices		0.469 0.97 (106.6%)		212.7	ITDA 93.9 (38.2%)
Sensitivity Analysis Base Case Spot Prices Spot USD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/~10%	.8/dmtu, 37% Mn 1 0.38 / 0	0.469 0.97 (106.6%) fob Sth Africa \$ 0.58 (-19.0% / 2	5.5/dmtu 3.2%) 177.	212.7 2 4 / 255.9 (-16	93.9 (38.2%) .6% / 20.3%)
Sensitivity Analysis Base Case Spot Prices Spot USD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/~10% Manganese +/~10%	.8/dmtu, 37% Mn 1 0.38 / 0 0.58 / 0	0.469 0.97 (106.6%) fob Sth Africa \$ 0.58 (-19.0% / 2 0.36 (24.1% / -2	5.5/dmtu 3.2%) 177. 4.1%) 256.	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.9	93.9 (38.2%) .6% / 20.3%) 5% / -20.5%)
Sensitivity Analysis Base Case Spot Prices Spot USD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/~10%	.8/dmtu, 37% Mn 1 0.38 / 0 0.58 / 0	0.469 0.97 (106.6%) fob Sth Africa \$ 0.58 (-19.0% / 2	5.5/dmtu 3.2%) 177. 4.1%) 256.	212.7 2 4 / 255.9 (-16	93.9 (38.2%) .6% / 20.3%) 5% / -20.5%)
Sensitivity Analysis Base Case Spot Prices Spot USD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/-10% Manganese +/-10% Production +/-10% Unpaid Capital Year Expires	.8/dmtu, 37% Mn 1 0.38 / 0 0.58 / 0	0.469 0.97 (106.6%) fob Sth Africa \$ 0.58 (-19.0% / 2 0.36 (24.1% / -2 0.42 (9.8% / -9 <u>\$m</u>	5.5/dmtu (3.2%) 177. (4.1%) 256. (.8%) 234. <u>Avg price</u>	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.3 3 / 191.1 (10.3 <u>6 ord</u>	93.9 (38.2%) .6% / 20.3%) 5% / -20.5%)
Sensitivity Analysis Base Case Spot Prices Spot DSD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/10% Wanganese +/10% Production +/10% Unpaid Capital Year Expires 28-Feb-19	.8/dmtu, 37% Mn 1 0.38 / 0 0.58 / 0	0.469 0.97 (106.6%) fob Sth Africa \$ 0.58 (-19.0% / 2 0.36 (24.1% / -2 0.42 (9.8% / -9 <u>\$m</u> 0.0	5.5/dmtu (3.2%) 177. (4.1%) 256. (.8%) 234. <u>Avg price 9</u> 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.4 6 ord 0%	93.9 (38.2%) .6% / 20.3%) 5% / -20.5%)
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Sensitivity Analysis Base Case Spot Prices Spot DSD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/10% Production +/10% Unpaid Capital Year Expires 28-Feb-19 28-Feb-21 28-Feb-22	.8/dmtu, 37% Mn 1 0.38 / 0 0.58 / 0	0.469 0.97 (106.6%) fob Sth Africa \$ 0.58 (-19.0% / 2 0.36 (24.1% / -2 0.42 (9.8% / -9 <u>\$m</u> 0.0 0.0	5.5/dmtu (3.2%) 177. (4.1%) 256. (.8%) 234. Avg.price <u>9</u> 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.4 6 ord 0% 0%	93.9 (38.2%) .6% / 20.3%) 5% / -20.5%)
Sensitivity Analysis Base Case Spot Prices Spot DSD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/- 10% Production +/- 10% Unpaid Capital Year Expires 28-Feb-19 28-Feb-21 28-Feb-22 28-Feb-23	.8/dmtu, 37% Mn 1 0.38 / 0 0.58 / 0	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -2 0.42 (9.8% / -2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.5/dmtu 3.2%) 177. 4.1%) 256. .8%) 234. <u>Avg price</u> 2 0.00 0.00 0.00 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.2 3 / 191.1 (10.2 0% 0% 0% 0% 0% 0% 0%	93.9 (38.2%) .6% / 20.3%) 5% / -20.5%)
Sensitivity Analysis Base Case Spot Prices Spot Dirices Spot Dirices AUDUSD /-10% Manganese +/-10% Unpaid Capital Year Expires 28-Feb-19 29-Feb-20 28-Feb-21 28-Feb-22 28-Feb-23 TOTAL	.8/dmtu, 37% Mn 1 0.38 / 0 0.58 / 0	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -9 0.42 (9.8% / -9 0.0 0.0 0.0 0.0 0.0	5.5/dmtu (3.2%) 1777 (4.1%) 256 (8%) 234 (1%) 23	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.3 3 / 191.1 (10.3 6 0% 0% 0% 0% 0%	93.9 (38.2%) 6% / 20.3%) 5% / -20.5%) 2% / -10.2%)
Sensitivity Analysis Base Case Spot Prices Spot Dices AUDUSD //L-10% Manganese +/-10% Production +/-10% Unpaid Capital Year Expires 28-Feb-19 29-Feb-20 28-Feb-21 28-Feb-23 TOTAL Valuation	.8/dmtu, 37% Mn 0.38 / (0.58 / (0.51 /	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -2 0.42 (9.8% / -2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.5/dmtu 3.2%) 177. 4.1%) 256. .8%) 234. <u>Avg price</u> 2 0.00 0.00 0.00 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.2 3 / 191.1 (10.2 0% 0% 0% 0% 0% 0% 0%	93.9 (38.2%) .6% / 20.3%) 5% / -20.5%)
Sensitivity Analysis Base Case Spot Prices Spot Dices Spot Prices AUDUSD /10% Manganese +/10% Unpaid Capital Year Expires 28-Feb-19 29-Feb-20 28-Feb-21 28-Feb-22 28-Feb-23 TOTAL	.8/dmtu, 37% Mn 0.38 / (0.58 / (0.51 /	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -2 0.42 (9.8% / -2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.5/dmtu 3.2%) 177. 4.1%) 256. .8%) 234. <u>Avg price</u> 2 0.00 0.00 0.00 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.2 3 / 191.1 (10.2 0% 0% 0% 0% 0% 0% 0%	93.9 (38.2%) 6% / 20.3%) 5% / -20.5%) 2% / -10.2%) 2% / shr
