

MOY : Producing gold

Visible mineralisation outside existing Resources
Expect good success in exploration drilling

Recommendation

BUY, High Risk

Price

4.6c

Valuation

14.5c

Commodity

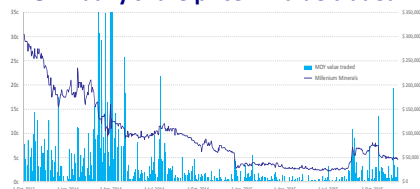
Gold

- Following a write-down to its Reserves in March 2015, MOY now has 2 years of Reserves.
- MOY has visible mineralisation outside of its Resources and many large intercepts of high grade and ore grade material. In our base case, Beer & Co allows \$10m of drilling each year, for 2.0Mt at 1.5g/t to be added to mining inventory.
- Our base case valuation of 14.5c/share assumes current AUD-USD rate and a gold price rising slowly to \$1200/oz.
- MOY is highly leveraged to better exploration results as well as the AUD gold price.

Snapshot

Market Cap	\$10.0m
Cash on hand (31 Sept 2015)	\$5.05m
Net Debt	(\$19.5m)
Equity being raised	\$20m - \$21m
Shares on Issue	271.7m
Shares to be issued :	500m – 525m
52 Week High	7.9c
52 Week Low	2.3c
1 month / 6 month VWAP	5.0c / 5.0c

MOY : daily share price v. value traded



MOY began mining operations at Nullagine in September 2012. The operations were declared commercial in February 2013.

While the operations generated cash, the cash generated was, for 2014 and the first half of 2015, not enough to meet the required debt repayments.

The operations have been turned around, but there is further to go.

Success in converting known mineralisation into mining inventory is essential, and Beer & Co expects MOY to out-perform.

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Mining Operations at Nullagine are now (out-)performing

MOY's Nullagine mine has JORC Resources in 14 separate deposits across a tenement area of 264km² in the West Pilbara region. First gold was poured in September 2012, but not enough net cash was generated to service and pay down the \$50m in project finance taken on to develop the \$83m project. This was due to

- Unit costs being higher than expected; and
- AUD gold prices being lower than expected.

This led to a write down in the carrying value of \$76m.

With the change in CEO in December 2014, mill throughput has been ramped up to about 1.9Mt/yr and has processed oxide material grading around 1.7g/t to generate strong cashflows.

MOY forced to Raise Equity

MOY is now able to repay its bank debt, but will not be able to generate the cash required to pay back its subordinated debt, which is now about \$15m, by its due date of July 2016.

With only 5Mt in Reserves at the start of 2015, MOY needs to drill known mineralisation to extend its mine life, which requires capital.

Drilling WILL be successful

MOY will invest \$10m annually to increase its mining inventory. Beer & Co expects to add at least 2.0Mt each year, grading 1.5g/t, which is a discovery cost of over \$120/oz, which is a high cost given there are significant areas of visible mineralisation.

Beer & Co risked valuation 14.5c/share

Given our expected exploration success, and a gold price of \$1,200/oz, at an AUD-USD rate of 0.700, Beer & Co generates a risked value of 14.5c/share.

Beer & Co conclusions

Drilling success is expected, and necessary. BUY, High Risk.

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Millennium Minerals

Nullagine Gold Mine

MOY operates a gold mine at Nullagine in the West Pilbara region of WA.

Millennium Minerals operates a gold mine in the Pilbara region of WA, as shown in Figure 1.

MOY has a tenement area of 264km², with some in Mining Licences and the rest in Exploration Leases.

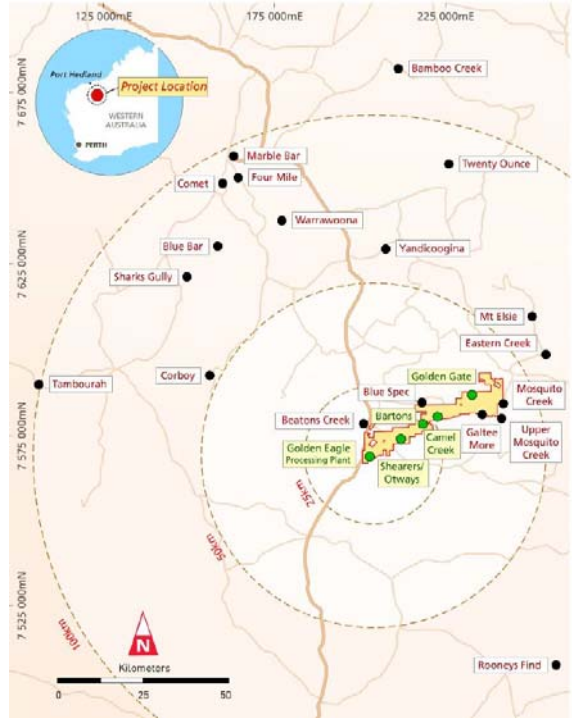
MOY announced the results of its feasibility study in October 2009. The expected capital cost was \$87m.

