

# Musgrave Minerals Limited

## More high-grade gold intercepts from Break of Day

MGV is an exploration company focusing on its 100% held Cue Project located in the Murchison Region in WA. The project is divided into two very distinct areas, both with mineral resources. These are the Moyagee Gold Project and the Hollandaire Base Metals Project.

MGV is currently focused on the Moyagee Project with a drill programme underway at its high-grade Break of Day deposit, located near the southern tip of the Moyagee Project area. Inferred and indicated gold resources at Moyagee stand at 441,000 ounces including the Break of Day deposit comprising 200,000 ounces at +7g/t Au.

Drilling is aimed at doubling the size of the resource, sufficient for a standalone operation. Significantly MGV has reported its highest grade gold intercept to-date of 11m at 54g/t Au from outside of the current resource. Infill intercepts include 30 metres at 11.3g/t, including 8 metres at 28.1g/t and 11 metres at 13.8 g/t gold, including 6 metres at 24.5 g/t.

Drilling at the Louise Prospect has returned an intercept of 4 metres at 15.4g/t, including 2 metres at 29.9g/t which is open to the north and at depth, highlighting the Prospect as a potential second discovery, 750m south of the Break of Day deposit.

MGV is focusing on a standalone development, however the option of third party milling with 4 mills within trucking distance of the deposit is a viable alternative.

Cash reserves currently stand at approximately \$4.0 million after \$3.6 million was raised from a placement and share purchase plan in October 2017.

### Veritas Comment

The Murchison district has a strong gold endowment with six deposits of around 1 Moz and the larger Great Fingal and Hill 50 deposits as well as the Big Bell deposit being 2 Moz and 4 Moz's respectively.

Besides a potential standalone production scenario, MGV also has four mills within 150 kilometres of Break of Day, all with the potential for toll treatment. Two of these mills are within 40 kilometres trucking distance.

A recent site trip highlighted the underexplored nature of the belt despite being in a well-endowed gold district.

### Recommendation

We recommend a Speculative BUY and place a price target of 18cps based on existing resources and resource extension/exploration upside. We see MGV as well positioned to double resources at Break of Day to approximately 400,000 ounces at +7g/t Au. In our view this would support a mine life of 5-7 years at a production rate of 60,000 ounces per annum and provide substantial share price re-rating beyond our price target.

MGV.ASX

Spec. BUY

12 December 2017

Share Price	\$0.08
12 mth Price range high	\$0.11
12 mth Price range low	\$0.06
Price target	\$0.18
GICS Sector	Materials
Market capitalisation*	\$20.9m
Shares on Issue*	278.4m
Cash on hand	\$4.0m
Enterprise value	\$16.9m
Previous rating	Initiation

\* excludes 10.875m Director and employee optns

#### Directors & Management

Non-Exec Chairman	Graham Ascough
Managing Director	Robert Waugh
Non-Exec Director	Kelly Ross
Non-Exec Director	John Percival

#### Major Shareholders

Jetosea Pty Ltd	6.1%
Riggy and Boo Pty Limited	4.1%
Silver Lake Resources	3.6%
Independence Group	3.4%

