

16 Jan 2019

Share Price	\$0.190
Valuation	\$0.18
Price Target (12 month)	\$0.26

**Brief Business Description:**

Gold producer in the Pilbara (Nullagine)

**Hartleys Brief Investment Conclusion**

WA gold producer with both production and mine life growth potential. Fresh ore processing expansion expected to be commissioned in early CY19. Significant exploration upside. Barton's first underground mine now delivering ore, with potential for a second underground mine in CY19.

**Chairman & CEO**

Greg Bittar (Non-Exec Chairman)  
Peter Cash (CEO)

**Top Shareholders**

IMC Resource Investment Pty Ltd	47.8%
Board & Management	1.5%

**Company Address**

Unit 7, 140 Abernathy Road  
Belmont, WA 6104

<b>Issued Capital</b>	794.4m
- fully diluted	843.6m

<b>Market Cap</b>	A\$150.9m
- fully diluted	A\$160.3m

**Cash and Bullion (31 Dec 18a)** A\$5.7m

**Debt (31 Dec 18a)** A\$5.0m

**Undrawn Debt (31 Dec 18a)** A\$12.5m

**EV** A\$150.2m

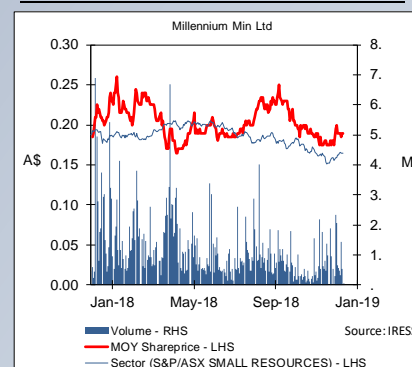
**EV/Resource Au oz** 135.7

**EV/Reserve Au oz** 492.6

Prelim. (A\$m)	CY17a	CY18e	CY19e
Prod (koz Au)	72.9	79.9	96.4
Op Cash Flw	30.8	29.1	41.3
Norm NPAT	-7.3	-5.8	15.9
CF/Share (cps)	3.9	3.7	5.1
EPS (cps)	-0.7	-0.6	1.5
P/E	-26.6	-33.8	12.5

**Resources (Moz)** 1.11

**Reserves (Moz)** 0.31



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## MILLENNIUM MINERALS LTD (MOY)

### Hits upper end CY18 guidance, but cash appears low

Millennium (MOY) has achieved upper end CY18 guidance, following a solid final quarter (DecQ), and is now operating at the annualised ~100kozpa rate.

Production guidance for CY19 is due to be reported in Feb'19, together with updated reserves and resources (as at the end of Dec'18). We have an expectation for guidance around the 100koz mark with costs slightly improved on the recent CY18 result; we forecast ~96koz at an AISC of ~A\$1,326/oz.

MOY reported **CY18 production of 79,891oz at an AISC of A\$1,463/oz** (gold sold of 80,869oz at an AISC of A\$1,446/oz) which compares to guidance of 75k-80koz within at an AISC range of A\$1,280-1,350/oz.

Cash and bullion of only \$5.7M at DecQ end (down from A\$15.6M SepQ), after some A\$20M expenditure, split between expansion capex (A\$15.8M), exploration (A\$2.9M) and other activities (A\$1.3M). MOY has current debt of A\$5M (previously drawn A\$10M and repaid A\$5M in the quarter) from the A\$17.5M Investec facility (A\$12.5M undrawn), to have a Net Cash position of A\$0.7M at the end of the quarter. We had previously forecast a Net Debt position of ~A\$6M at year end, and assume some additional debt will be drawn during the course of CY19 to complete the plant upgrade. Higher debt levels add some financial risks, but provides some certainty around more sustainable production levels over an anticipated longer mine life.

