

30 Jan 2018

## MILLENNIUM MINERALS LTD (MOY)

### Nullagine getting ready for production growth

Millennium's (MOY) Nullagine operations finished CY17 (DecQ) strongly to produce 21.4koz at AISC of A\$1,290/oz, which was vastly improved from the 16koz at AISC of A\$1,470/oz reported in the SepQ.

The production result, was however, below quarterly guidance due to delays in accessing some higher grade ores from the Bartons pit cut-back. These higher grade ore tonnes will now be mined in the current MarQ, which is forecast to deliver some 18k-20koz, with updated guidance for CY18 to be released in the coming weeks.

The Nullagine operations achieved CY17 production of 72.8koz at AISC of A\$1,372/oz, which was slightly below the production guidance range for 75k-80koz but pleasingly within cost guidance AISC of A\$1,360 - \$1390/oz. The Company's realised gold price (avg.) for the DecQ was A\$1,637/oz for sales of A\$32.1M (up from A\$25.2M). Operating free cash flows were A\$11.3M for the quarter before A\$1.8M capex, A\$6.2M exploration and A\$1.0M on expansion studies. Cash and bullion was A\$22.4M (up from A\$20.1M), and MOY remains debt free. MOY's current hedge book consists of 12koz at a gold price (avg.) of A\$1,675/oz for delivery by 29 June 2018.

We maintain our Buy recommendation on MOY, with our latest price target of 29cps. MOY continues to trade at a slight discount to our NAV and spot NAV of 26cps (P/NAV 0.84x). The Company appears well poised for production growth (potential for +100kozpa) and for mine life extensions (+5 years). Reserves and resources are now being updated.

### Maiden Redbeard resource with more to come

Exploration continues to drive value for MOY with ~A\$18M spent on exploration activities in CY17, delivering some outstanding results. In particular, from the greenfields discovery at the Redbeard prospect, which within less than two months has been advanced from delineation through to a maiden oxide resource of 20.6koz (grading 2.6g/t Au). The initial resource at Redbeard has been estimated over a strike length of 490m, but is part of the larger Yates trend which spans over 2km. Further growth is anticipated with the deposit likely to come into the mine plan in the not too distant future.

### CY18 exploration underway; Mining at Bartons UG in Q1 CY18

The CY18 exploration program is now underway with 4 drill rigs active with the drill-out of the Golden Eagle South discovery, which is expected to provide oxide material and further support the Golden Eagle sulphide study. Drilling continues to be focused on oxide resource/reserve growth and deeper testing of the underground potential for the field. The aim is to establish more sustainable, lower cost ore sources, to provide higher production levels to maximise free cash generation. Trade-off studies on the potential processing options to treat sulphide ores are advancing with an update expected soon.

Mining is expected to commence at the Bartons underground this quarter (late MarQ), with a suitable underground mining contractor in the process of being appointed. The underground has a current resource for ~98koz (grading 4.9g/t Au), and interim reserve for ~39koz (grading 4.5g/t Au), but with the system still open, reserves/resources will grow. Low pre-production capital costs are expected as the underground starts from shallow depths.

Share Price	\$0.215
Valuation	\$0.26
Price Target (12 month)	\$0.29

**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 study well advanced. Significant exploration upside. Bartons first underground mine in early CY18.

**Chairman & CEO**

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

**Top Shareholders**

IMC Resource Investment Pty Ltd	45.7%
Board & Management	1.9%

**Company Address**  
Ground Floor, 10 Kings Park Road  
West Perth, WA 6873

**Issued Capital**

	787.5m
- fully diluted	834.2m

**Market Cap**

	A\$169.3m
- fully diluted	A\$179.4m

**Cash and Bullion (31 Dec 17a)** A\$22.4m

**Debt (31 Dec 17a)** A\$0.0m

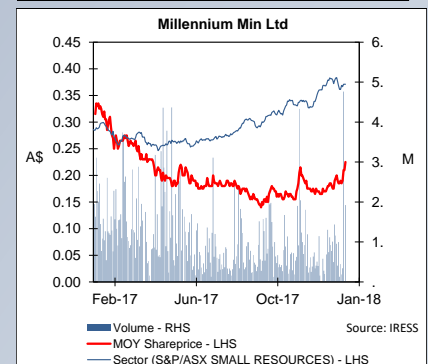
**EV** A\$146.9m

**EV/Resource Au oz** 114.7

**EV/Reserve Au oz** 790.3

Prelim. (A\$m)	CY16a	CY17e	CY18e
Prod (koz Au)	86.3	72.8	95.0
Op Cash Flw	42.0	33.7	46.1
Norm NPAT	11.9	8.9	30.9
CF/Share (cps)	5.5	4.3	5.9
EPS (cps)	2.2	0.9	3.0
P/E	9.6	24.5	7.1