#### MGV Vs Small Resources (XSR)

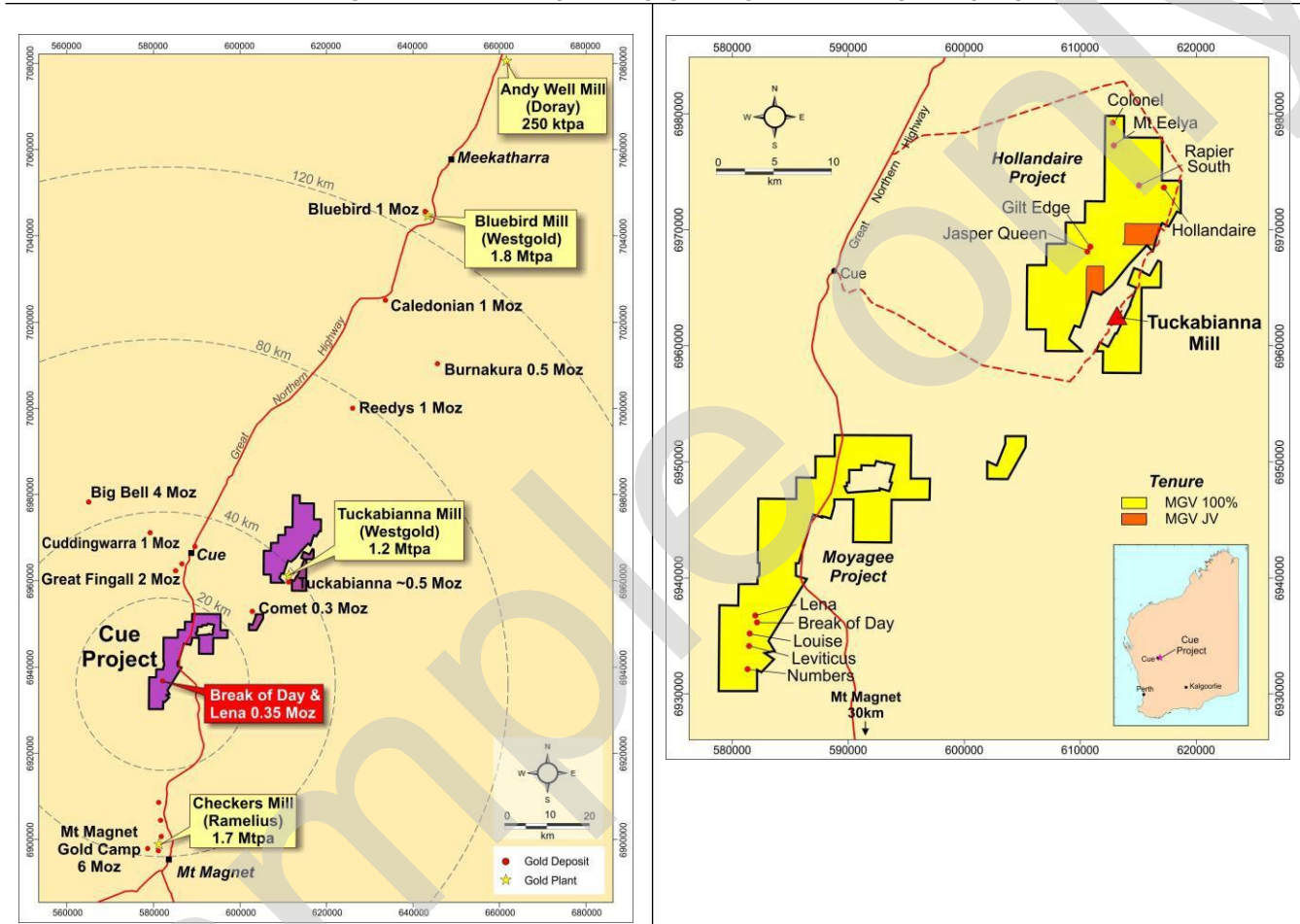


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## Moyagee Project (MGV – 100%)

The company's flagship asset is its Cue Project located in the Murchison Region in WA. This project is divided into two very distinct areas, both with mineral resources. These are the Moyagee Gold Project and the Hollandaire Base Metals Project (see Figure 1).

**Figure 1: Location maps of Moyagee Project and nearby third party mills**



Source: Musgrave Minerals Limited

The company already has mineral resources at Moyagee and at Hollandaire drilling has proven existence of high-grade zinc plus copper, gold and silver. The company has adequate cash reserves to ensure what we would expect to be good news flow over the next twelve months.