### DecQ delivers 24.5koz largely in-line, but costs higher

The Nullagine operations produced **24,514oz in the DecQ** (up from 22,414oz SepQ) at an **AISC of A\$1,216/oz** (A\$1,324/oz SepQ), which was largely in-line for DecQ production guidance of ~25koz, while costs were higher than forecast (AISC of ~A\$1,150/oz guided). The increased gold production was largely driven by higher grade material delivered from the Bartons underground mine and from other open pits (Redbeard and Mustang). Stopping at the Bartons underground is on track to commence ahead of schedule this quarter (MarQ) due to better than expected ground conditions, with the Company now considering a revised 'top-down' mining method. The increased grades (+29% qoq) were well supported by higher mining rates (+14% qoq) but lower mill throughput levels (-12% qoq) were below the CY18 average. Gold sales for the quarter were A\$39.2M (22,782oz at an average gold price of A\$1,749/oz) for operating cash flows of A\$14.7m (before expansion capex, expansion studies and exploration), up from A\$7.4M SepQ. MOY's current hedge book of 41.5koz is to be delivered over the period Jan'19–Dec'19 at an average forward gold price of A\$1,715/oz.

### Recent met-testwork improving recoveries; Accumulate

Recent sulphide metallurgical test-work has shown that in-mill oxidation leach tests (INOX) have (un-optimised) recoveries of ~79% (up from ~75%) with further results pending. The Company is also considering a pressure comminution oxidation step (PINOX). Construction mobilisation of the sulphide expansion will commence late Jan'19 with stockpiling of sulphide concentrate from late MarQ for commissioning of the expanded sulphide circuit in early JunQ, for improved/more sustainable production levels.

We maintain our **Accumulate** recommendation, with our latest price target of 26cps (down from 30cps). MOY is currently trading around our latest NAV of 18cps (P/NAV 1.04x) and our spot NAV of 26cps (P/NAV 0.73x).