MOY then proceeded to finance the project, including \$50m in project finance plus an \$8m lease finance facility.

First gold was poured in September 2012.

The operations were brought into production in September 2012 with first gold poured on 30 September, 2012.

Figure 1 : Nullagine Gold operations



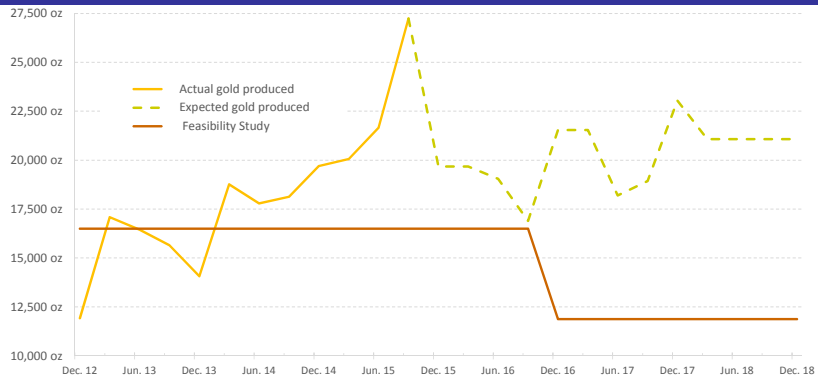
Source : MOY presentation, November 2015

Figure 2 shows that MOY has progressively increased its gold production.

It shows that during 2014, the production was roughly in line with the projections in the October 2009 feasibility study.

During 2013 and 2014, gold produced was in line with that projected in the feasibility study

Figure 2 : Gold produced, and expected production



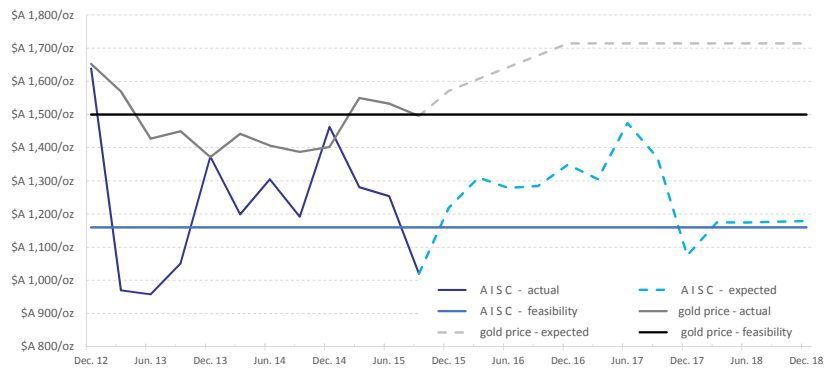
Source : MOY quarterly reports, Beer & Co estimates

However, as shown in Figure 3, the costs of production were only a small premium to the gold price in the period to December 2014. Note that the All In costs in Figure 3 exclude the costs of servicing the debt, including the repayment of principal, taken on to finance the development of the project, which is about \$300/oz.

However, not enough cash was generated to service and repay the \$50m in project finance taken on to construct the project

Some of this shortfall was due to lower than expected AUD gold prices, but also due to higher costs

Figure 3 : Costs of production v. gold price, actual v expected



Source : MOY quarterly reports, Beer & Co estimates

MOY Response to (under-)Performance

Looking at the period to December 2014, and bearing in mind the additional cost for debt servicing, shows that MOY came under significant financial distress. The first response, on 31 December 2013, was to defer some of the principal on the loans due to be paid to the senior debt providers. This was followed by

Due to the shortfall in cash, MOY :

- Took on 2 tranches, totalling \$12m, in subordinated debt;
- Sold a project nearby for \$3.8m;
- Wrote down the asset value by \$76m, leaving only 2 years of reserves; and
- Changed the CEO