Sensitivity Analysis Base Case Spot Prices Spot USD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/-10% Manganese +/-10% Production +/-10% Unpaid Capital Year Expires 28-Feb-19 29-Feb-20 28-Feb-21 28-Feb-21 28-Feb-23 TOTAL Valuation 49.9% Tshipi (pre-tax NAV at disc. rate Tshipi Tax (NPV future liability) Marketing	.8/dmtu, 37% Mn 0.38 / (0.58 / (0.51 /	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -2 0.42 (9.8% / -2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.5/dmtu 3.2%) 177. 4.1%) 256. .8%) 234. <u>Avg price</u> 2 0.00 0.00 0.00 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.2 3 / 191.1 (10.2 0% 0% 0% 0% 0% 0% 0%	93.9 (38.2%) 6% / 20.3%) 5% / -20.5%) 2% / -10.2%) 2% / -10.2%) A\$/shr 0.60 -0.16 0.02
Sensitivity Analysis Base Case Spot Prices Spot DSD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/10% Wanganess +/10% Production +/10% Uppaid Capital Year Expires 28-Feb-19 29-Feb-20 28-Feb-21 28-Feb-23 TOTAL Valuation 49.9% Tshipi (pre-tax NAV at disc. rate Tshipi Tax (NPV future liability) Marketing Other Assets/Exploration	.8/dmtu, 37% Mn 0.38 / (0.58 / (0.51 /	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -2 0.42 (9.8% / -2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.5/dmtu 3.2%) 177. 4.1%) 256. .8%) 234. <u>Avg price</u> 2 0.00 0.00 0.00 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.2 3 / 191.1 (10.2 0% 0% 0% 0% 0% 0% 0%	93.9 (38.2%) 6% / 20.3%) 5% / -20.5%) 2% / -10.2%) 2% / -10.2%) 2% / -10.2%) 0.60 -0.16 0.02 0.00
Sensitivity Analysis Base Case Spot Prices Spot USD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/-10% Production +/-10% Unpaid Capital Year Expires 28-Feb-20 28-Feb-21 28-Feb-21 28-Feb-22 28-Feb-22 28-Feb-22 28-Feb-23 TOTAL Valuation 49.9% Tshipi (pre-tax NAV at disc. ratt Tshipi Tax (NPV future liability) Marketing Other Assets/Exploration Forwards	.8/dmtu, 37% Mn 0.38 / (0.58 / (0.51 /	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -2 0.42 (9.8% / -2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.5/dmtu 3.2%) 177. 4.1%) 256. .8%) 234. <u>Avg price</u> 2 0.00 0.00 0.00 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.2 3 / 191.1 (10.2 0% 0% 0% 0% 0% 0% 0%	93.9 (38.2%) 6% / 20.3%) 5% / -20.5%) 2% / -10.2%) 2% / -10.2%) A\$/shr 0.60 -0.16 0.02
Sensitivity Analysis Base Case Spot Prices Spot DSD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/10% Wanganess +/10% Production +/10% Uppaid Capital Year Expires 28-Feb-19 29-Feb-20 28-Feb-21 28-Feb-23 TOTAL Valuation 49.9% Tshipi (pre-tax NAV at disc. rate Tshipi Tax (NPV future liability) Marketing Other Assets/Exploration	.8/dmtu, 37% Mn 0.38 / (0.58 / (0.51 /	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -2 0.42 (9.8% / -2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.5/dmtu 3.2%) 177. 4.1%) 256. .8%) 234. <u>Avg price</u> 2 0.00 0.00 0.00 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.2 3 / 191.1 (10.2 0% 0% 0% 0% 0% 0% 0%	93.9 (38.2%) 6% / 20.3%) 5% / -20.5%) 2% / -10.2%) 2% / -10.2%) 2% / -10.2%) 0.06 0.016 0.02 0.000
Sensitivity Analysis Base Case Spot Prices Spot USD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/10% Production +/-10% Unpaid Capital Year Expires 28-Feb-20 28-Feb-20 28-Feb-22 28-Feb-22 28-Feb-22 28-Feb-22 28-Feb-22 28-Feb-22 70TAL Yaluation 49.9% Tshipi (pre-tax NAV at disc. ratt Tshipi Tax (NPV future liability) Marketing Other Assets/Exploration Forwards Corporate Overheads Net Cash (Debt) With Holding Tax	.8/dmtu, 37% Mn 0.38 / (0.58 / (0.51 /	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -2 0.42 (9.8% / -2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.5/dmtu 3.2%) 177. 4.1%) 256. .8%) 234. <u>Avg price</u> 2 0.00 0.00 0.00 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.2 3 / 191.1 (10.2 0% 0% 0% 0% 0% 0% 0%	93.9 (38.2%) 6% / 20.3%) 5% / -20.5%) 2% / -10.2%) 2% / -10.2%) 0.00 -0.16 0.02 0.00 0.00 -0.01 0.00 -0.01 0.002 -0.02
Sensitivity Analysis Base Case Spot Prices Spot USD/AUD 0.74, 44% Mn CFR \$6 AUDUSD +/-10% Manganese +/-10% Production +/-10% Unpaid Capital Year Expires 28-Feb-19 29-Feb-20 28-Feb-21 28-Feb-21 28-Feb-21 28-Feb-23 TOTAL Valuation 49.9% Tshipi (pre-tax NAV at disc. rate Tshipi Tax (NPV future liability) Marketing Other Assets/Exploration Forwards Corporate Overheads Net Cash (Debt)	.8/dmtu, 37% Mn 0.38 / (0.58 / (0.51 /	0.469 0.97 (106.6%) lob Sth Africa \$ 0.58 (-19.0% / 2 0.42 (9.8% / -2 0.42 (9.8% / -2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.5/dmtu 3.2%) 177. 4.1%) 256. .8%) 234. <u>Avg price</u> 2 0.00 0.00 0.00 0.00 0.00	212.7 2 4 / 255.9 (-16 4 / 169.1 (20.4 3 / 191.1 (10.2 3 / 191.1 (10.2 0% 0% 0% 0% 0% 0% 0%	93.9 (38.2%) 6% / 20.3%) 5% / -20.5%) 2% / -10.2%) 2% / -10.2%) 2% / -10.2%) 0.60 -0.16 0.02 0.00 0.00 0.001 0.05