## SUMMARY MODEL

Millennium Min Ltd MOY					Share Price \$0.190		16 January 2019 Accumulate																																		
<b>Key Market Information</b>							<b>Directors</b>				<b>Company Information</b>																														
Share Price	\$0.190						Greg Bittar (Non-Exec Chairman)	Unit 7, 140 Abernathy Road																																	
Market Capitalisation - ordinary	A\$151m						Peter Cash (CEO)	Belmont, WA 6104																																	
Net Debt (cash)	-A\$1m						Peter Lester (Non-exec Director)	+61 8 9216 9011																																	
Market Capitalisation - fully diluted	A\$160m						Tim Kennedy (Non-Exec Director)	+61 8 9481 0288																																	
EV	A\$160m						Bruno Lorenzon (Non-Exec Director)	www.millenniumminerals.com.au																																	
Issued Capital	794.4m						Dean Will (COO)	Michael Poepeja (BD and Tech Services)																																	
Options & Rights	49.2m						Ray Parry (CFO and Comp Sec)	Jason Robertson (GM Operation)																																	
Issued Capital (fully diluted inc. all options)	843.6m																																								
Issued Capital (fully diluted inc. all options and new capital)	843.6m																																								
Hedging	41.5koz @ A\$1,715/oz gold forward																																								
Valuation	\$0.18																																								
12month price target	\$0.26																																								
<b>P&amp;L</b>							<b>Top Shareholders</b>							<b>Reserves &amp; Resources</b>																											
Net Revenue	Unit	31 Dec 16	31 Dec 17	31 Dec 18	31 Dec 19	166.9	IMC Resource Investment Pty Ltd		m shares		%		TOTAL RESOURCE & RESERVE		Mt		g/t Au		Koz																						
Total Costs	A\$m	-99.5	-94.3	-116.0	-123.1	43.8	Board & Management		12.0		1.5%		Measured		4.0		1.3		191																						
EBITDA	A\$m	42.1	21.3	21.1	43.8	269							Indicated		9.7		1.6		509																						
- margin		30%	18%	15%	26%	31.0							Inferred		8.2		1.5		408																						
Depreciation/Amort	A\$m	-21.9	-25.3	-25.8	-31.0	12.8							<b>Resource (Total)</b>		<b>21.9</b>		<b>1.6</b>		<b>1,107</b>																						
EBIT	A\$m	20.1	-4.0	-4.7	12.8	0.6	Bartons UG		0.63		4.9		98		Jun-18																										
Net Interest	A\$m	-3.1	-1.6	0.2	-0.6	12.2	<b>Reserve</b>		<b>6.0</b>		<b>1.6</b>		<b>305</b>		<b>Jun-18</b>																										
Pre-Tax Profit	A\$m	17.1	-5.6	-4.5	12.2	0.3	Reserve (UG) - Bartons		0.3		4.5		39		Jun-18																										
Tax Expense	A\$m	0.0	0.0	0.0	0.0																																				
Normalised NPAT	A\$m	11.9	-7.3	-5.8	15.9																																				
Abnormal Items	A\$m	-5.1	1.7	1.3	-3.7																																				
Reported Profit	A\$m	17.1	-5.6	-4.5	12.2																																				
Minority	A\$m	0.0	0.0	0.0	0.0																																				
Profit Attrib	A\$m	17.1	-5.6	-4.5	12.2																																				
<b>Balance Sheet</b>							<b>Production Summary</b>							<b>Costs</b>																											
Cash	A\$m	25.2	17.9	5.7	26.1	14.2	Unit	Dec 16	Dec 17	Dec 18	Dec 19	Unit	Dec 16	Dec 17	Dec 18	Dec 19	Unit	Dec 16	Dec 17	Dec 18	Dec 19																				
Other Current Assets	A\$m	20.6	21.5	11.7	14.2	40.3	Mill Throughput	Mt	2.0	1.9	1.9	1.7	Cost per milled tonne	\$/t	44.8	47.8	55.4	65.2	21.5	11.1	11.1	25.8																			
Total Current Assets	A\$m	45.7	39.3	17.4	40.3	14.3	Strip Ratio	x	4.2	8.2	7.7	6.0	EBITDA / tonne milled ore	\$/t	21.5	11.1	11.1	25.8	1,153	1,293	1,452	1,277																			
Property, Plant & Equip.	A\$m	23.1	19.5	25.3	14.3	77.5	Mined grade	g/t	1.6	1.3	1.5	2.1	Total cash costs	\$/oz	1,037	1,303	1,296	1,150	1,037	1,303	1,296	1,150																			
Exploration	A\$m	37.2	50.9	65.5	77.5	0.0	Combined Recovery & Payability	%	85%	88%	85%	86%	C1: Operating Cash Cost = (a)	\$/oz	1,092	1,359	1,354	1,206	1,092	1,359	1,354	1,206																			
Investments/other	A\$m	0.0	0.0	0.0	0.0	17.5	Gold Prod	(Koz)	86.3	72.9	79.9	96.4	C2: (a) + depreciation & amortisation = (c)	\$/oz	1,297	1,663	1,615	1,471	1,297	1,663	1,615	1,471																			