- Taking on \$7m in subordinated debt, from the major shareholder, IMC Resources on 19 March 2014;
- Extending the term of the senior debt from September 2015 to June 2016;
- The MD announcing his intention to resign on 27 August 2014 and a new CEO being appointed on 18 December 2014;
- An extra \$5m in subordinated debt announced on 23 December 2014;
- Selling their interest in the Beatons Creek JV, for \$3.8m, on 27 March 2015;
- Announcing an asset impairment charge of \$76m (compared with the original construction cost of \$83m), together with a write-down in Reserves to leave a mine life of just over 2 years, on 27 March 2015

Since the change in CEO, gold production has increased

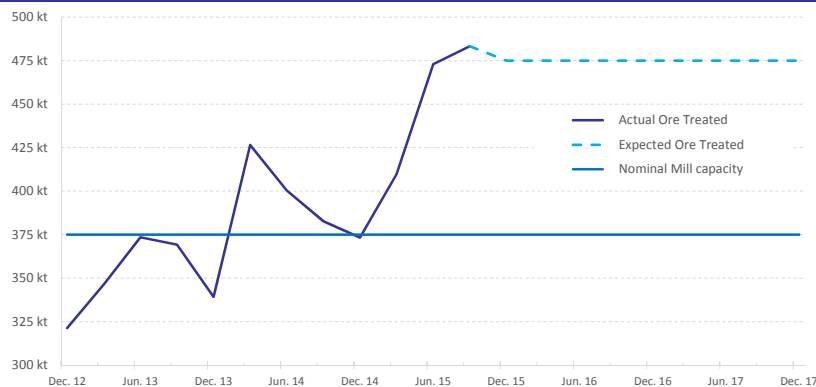
Figure 2 shows that following the change in CEO, there was a significant increase in the amount of gold produced, while Figure 3 shows that this was accompanied by a significant fall in the cost of gold produced.

Figure 4 shows that the first action was to increase mill throughput.

Particularly due to an increase in the mill throughput rate

And higher yielding ore

Figure 4 : Ore treated,. Actual v projected



Source : MOY quarterly reports, Beer & Co estimates

As well as increased throughput, other actions included a much tighter review of costs and review of the mine plan to focus on total net benefit to MOY.

While MOY is able to repay the senior debt, it needs to raise equity to repay the sub-debt by the time it is due

Refinancing

The subordinated debt that had been taken on so that commitments to the senior lenders could be met, as the sub-debt :

- Had a high interest rate, as expected from subordinated debt, including the issue of options with an exercise price linked to any future raising; and
- Had a term to 30 days after the expiry of the senior debt.

While MOY has generated enough cash to repay the senior debt, Beer & Co calculate that it would not be able to generate the roughly \$15m, including accumulated interest, in total required to be re-paid by July 2016.

MOY needs to drill to extend its mine life, as it has reserves only until about mid 2017.

Also, part of the cost cutting to survive was to cease exploration and with only 2 years of reserves, money is needed to develop the mining inventory.

This has led to the raising of \$20m - \$21m in new equity.

Expected Exploration Success

Figure 4 shows that Beer & Co expects that MOY will process about 1.9Mt/yr of ore for many years.

However, Figure 5 shows that MOY has Reserves that will last only until about July 2017.

MOY will invest \$10m in drilling to increase its mining inventory

MOY have stated that the company will invest \$10m a year in drilling to increase mine life.

Figure 5 : Nullagine Reserves, Dec. 2014

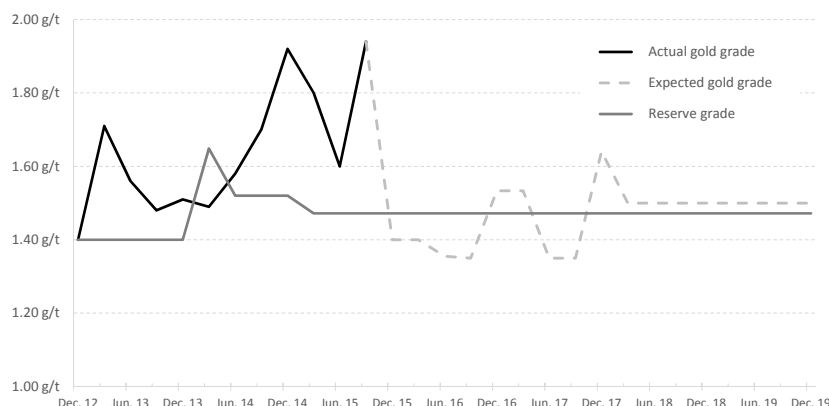
Proved	3.68 Mt	1.5 g/t	174 koz
Probable	0.64 Mt	1.5 g/t	30 koz
Stockpiles	0.64 Mt	0.9 g/t	19 koz
TOTAL	4.97 Mt	1.40 g/t	223 koz