Analyst: Trent Barnett +61 8 9268 3052 "tbc capital" could be equity or debt. Our valuation is risk-adjusted for how this may be obtained. Sources: IRESS, Company Information, Hartleys Research

Fig. 2: Earnings Changes Tshipi (49.9%) Unit 28 Feb 18 28 Feb 19 29 Feb 20 Old New % chg Old New % chg Production (100%) Mtpa 3.4 0.0% 3.3 3.3 0.0% 3.3 3.3 US\$/dmtu **Received Price** 5.5 5.5 0.0% 4.2 0.0% 4.6 4.2 Tshipi Revenue (49.9%) A\$m 372.0 430.5 430.5 0.0% 332.7 332.7 0.0% ZARm 3659.7 4007.9 4007.9 0.0% 3460.6 3460.6 0.0% Tshipi Cash Costs (49.9%) A\$m -214.5 -217.8 -217.8 0.0% -205.5 -205.5 0.0% 0.0% ZARm -2110.8 -2027.4 -2027.4 0.0% -2137.2 -2137.2 Tshipi EBITDA (49.9%) A\$m 157.4 212.7 212.7 0.0% 127.2 127.2 0.0% - margin 49% 38% A\$m 315.5 426.3 426.3 0.0% 255.0 255.0 0.0% Tshipi, 100%, EBITDA 161.2 315.1 271.9 195.6 0.0% A\$m -13.7% 195.6 Tshipi, 100%, Cash dist % of EBITDA 51% 74% 64% -13.7% 77% 77% 0.0% ZARm 0.0% Tshipi, 100%, EBITDA 3104.0 3968.9 3968.9 2652.1 2652.1 0.0% Tshipi, 100%, EBITDA US\$ 244.6 324.0 324.0 0.0% 194.3 194.3 0.0% Pro forma D&A A\$m -11.7 -11.7 -11.7 0.0% -11.7 -11.7 0.0% Tshipi EBIT A\$m 133.9 191.7 191.7 0.0% 106.5 106.5 0.0% Tshipi Net Interest A\$m 1.1 0.0 0.0 0.0 0.0 Pro Forma PBT A\$m 135.0 191.7 191.7 0.0% 106.5 106.5 0.0% Tshipi Tax Expense A\$m -38.6 -53.7 -53.7 0.0% -29.8 -29.8 0.0% Tshipi NPAT (49.9%) A\$m 138.0 138.0 0.0% 76.7 0.0% 96.4 76.7 payout 84% 114% 99% -13.6% 128% 128% 0.0% 0.060 -14.3% 0.040 0.040 DPS -0.070 0.0%