Tot Non-Curr. Assets	A\$m	60.3	70.3	90.9	91.9	17.5	Gold Sold	(Koz)	84.4	70.2	80.9	96.4	(a) + actual cash for development = (d)	\$/oz	1,348	1,484	1,869	1,482	1,348	1,484	1,869	1,482																			
Total Assets	A\$m	106.0	109.7	108.3	132.2	17.5	M & I Resource Conversion	Mt	43.2%	43.0%	35.3%	35.1%	C3: (c) + Royalty	\$/oz	1,352	1,719	1,673	1,528	1,352	1,719	1,673	1,528																			
Short Term Borrowings	A\$m	-	-	5.0	10.0	17.5	Modelled Mining Inventory	Mt	14.3	12.3	10.4	8.5	(d) + Royalty	\$/oz	1,211	1,540	1,354	1,206	1,211	1,540	1,354	1,206																			
Other	A\$m	11.1	21.0	10.6	11.2	17.5	Modelled Mine Life	yr	6.3	5.5	5.5	5.3	All In Sustaining Cost (AISC)	\$/oz	1,228	1,372	1,446	1,326	1,228	1,372	1,446	1,326																			
Total Curr. Liabilities	A\$m	11.1	21.0	15.6	21.2	17.5	<b>Price Assumptions</b>							<b>Hedging</b>																											
Long Term Borrowings	A\$m	-	-	-	-	38.7	Unit	Dec 16	Dec 17	Dec 18	Dec 19	Dec 16	Dec 17	Dec 18	Dec 19	Valuation		CY19 NPAT																							
Other	A\$m	19.2	17.5	17.5	17.5	38.7	AUD/USD	\$/US\$	0.75	0.77	0.74	0.76	No	No	No	Yes	0.18	12.2																							
Total Non-Curr. Liabil.	A\$m	19.2	17.5	17.5	17.5	38.7	Gold	US\$/oz	1227	1277	1255	1309																													
Total Liabilities	A\$m	30.3	38.6	33.1	38.7	38.7	Gold	A\$/oz	1632	1649	1688	1731																													
Net Assets	A\$m	75.7	71.1	75.2	93.5	93.5	<b>Sensitivity Analysis</b>							<b>Unpaid Capital</b>																											
Net Debt	A\$m	-25.2	-17.9	-0.7	-16.1	-16.1	Base Case		Valuation		0.18		CY19 NPAT		12.2		Options and Rights																								
<b>Cashflow</b>							Spot Prices							Year Expires																											
Operating Cashflow	A\$m	41.9	30.5	28.9	41.9	41.9	Spot USD/AUD 0.72, Gold \$1292/oz.		0.26 (44.0%)		5.8 (-52.7%)		31-Dec-18		10.0		0.0		0.00		1%																				
Income Tax Paid	A\$m	0.0	0.0	0.0	0.0	0.0	AUDUSD +/-10%		0.09 / 0.29 (-50.3% / 61.0%)		-2.4 / 30.2 (-120.0% / 146.7%)		31-Dec-19		14.1		1.1		0.08		2%																				
Interest & Other	A\$m	0.1	0.3	0.2	-0.6	-0.6	Gold +/-10%		0.28 / 0.08 (54.9% / -55.5%)		28.4 / -3.9 (132.0% / -132.0%)		31-Dec-20		12.9		0.4		0.03		2%																				
Operating Activities	A\$m	42.0	30.8	29.1	41.3	41.3	Production +/-10%		0.27 / 0.10 (46.8% / -47.4%)		28.9 / -4.5 (136.5% / -136.5%)		31-Dec-21		12.2		1.1		0.09		2%																				
Property, Plant & Equip.	A\$m	-0.1	-2.1	-31.6	-20.0	-20.0	Operating Costs +/-10%		0.10 / 0.26 (-45.2% / 44.4%)		1.2 / 23.3 (-90.6% / 90.6%)		TOTAL		49.2		2.6		0.05		6%																				
Exploration and Devel.	A\$m	-16.1	-23.3	-14.7	-12.0	-12.0	<b>Share Price Valuation (NAV)</b>							<b>Risked Est. A\$m</b>							<b>Est. A\$/share</b>																				
Other	A\$m	-10.0	-12.8	0.0	0.0	0.0	100% Nullagine (pre-tax NAV at disc. rate of 8%)		184.2		0.22		Other Exploration		60.0		0.07																								
Investment Activities	A\$m	-26.2	-38.1	-46.3	-32.0	-32.0	Forwards		0.0		0.00		Corporate Overheads		-38.2		-0.05																								
Net Borrowings	A\$m	-4.0	0.0	5.0	10.0	10.0	Net Cash (Debt)		0.7		0.00		Tax (NPV future liability)		-53.3		-0.06																								
Equity or "tbc capital"	A\$m	2.0	0.1	0.0	1.1	1.1	Options & Other Equity		0.7		0.00		Hedges		-0.6		0.00																								
Dividends Paid	A\$m	0.0	0.0	0.0	0.0	0.0	TOTAL		153.6		0.18		1.1x NAV		0.20																										
Financing Activities	A\$m	-2.0	0.0	5.0	11.1	11.1																																			
Net Cashflow	A\$m	13.8	-7.3	-12.2	20.4	20.4																																			
<b>Shares</b>							<b>Ratio Analysis</b>																																		
Ordinary Shares - End	m	780.9	787.5	794.4	818.5	818.5	Unit	31 Dec 16	31 Dec 17	31 Dec 18	31 Dec 19	Cashflow Per Share	A\$ cps	5.5	3.9	3.7	5.1	Cashflow Multiple	x	3.4	4.8	5.2	3.7																		
Ordinary Shares - Weighted	m	761.8	784.2	791.0	806.4	806.4	Earnings Per Share	A\$ cps	2.2	-0.7	-0.6	1.5	Price to Earnings Ratio	x	8.5	-26.6	-33.8	12.5	Dividends Per Share	AUD	-	-	-	-																	
Diluted Shares - Weighted	m	761.9	783.5	788.9	791.9	791.9	Dividend Yield	%	0.0%	0.0%	0.0%	0.0%	Net Debt / Net Debt + Equity	%	-50%	-34%	-1%	-21%	Interest Cover	X	6.5	na	21.7	21.4																	
							Return on Equity							% 16%							na							na							17%						