Source : MOY ASX announcement, 27 March 2015 plus 25 September 2015, Beer & Co.

As a base case, Beer & Co expects that MOY will add at least 2.0Mt to mining inventory, at a grade of about 1.5g/t, as shown by Figure 6.

Beer & Co's analysis assumes that MOY is able to add 2.0Mt a year to its mining inventory at a grade that is around the Reserve grade, despite history showing higher grading ore.

Figure 6 : Actual grade of ore processed v. expected v. Reserves



Source : MOY ASX quarterly announcements, Reserve statements, Beer & Co estimates

Figure 6 shows that while MOY has focussed recent operations on higher grades, Beer & Co is not basing its analysis on a continuation of this trend.

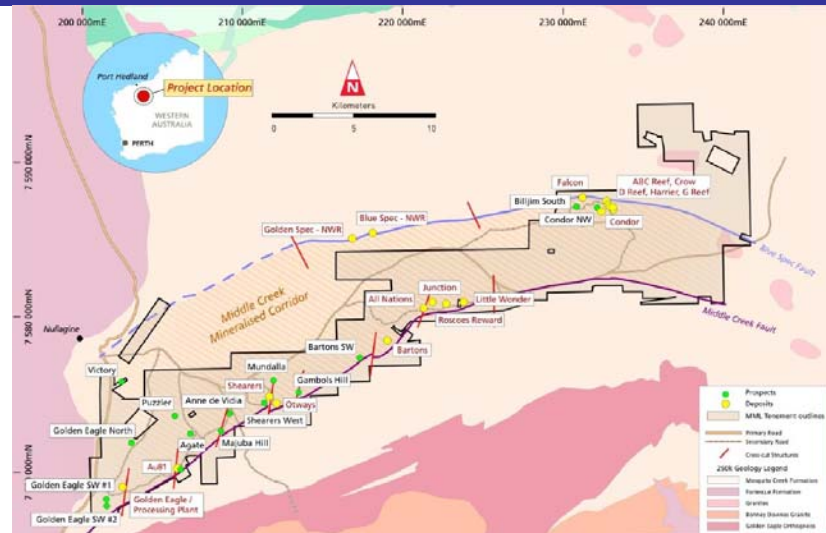
Figure 6 shows that Beer & Co mine plan assumes that Reserves, on a deposit by deposit basis, are mined before new discoveries. However, we expect that MOY will be smarter than this.

Figure 7 shows that MOY has delineated Resources at 14 deposits and has a further 15 prospects for drilling, each of which has evidence of gold.

At Nullagine, MOY has delineated Resources at 14 separate deposits and has a further 15 prospects that have some evidence of mineralisation.

Mineralisation is found immediately north of the Middle Creek fault, and along splays of this fault

Figure 7 : Mineralised areas at Nullagine



Source : MOY ASX announcement, 23 November 2015

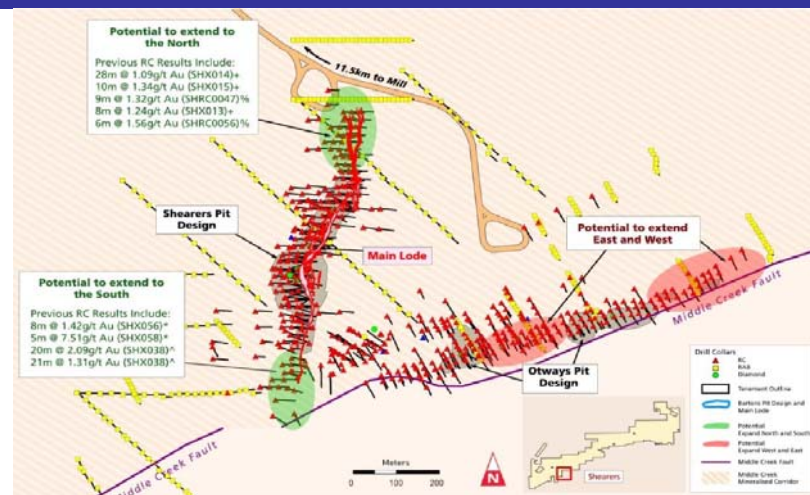
Figure 7 also shows that the gold is located to the immediate north of the Middle Creek fault and also along splays off this fault, to the north.