Source: Hartleys Estimates

Assumption	Risk of not realising assumption	Downside risk to valuation if assumption is incorrect	Comment
Mine life	Low	High	We assume a long mine life. The mining right expires in 2040 but we assume it is extended.
Discount rate	Moderate	Upside	We assume a discount rate of 10%, real.
FX	Moderate	Meaningful	We assume that the Rand depreciates modestl
Selling prices fall from current prices	Moderate	Most significant	We assume manganese selling prices retrace but remain above cash costs.
Project interest	Low	Modest	We assume JMS retains its 49.9% interest in Tshipi.
Conclusion	We believe our assu		ese selling prices are the most important for our uation.

Source: Hartleys

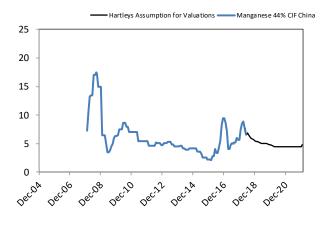
PRICE TARGET

We have a twelve month price target of \$0.55 (unchanged from previous).

Price Target Methodology	Weighting	Spot	12 mth out
NPV base case valuation	25%	\$0.47	\$0.43
NPV spot valuation	15%	\$0.97	\$0.99
4x EV/EBITDA	20%	\$0.43	\$0.29
10x EV/EBITDA	15%	\$1.00	\$0.65
Dividend yield 9.1% base case	20%	\$0.60	\$0.42
Dividend yield 9.1% spot prices	5%	\$1.08	\$1.08
Risk weighted composite		\$0.67	
12 Months Price Target		\$0.55	
Shareprice - Last		\$0.3700	
12 mth total return		48%	

Source: Hartleys Research Estimates

Fig. 4: Manganese Price Assumptions





Source: Asian Metal, Hartleys estimates

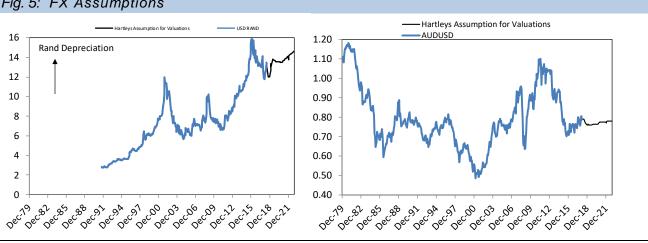
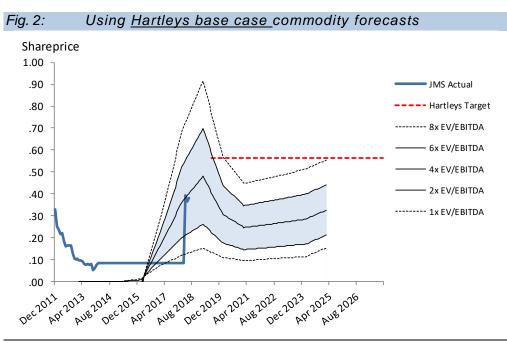
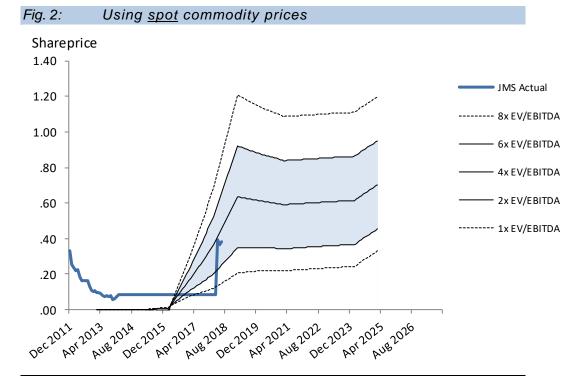


Fig. 5: FX Assumptions

Source: Iress, Hartleys estimates



Source: Hartleys Estimates, IRESS



Source: Hartleys Estimates, IRESS

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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 /	It is anticipated to be unlikely that there will be gains over
Take profits	the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	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.

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