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\*"tbc capital" could be equity or debt. Our valuation is risk-adjusted for how this may be obtained.

Sources: IRESS, Company Information, Hartleys Research

Last Updated: 16/01/2019

## EARNINGS CHANGES

Fig. 1: Earnings Changes

Financial Performance	Unit	CY16a	CY17a	CY18e			CY19e		
		Actual	Actual	Old	New	% chg	Old	New	% chg
<b>Production</b>	<b>(koz)</b>	<b>86.3</b>	<b>72.9</b>	<b>80.3</b>	<b>79.9</b>	<b>-0.5%</b>	<b>103.4</b>	<b>96.4</b>	<b>-6.8%</b>
<b>Net Revenue</b>	<b>A\$m</b>	<b>141.6</b>	<b>115.6</b>	<b>137.6</b>	<b>137.1</b>	<b>-0.3%</b>	<b>179.1</b>	<b>166.9</b>	<b>-6.8%</b>
<b>Total Costs</b>	<b>A\$m</b>	<b>(99.5)</b>	<b>(94.3)</b>	<b>(120.0)</b>	<b>(116.0)</b>	<b>-3.3%</b>	<b>(130.9)</b>	<b>(123.1)</b>	<b>-6.0%</b>
EBITDA	A\$m	42.1	21.3	17.5	21.1	20.3%	48.2	43.8	-9.2%
- margin		0.3	0.2	0.1	0.2	20.7%	0.3	0.3	-2.5%
Depreciation/Amort	A\$m	(21.9)	(25.3)	(25.5)	(25.8)	1.0%	(29.8)	(31.0)	3.9%
<b>EBIT</b>	<b>A\$m</b>	<b>20.1</b>	<b>(4.0)</b>	<b>(8.0)</b>	<b>(4.7)</b>	<b>-41.4%</b>	<b>18.4</b>	<b>12.8</b>	<b>-30.3%</b>
Net Interest	A\$m	(3.1)	(1.6)	(0.3)	0.2	na	(1.1)	(0.6)	na
<b>Pre-Tax Profit</b>	<b>A\$m</b>	<b>17.1</b>	<b>(5.6)</b>	<b>(8.3)</b>	<b>(4.5)</b>	<b>-46.0%</b>	<b>17.4</b>	<b>12.2</b>	<b>-29.5%</b>
Tax Expense	A\$m	-	-	-	-	0.0%	-	-	0.0%
<b>Normalised NPAT</b>	<b>A\$m</b>	<b>11.9</b>	<b>(7.3)</b>	<b>(10.7)</b>	<b>(5.8)</b>	<b>-46.0%</b>	<b>22.6</b>	<b>15.9</b>	<b>-29.5%</b>
Abnormal Items	A\$m	(5.1)	1.7	2.5	1.3	0.0%	(5.2)	(3.7)	0.0%
Reported Profit	A\$m	17.1	(5.6)	(8.3)	(4.5)	-46.0%	17.4	12.2	-29.5%
Minority	A\$m	-	-	-	-	0.0%	-	-	0.0%
<b>Profit Attrib</b>	<b>A\$m</b>	<b>17.1</b>	<b>(5.6)</b>	<b>(8.3)</b>	<b>(4.5)</b>	<b>-46.0%</b>	<b>17.4</b>	<b>12.2</b>	<b>-29.5%</b>