Historical drilling has already shown large intercepts at ore grades and higher

Figure 8 shows Infill potential at Otways, plus extension to the east, and extensions to both north and south of Shearers with historical results to the south of Shearers including :

- 5m at 7.51g/t;
- 20m at 2.09g/t; and
- 21m at 1.31g/t.

Figure 8 : Shearers – Otways deposits plus drilling



Source : MOY ASX announcement, 23 November 2015

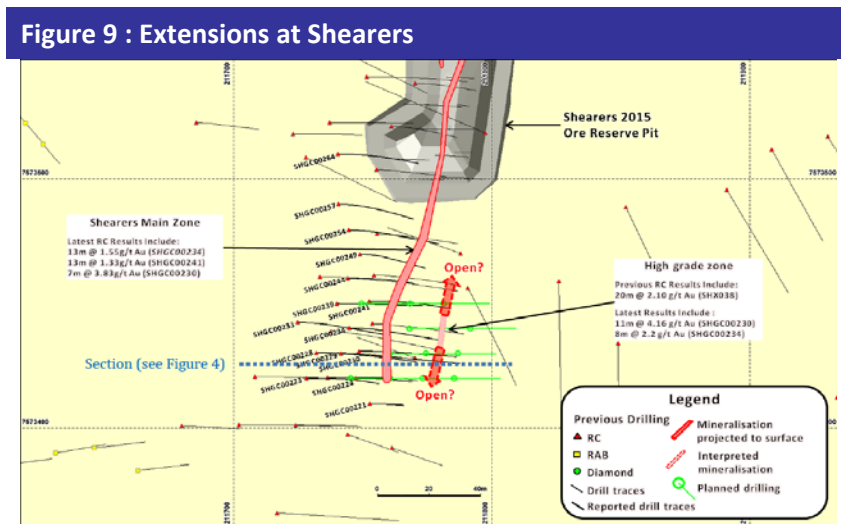
MOY has delineated extensions to existing operations

Recently announced results from drilling to the south of Shearers include :

- 11m at 4.16g/t, from 40m; and
- 7m at 3.83g/t, form 15m and
- 13m at 1.33g/t from surface.

Figure 9 shows that mineralisation extends beyond the ore reserve, with ore grade results in 2 lodes.

Known mineralisation extends beyond the bounds of the present reserves



Source : MOY ASX announcement, 23 November 2015

Outcomes

Figure 10 shows the actual outcomes from MOY’s operations, and Beer & Co’s projections.

Figure 10 : Actual and projected operational outcomes

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Waste moved	6,779 kt	8,778 kt	8,763 kt	8,550 kt	8,550 kt	8,550 kt	8,550 kt	8,550 kt	8,550 kt	8,550 kt	8,550 kt	8,550 kt	2,029 kt
waste : ore	4.2 : 1	5.5 : 1	4.8 : 1	4.5 : 1	4.5 : 1	4.5 : 1	4.5 : 1	4.5 : 1	4.5 : 1	4.5 : 1	4.5 : 1	4.5 : 1	4.5 : 1
Ore Mined	1,615 kt	1,583 kt	1,840 kt	1,900 kt	1,900 kt	1,900 kt	1,900 kt	1,900 kt	1,900 kt	1,900 kt	1,900 kt	1,900 kt	451 kt
Gold head grade	1.56 g/t	1.66 g/t	1.68 g/t	1.41 g/t	1.47 g/t	1.50 g/t	1.50 g/t	1.50 g/t	1.50 g/t	1.50 g/t	1.50 g/t	1.50 g/t	1.16 g/t
Recovery	88.2 %	87.1 %	90.9 %	92.0 %	92.0 %	92.0 %	92.0 %	92.0 %	92.0 %	92.0 %	92.0 %	92.0 %	92.0 %
Gold produced	63,247 oz	74,375 oz	88,631 oz	79,231 oz	82,534 oz	84,309 oz	84,309 oz	84,309 oz	84,309 oz	84,309 oz	84,309 oz	84,309 oz	37,473 oz