### Moyagee Area - Break of Day, Lena and Louise.

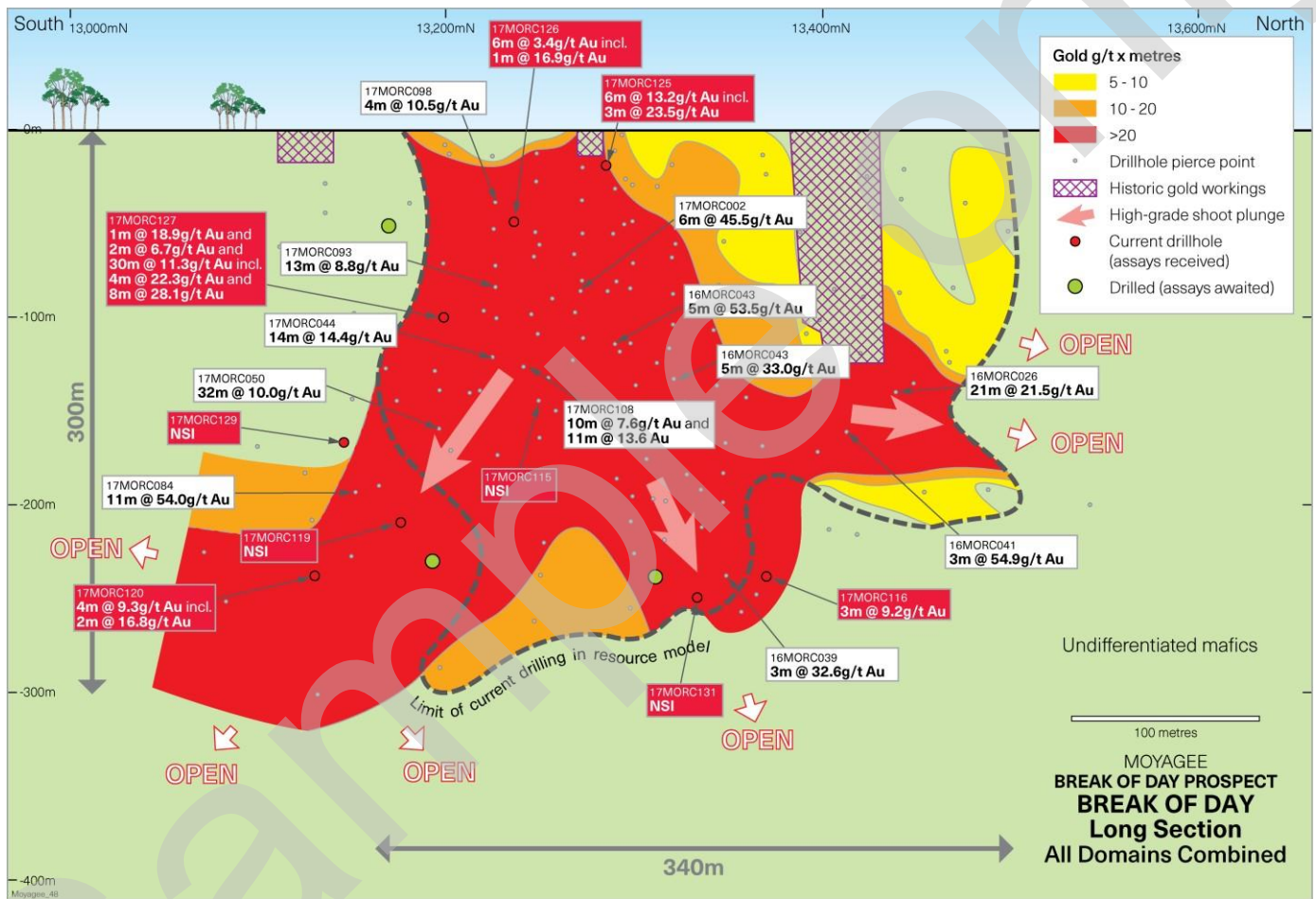
High-grade gold intercepts from Break of Day that when combined with excellent gold recoveries of between 96% and 97% for primary and oxide ores bode well for a relatively low cost production of gold. Moreover, test work indicates that gold recovery of between 73% and 84% can be obtained using a Knelson gravity concentrator. High gold recovery from gravity lowers reagent consumption and lowers operating costs. In addition, there are no deleterious elements to impact metallurgy.

**A gold recovery of +95% for primary and oxide ore including 73-84% of gold recovered from a gravity circuit.**

**Three new high-grade target zones defined by drilling at Break of Day.**

MGV announced further positive exploration results for the September quarter. At Break of Day the company announced that drilling has extended high-grade mineralisation beyond the current resource boundary. Recent high-grade gold intercepts are shown in Figure 3. Additional shoots of high-grade ore are defined within the orebody and remain open along strike and down plunge (see Figure 2). New high-grade ore shoots provide the company with exploration upside to greatly increase gold resources. There is a clear pathway to double mineral resources that would support construction of a standalone production facility. Drilling is continuing and we anticipate a significant increase to resources will ensue.