Source: Hartleys Estimates; Millennium Minerals Ltd (actuals)

## NULLAGINE PRODUCTION ACTUALS – CY18

MOY reported **CY18 production of 79,891oz at an AISC of A\$1,463/oz** (gold sold of 80,869oz at an AISC of A\$1,446/oz) which compares to guidance of 75k-80koz within at an AISC range of A\$1,280-1,350/oz.

The Nullagine operations produced 24,514oz in the DecQ (up from 22,414oz SepQ) at an AISC of A\$1,216/oz (A\$1,324/oz SepQ), which was largely in-line for DecQ production guidance of ~25koz, while costs were higher than forecast (AISC of ~A\$1,150/oz guided).

Fig. 2: Nullagine Production CY18

		Mar-18	Jun-18	Sep-18	Dec-18	CY18
Total volume mined	bcm	1,098,931	1,323,820	1,818,484	1,569,118	5,810,353
Ore mined	t	369,927	568,927	529,152	602,871	2,070,877
Ore processed	t	474,420	436,887	523,614	458,174	1,893,095
Head grade	g/t	1.56	1.01	1.53	1.98	1.54
Metallurgical recovery	%	85.5	83.8	86.8	83.7	85.0
Fine gold production	oz	20,324	12,639	22,414	24,514	79,891
Gold sold	oz	21,013	15,129	21,945	22,782	80,869
Gold sales revenue	\$M	35.5	26.0	36.5	39.3	137.3
Cash Operating Cost	\$/oz	1,194	2,020	1,183	1,156	1,351
All-in Sustaining Cost	\$/oz	1,295	2,178	1,324	1,216	1,463

Source: Millennium Minerals Ltd (actuals); Hartleys Estimates: Costs on production not sold

Adjustments to our earnings forecasts from DecQ actuals, and changes to our Nullagine model going forward

The Company has achieved production guidance for CY18 at the upper end

Company guidance for CY19 is expected to be provided at the same time as reserves and resources are updated (as at the end of December 2018), due in Feb'19

## VALUATION – UPDATED

Our sum of parts valuation for MOY assumes a further conversion of the current +1Moz resource to reserve over the coming years, and we assume a +5 year mine life can be achieved.

To achieve the additional mine-life (above the current reserve position) we expect the Company to have further exploration success within the extensive shallow oxide prospects and underground options (such as Bartons and Shearers) to be added to the processing mix throughout the Nullagine region. The Bartons deposit is the first underground for MOY, and is already contributing development ore with first stoping ores in the MarQ CY19.

The current Nullagine processing plant has nameplate capacity of 1.5Mtpa, but continues to operate well above this operating level at ~2.0Mtpa (from predominantly oxide ore feed). The plant has a crusher, SAG mill, gravity circuit and CIL circuit, designed to process free-milling ores. MOY is now upgrading the processing circuit to treat the sulphide ores within the field. This involves the installation of a gravity sulphide scavenging circuit on the existing CIL tails stream which will then undergo an ultrafine grind and intense cyanidation to improve overall gold recoveries and in turn increase production and improve cash flows. The anticipated capex for the processing expansion is ~A\$15M, with the additional processing costs of A\$3.6/t on the current ~A\$18/t costs for the current CIL plant (total processing costs of ~A\$22/t), currently estimated. The Company is also running in-mill oxidation leach tests (INOX) which have potential to increase recoveries further, with recent test work providing ~79% (up ~75%) recoveries on the sulphide ore, with further results pending. The Company is also considering a pressure comminution oxidation step (PINOX), which could assist with the processing of high arsenic ores. MOY is forecasting overall gold recoveries of 85% on a blended oxide and sulphide ore feed, with met-testwork ongoing expected to improve recoveries further. We have adjusted our model to the latest production actual and we currently have a forecast for CY19 production of ~96koz at an AISC of ~A\$1,326/oz, which will be updated once CY19 Company guidance is provided (due next month – Feb'19).