Source : Beer & Co estimates

Beer & Co projects continuing production of around 85koz a year, slightly below guidance for 2015

Figure 10 shows that Beer & Co’s projections effectively capitalise the turn-around that has already taken place in the operational performance at Nullagine, with

- Mill operations continuing at 1.9Mt/yr, even though the most recent quarter was at a higher rate, as shown in Figure 4;
- Ore grade being slightly below the historical average, especially in the next 2 years; and
- Recovery of gold in ore at 92%, despite MOY’s September quarterly stating that recoveries were at 93%.

Figure 11 shows Beer & Co’s base case commodity price assumptions and projected financial outcomes.

Figure 11 : Beer & Co's base case projected financial outcomes, Nullagine Mining

AUD m	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
AUD/USD	0.968	0.903	0.747	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700
Gold	\$ 1,411/oz	\$ 1,272/oz	\$ 1,149/oz	\$ 1,163/oz	\$ 1,200/oz	\$ 1,200/oz	\$ 1,200/oz	\$ 1,200/oz	\$ 1,200/oz	\$ 1,200/oz	\$ 1,200/oz	\$ 1,200/oz	\$ 1,200/oz
Revenue	92.4	106.9	136.9	131.7	141.5	144.5	144.5	144.5	144.5	144.5	144.5	144.5	64.2
Cash Costs	(60.9)	(70.8)	(84.0)	(79.0)	(82.8)	(76.4)	(77.1)	(77.9)	(78.7)	(79.5)	(80.2)	(82.5)	(28.9)
Royalties	(2.7)	(3.1)	(4.0)	(5.9)	(5.4)	(4.2)	(4.2)	(4.2)	(4.2)	(4.2)	(4.2)	(4.2)	(1.9)
Dep'n & Amort'sn	(22.0)	(27.2)	(22.5)	(20.0)	(22.5)	(15.7)	(13.8)	(13.2)	(13.0)	(13.0)	(12.9)	(14.8)	(4.5)
E B I T	6.8	5.8	26.4	26.8	30.8	48.3	49.4	49.2	48.6	47.9	47.2	43.0	29.0
Sus Cap Ex - drilling	0.0	0.0	0.0	(10.0)	(10.0)	(10.0)	(10.0)	(10.0)	(10.0)	(10.0)	(10.0)	(5.0)	0.0
Sus Cap Ex - other	(3.1)	(3.0)	(3.5)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(0.9)
Project Cashflow, p	25.8	30.0	45.4	33.1	39.6	50.4	49.6	48.8	48.0	47.3	46.5	49.2	32.6

Source : MOY reports, Beer & Co estimates

Figure 11 shows that Beer & Co projects that MOY invests \$10m in drilling each year, for 8.5 years, with the final 12 months is unsuccessful, so the low grade stockpiles are processed.

MOY Valuation

Figure 12 shows the detail of Beer & Co's base case valuation of MOY, which is 14.5c/share.

Figure 12: Beer & Co's base case valuation of MOY

Beer & Co's risked, base case valuation is 14.5c/share

	discount rate = 12.0 %	31 December 2014		23-Nov-15	
		risk :	100%	Product	per share
Nullagine Reserves	100%	\$ 82m	\$ 82m	10.8 c	6.6 c
franking credits	60%	\$ 7m	\$ 4m	0.5 c	0.6 c
Nullagine Extension	80%	\$ 141m	\$ 113m	14.9 c	16.5 c
franking credits	48%	\$ 33m	\$ 16m	2.1 c	2.3 c
Exploration	90%	(\$ 46m)	(\$ 41m)	(5.5c)	(6.0c)
Hedge	100%	(\$ 8m)	(\$ 8m)	(1.0c)	(0.6c)
Corporate	100%	(\$ 30m)	(\$ 30m)	(3.9c)	(3.7c)
Cash / Debt	100%	(\$ 36m)	(\$ 36m)	(4.7c)	(1.3c)
Equity raisings	100%	\$ 19m	\$ 19m	2.5 c	0.3 c
TOTAL		\$ 163m	\$ 119m	15.7 c	14.6 c
Shares on issue		217.7m	F P O shares	18.0m	Options
		525.0m	issued 2015	16.0m	Ops. Ex'd

Source : Beer & Co estimates

Figure 12 shows that while Beer & Co is confident of exploration success, we have still discounted the success for risk, while the investment has a lower risk weighting, despite our assumption that the last 12 months has zero success.