	Au
Resources (Moz)	1.28
Reserves (Moz)	0.19



Mike Millikan  
Resources Analyst  
Ph: +61 8 9268 2805  
E: mike.millikan@hartleys.com.au

Hartleys has provided corporate advice within the past 12 months and continues to provide corporate advice to MOY for which it has earned fees.



## EARNINGS CHANGES

Fig. 1: Earnings Changes

Financial Performance	Unit	CY15	CY16a	CY17e			CY18e		
		Actual	Actual	Old	New	% chg	Old	New	% chg
<b>Production</b>	<b>(koz)</b>	<b>91.5</b>	<b>86.3</b>	<b>73.3</b>	<b>72.8</b>	<b>-0.6%</b>	<b>96.8</b>	<b>95.0</b>	<b>-1.9%</b>
<b>Net Revenue</b>	<b>A\$m</b>	<b>142.5</b>	<b>141.6</b>	<b>121.6</b>	<b>115.9</b>	<b>-4.7%</b>	<b>162.8</b>	<b>159.8</b>	<b>-1.8%</b>
<b>Total Costs</b>	<b>A\$m</b>	<b>(103.2)</b>	<b>(99.5)</b>	<b>(88.9)</b>	<b>(88.8)</b>	<b>-0.1%</b>	<b>(111.5)</b>	<b>(111.9)</b>	<b>0.3%</b>
EBITDA	A\$m	39.3	42.1	32.7	27.1	-17.2%	51.2	47.9	-6.5%
- margin		0.3	0.3	0.3	0.2	-13.1%	0.3	0.3	-4.8%
Depreciation/Amort	A\$m	(11.8)	(21.9)	(20.6)	(20.2)	-2.0%	(24.9)	(24.2)	-3.1%
<b>EBIT</b>	<b>A\$m</b>	<b>27.4</b>	<b>20.1</b>	<b>12.1</b>	<b>6.9</b>	<b>-43.2%</b>	<b>26.3</b>	<b>23.7</b>	<b>-9.8%</b>
Net Interest	A\$m	(4.5)	(3.1)	-	-	na	-	-	na
<b>Pre-Tax Profit</b>	<b>A\$m</b>	<b>22.9</b>	<b>17.1</b>	<b>12.1</b>	<b>6.9</b>	<b>-43.2%</b>	<b>26.3</b>	<b>23.7</b>	<b>-9.8%</b>
Tax Expense	A\$m	-	-	-	-	0.0%	-	-	0.0%
<b>Normalised NPAT</b>	<b>A\$m</b>	<b>16.0</b>	<b>11.9</b>	<b>15.7</b>	<b>8.9</b>	<b>-43.2%</b>	<b>34.2</b>	<b>30.9</b>	<b>-9.8%</b>
Abnormal Items	A\$m	(6.9)	(5.1)	(3.6)	(2.1)	-43.2%	(7.9)	(7.1)	0.0%
Reported Profit	A\$m	22.9	17.1	12.1	6.9	-43.2%	26.3	23.7	-9.8%
Minority	A\$m	-	-	-	-	0.0%	-	-	0.0%
<b>Profit Attrib</b>	<b>A\$m</b>	<b>22.9</b>	<b>17.1</b>	<b>12.1</b>	<b>6.9</b>	<b>-43.2%</b>	<b>26.3</b>	<b>23.7</b>	<b>-9.8%</b>

Source: Hartleys Estimates; Millennium Minerals Ltd (actuals)

Only minor adjustments to our earnings forecasts

We now model increased production in CY18, with the introduction of Bartons underground expected to lift mill grades, we now forecast ~95koz at AISC of ~A\$1,405/oz

Hartleys sum of parts valuation for MOY is 26cps

Current spot NAV is 26cps

Hartleys 12 month price target is 29cps

## 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 expected to be the first underground for MOY, which should come into the mine plan in early CY18. The processing of some of the fresh ores at Nullagine requires the expansion of the plant, which is still being estimated but has indicative costs of A\$40-46M.