Reserves and resource updates are also expected to influence our valuation. We value the exploration potential for MOY at a nominal \$60M, which we believe is conservative given regional exploration is in its early stages and the majority of exploration to date has been brownfields, focussed on outcropping mineralisation and old workings.

*Our NAV for MOY assumes a further conversion of the current +1Moz resource to reserve over the coming years, and we assume a +5 year mine life can be achieved*

*MOY is currently trading around our latest NAV of 18cps (P/NAV 1.04x) and our spot NAV of 26cps (P/NAV 0.73x).*

**Fig. 3: MOY Sum of Parts Valuation**

Share Price Valuation (NAV)	Risked Est. A\$m	Est. A\$/share
100% Nullagine (pre-tax NAV at disc. rate of 8%)	184.2	0.22
Other Exploration	60.0	0.07
Forwards	0.0	0.00
Corporate Overheads	-38.2	-0.05
Net Cash (Debt)	0.7	0.00
Tax (NPV future liability)	-53.3	-0.06
Options & Other Equity	0.7	0.00
Hedges	-0.6	0.00
<b>Total</b>	<b>153.6</b>	<b>0.18</b>

Source: Hartleys Estimates

## PRICE TARGET

Our price target is based on our sum of parts valuation for the Nullagine project. We have included weighting for the base case at Consensus and Spot pricing.

*We maintain our **Accumulate** recommendation, with our latest price target of 26cps (down from 30cps).*

**Fig. 4: MOY Price Target Methodology**

Price Target Methodology	Weighting	Spot	12 mth out
NAV Base Case	55%	\$0.18	\$0.25
NAV Base Case at Spot commodity and FX prices	30%	\$0.26	\$0.34
NAV 1.1x	8%	\$0.20	\$0.27
Net Cash Backing	7%	\$0.00	\$0.02
<b>Risk weighted composite</b>		<b>\$0.19</b>	
<b>12 Months Price Target</b>		<b>\$0.26</b>	
Shareprice - Last		\$0.190	
<b>12 mth total return (% to 12mth target + dividend)</b>		<b>38%</b>	

Source: Hartleys Estimates

## RISKS

Cashflows continue to be generated from the Nullagine gold operation. Current Net Cash of ~A\$0.7M is expected to move to a Net Debt position to provide funding for the Nullagine plant expansion. Once debt is fully drawn some additional financial risks are introduced. Gold prices are volatile but fundamentals remain favourable.

**Fig. 5: Key assumptions and risks for valuation**

Assumption	Risk of not realising assumption	Risk to valuation if assumption is incorrect	Comment
Increased production over a longer mine life	Moderate	Meaningful	We assume further exploration success at Nullagine to further convert the current +1Moz resources to reserves. We have assumed production close to 100koz in CY19, which is subject to change and will be updated once Company guidance has been provided. With the introduction of Bartons underground mill grades should lift.
Metallurgy	Moderate	Meaningful	Metallurgy is a key risk within the Nullagine fresh rock (sulphide ores). The processing plant upgrade is estimated to cost A\$15M and new debt is available to be drawn to help fund the integration.
Debt drawn to fund plant upgrade	Low	Meaningful	We now model fully drawn debt to assist in the upgrade of the Nullagine plant. We assume the debt can be repaid through cash and cash generation from the operations. Clearly downside risk to our valuation if this is not achieved.
Exploration Upside	Moderate	Small	We assume exploration upside for MOY. We have assumed a relatively small value (\$60M) compared to the significant exploration potential of the region
Gold Price	High	High	Our gold price forecasts are in line with sell side consensus