Sensitivity Analyses

Sensitivity analysis suggests that the current MOY share price factors in some exploration success and current commodity prices

Beer & Co's base case valuation is a precise answer to a large number of assumptions, each of which is subject to a degree of error.

Figure 13 : Commodity prices

USD / oz	\$ 1,100/oz	\$ 1,200/oz	\$ 1,250/oz	\$ 1,300/oz
AUD-USD = 0.700	\$A 1,571/oz	\$A 1,714/oz	\$A 1,786/oz	\$A 1,857/oz
Reserves	3.0 c	4.2 c	4.4 c	4.7 c
Exploration	6.0 c	10.4 c	12.6 c	14.6 c
TOTAL	9.0 c	14.6 c	17.0 c	19.3 c

Source : Beer & Co estimates

Beer & Co's valuation is very sensitive to being able to add 2.0Mt/yr to the mining inventory

Figure 13 attempts to break the valuation up between existing Reserves and Beer & Co's expected exploration success. It shows that the current share price :

- Assumes some exploration success; and
- Reflects current commodity prices.

The other key variables are the degree of exploration success. Figure 14 shows that a positive view on investment in MOY requires success in finding 2.0Mt/yr of mining inventory.

Grade is also important

Figure 14a : Exploration Success

Gold price :	\$A 1,714/oz	Years :	7.5 years
Tonnes by Grade	1.30 g/t	1.50 g/t	1.70 g/t
1.5 Mt/yr	(1.0c)	0.4 c	2.2 c
2.0 Mt/yr	8.9 c	14.6 c	21.3 c
2.5 Mt/yr	10.2 c	16.7 c	24.3 c

Source : Beer & Co estimates

Figure 14b : Exploration Success

Gold price :	\$A 1,571/oz	Years :	7.5 years
Tonnes by Grade	1.30 g/t	1.50 g/t	1.70 g/t
1.5 Mt/yr	(5.3c)	(3.9c)	(2.3c)
2.0 Mt/yr	3.8 c	9.0 c	15.2 c
2.5 Mt/yr	4.6 c	10.6 c	17.5 c

Source : Beer & Co estimates

Figure 14b shows that at current commodity prices, of \$1100/oz gold and AUD-USD rate of 0.700 , MOY gains significant benefit from either or both of higher grade and higher volume of exploration success.

Beer & Co's analysis showed muted sensitivity to the number of years of expected exploration success.

Conclusions

MOY is raising equity at 4c/share.

MOY's operations at Nullagine produced first gold in September 2012. From then until the most recent quarter, MOY failed to generate sufficient cash to service and repay the \$58m in debt it had taken on to develop the \$83m project.

This had been due to a range of operational issues.

Beer & Co's risked valuation is 14.5c/share

For the September quarter, a strong cashflow was generated by running the operations well, with higher throughput, better recoveries, lower costs and focus on ore with a better net return.

Our valuation is sensitive to commodity prices, volume and grade of exploration success

MOY is raising equity to repay the subordinated debt it had taken on to service the senior debt, as the sub-debt must be repaid quickly.

With this raising, MOY will be generating good cash.

We believe that we have been conservative in our base case for exploration success, which is \$121/oz, which is a high cost

Beer & Co's base case valuation is based on :

- The gold price rising slowly to \$1200/oz, which is lower than the average of 2014, while the AUD-USD rate stays level, when most expect it to fall;
- An investment of \$10m/yr in exploration for 8½ years, yielding 2.0Mt each year of material grading 1.5g/t, which is less than the grade or ore treated to date, for the first 7 ½ years before generating nothing in the final year.
 - The exploration cost is \$121/oz, which is high, especially for an area that is as prospective as Nullagine.

Our valuation is quite sensitive to the volume of exploration success, but we feel that MOY is likely to be more successful than we have projected.

Beer & Co has a BUY, High Risk recommendation on MOY

Our valuation shows that MOY is fair value at current commodity prices and our projected, very modest, exploration success.

Beer & Co initiates research on MOY with a BUY, High Risk, recommendation.

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The analyst responsible for this research report certifies that all of the views expressed reflect his personal views about the securities and the issuer.

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