We value the exploration potential for MOY at a nominal \$80M, 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 nominal exploration value also encompasses the fresh ore material opportunities beneath the existing open pits.

## 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.

Fig. 2: MOY Price Target Methodology

Price Target Methodology	Weighting	Spot	12 mth out
NPV base case	70%	\$0.26	\$0.29
NPV base case at spot commodity and fx prices	30%	\$0.26	\$0.30
<b>Risk weighted composite</b>		<b>\$0.26</b>	
<b>12 Months Price Target</b>		<b>\$0.29</b>	
Shareprice - Last		\$0.215	
<b>12 mth total return (% to 12mth target + dividend)</b>		<b>37%</b>	

Source: Hartleys Estimates

## RISKS

Solid cashflows continue to be generated from the Nullagine gold operation. With cash of ~A\$22M and no debt, financial risks appear low. Gold prices are volatile but fundamentals remain favourable.

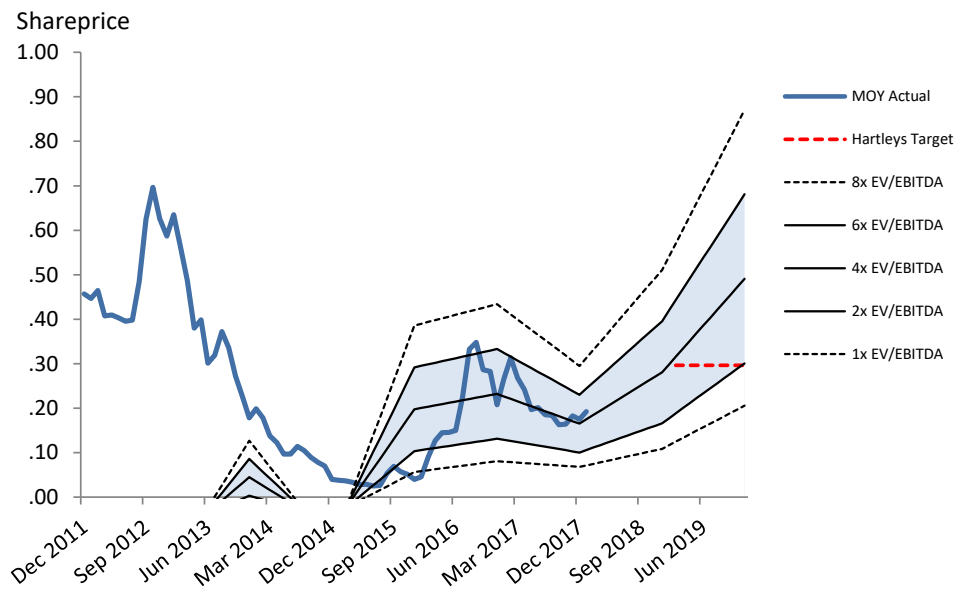
*Fig. 3: Key assumptions and risks for valuation*

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 now model increased production in CY18, with the introduction of Bartons underground expected to lift mill grades, we now forecast ~95koz at AISC of ~A\$1,405/oz (this forecast is subject to change)
Metallurgy	Moderate	Meaningful	Metallurgy is a key risk within the Nullagine fresh rock and further study work will guide us on the significant potential that exists within the fresh ore material at Nullagine
Exploration Upside	Moderate	Small	We assume exploration upside for MOY. We have assumed a relatively small value (\$80M) compared to the significant exploration potential of the region
Gold Price	High	High	Our gold price forecasts are in line with sell side consensus
<i>Conclusion</i>	<i>Our assumptions have associated meaningful risks. Processing of fresh ore has metallurgical risks which will be mitigated through development study work.</i>		