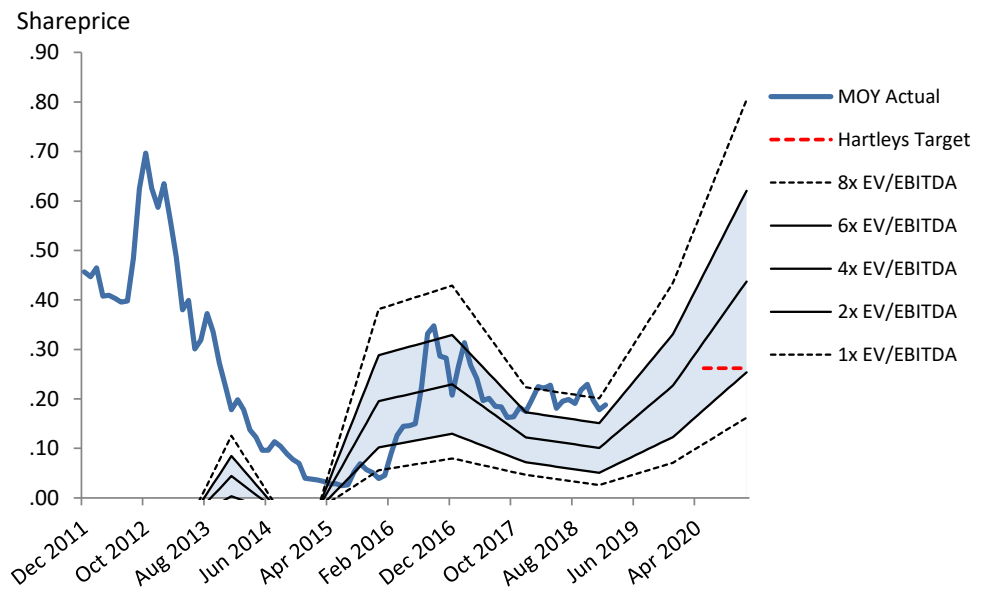
**Conclusion**

*Our assumptions have associated meaningful risks. Processing of fresh ore has metallurgical risks which will be mitigated through development study work.*

Source: Hartleys Research

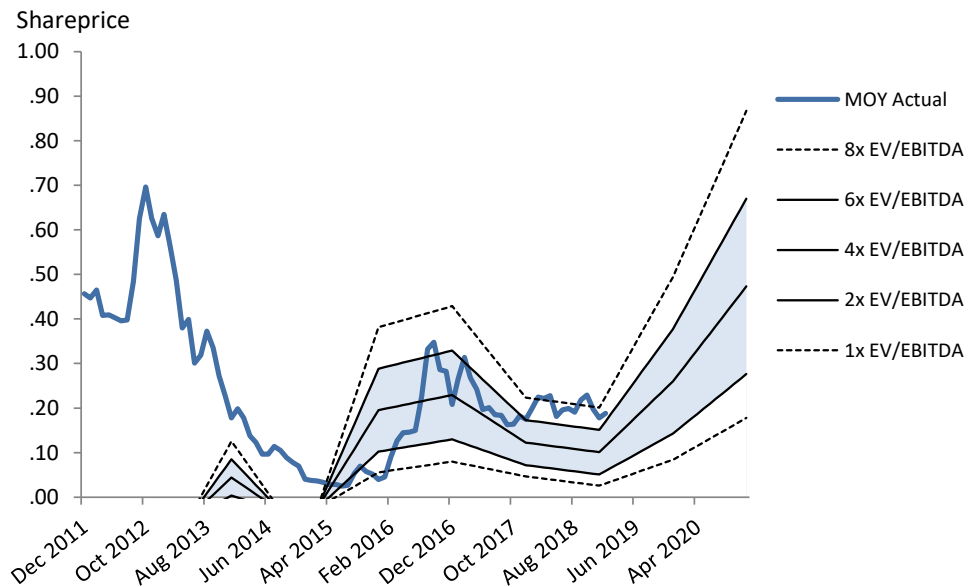
## EV/EBITDA BANDS

**Fig. 6: Using Hartleys base case commodity forecasts**



Source: Hartleys Research Estimates, IRESS

**Fig. 7: Using spot commodity prices**



Source: Hartleys Research Estimates, IRESS

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## Hartleys Recommendation Categories

Buy	Share price appreciation anticipated.
Accumulate	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	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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