Source: Hartleys Research

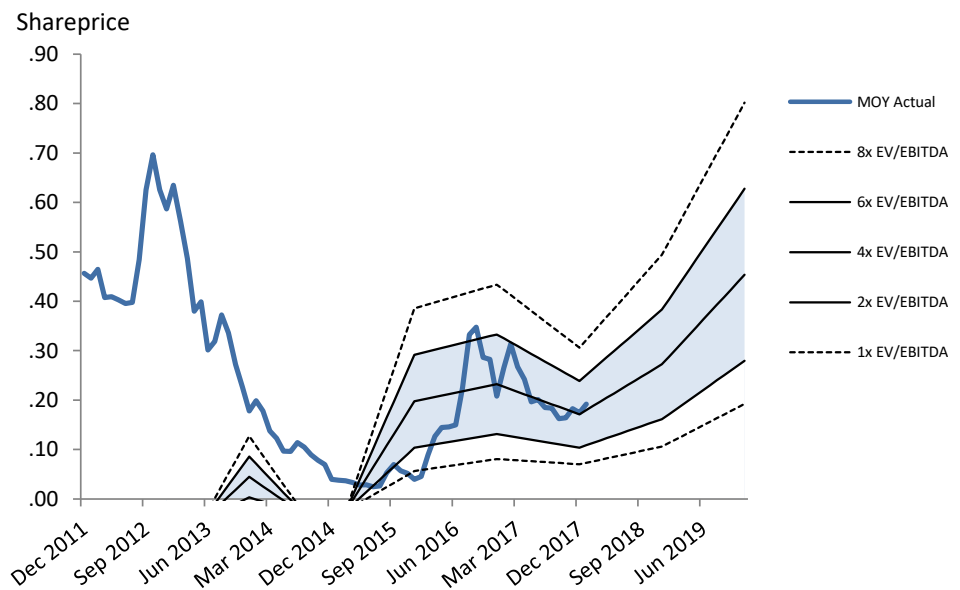
## EV/EBITDA BANDS

**Fig. 4:** Using Hartleys base case commodity forecasts



Source: Hartleys Research Estimates, IRESS

**Fig. 5:** Using spot commodity prices



Source: Hartleys Research Estimates, IRESS

# HARTLEYS CORPORATE DIRECTORY

## Research

Trent Barnett	Head of Research	+61 8 9268 3052
Mike Millikan	Resources Analyst	+61 8 9268 2805
John Macdonald	Resources Analyst	+61 8 9268 3020
Paul Howard	Resources Analyst	+61 8 9268 3045
Aiden Bradley	Research Analyst	+61 8 9268 2876
Oliver Stevens	Research Analyst	+61 8 9268 2879
Michael Scantlebury	Junior Analyst	+61 8 9268 2837
Janine Bell	Research Assistant	+61 8 9268 2831

## Corporate Finance

Dale Bryan	Director & Head of Corp Fin.	+61 8 9268 2829
Richard Simpson	Director	+61 8 9268 2824
Ben Crossing	Director	+61 8 9268 3047
Ben Wale	Associate Director	+61 8 9268 3055
Stephen Kite	Associate Director	+61 8 9268 3050
Scott Weir	Associate Director	+61 8 9268 2821
Scott Stephens	Associate Director	+61 8 9268 2819
Rhys Simpson	Manager	+61 8 9268 2851

## Registered Office

### Level 6, 141 St Georges Tce Postal Address:

PerthWA 6000 GPO Box 2777  
Australia Perth WA 6001  
PH:+61 8 9268 2888 FX: +61 8 9268 2800  
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	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.

## 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 provided corporate advice within the past 12 months and continues to provide corporate advice to Millennium Minerals Limited for which it has earned fees. This report was prepared solely by Hartleys Limited. ASX did not prepare any part of the report and has not contributed in any way to its content. The role of ASX in relation to the preparation of the research reports is limited to funding their preparation, by Hartleys Limited, in accordance with the ASX Equity Research Scheme. ASX does not provide financial product advice. The views expressed in this research report may not necessarily reflect the views of ASX. To the maximum extent permitted by law, no representation, warranty or undertaking, express or implied, is made and no responsibility or liability is accepted by ASX as to the adequacy, accuracy, completeness or reasonableness of the research reports.

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
Veronika Tkacova	+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 Goodlad	+61 8 9268 2890
Andrew Gribble	+61 8 9268 2842
David Hainsworth	+61 8 9268 3040
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
Jamie Moullin	+61 8 9268 2856
Chris Munro	+61 8 9268 2858
Michael Munro	+61 8 9268 2820
Ian Parker	+61 8 9268 2810
Matthew Parker	+61 8 9268 2826
Charlie Ransom	+61 8 9268 2868
Mark Sandford	+61 8 9268 3066
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
Jayne Walsh	+61 8 9268 2828