**Figure 2: Break of Day Long Section – shows new high-grade target zones.**



Source: Musgrave Minerals Limited

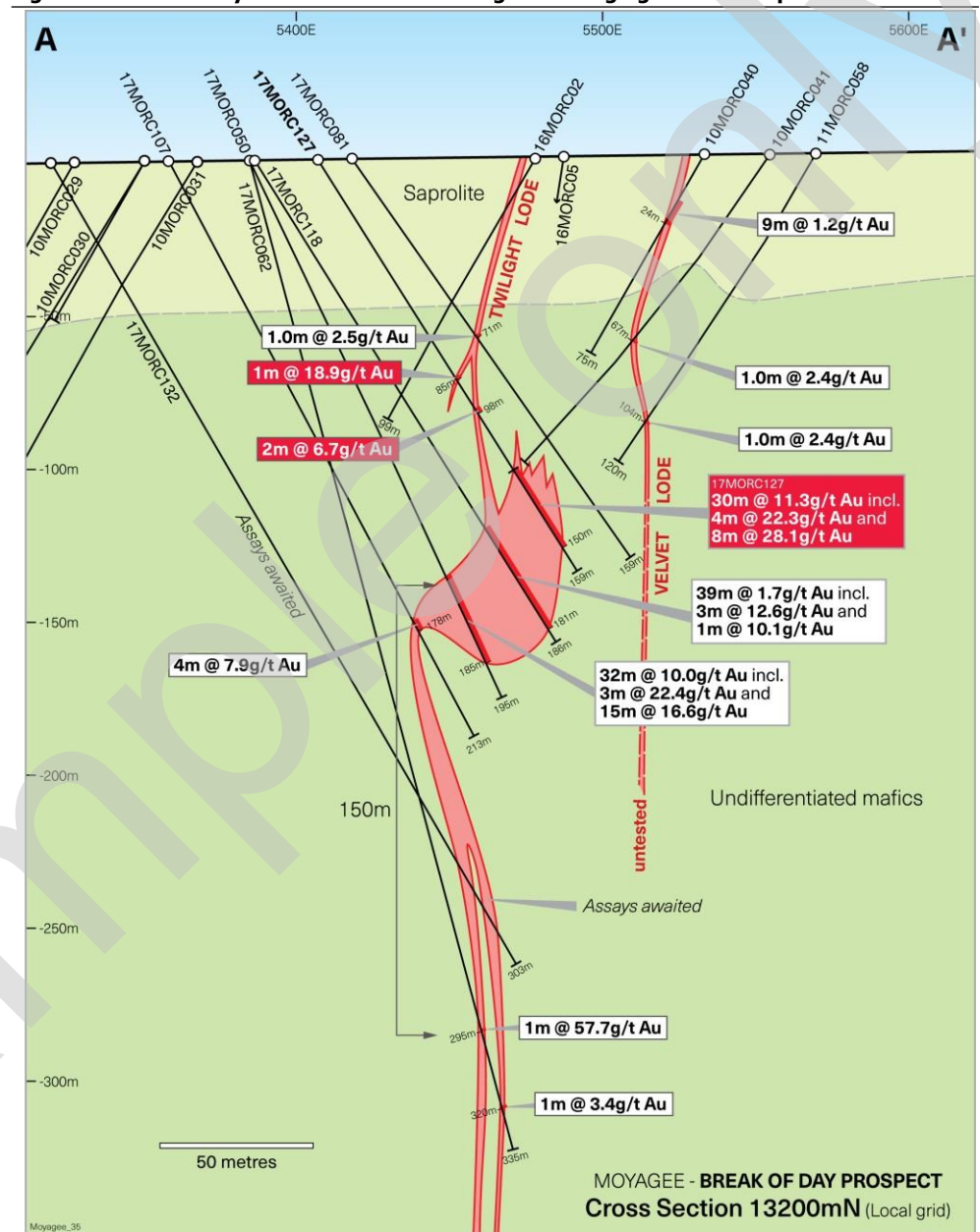
The company recently announced more highly encouraging and high-grade drill results from Break of Day. The importance of the most recent drill results other than showing continuation of high-grade gold ore is that the depths of intersection show potential for an initial open pit development.

Recent drill results which are potentially open pit include 30 metres at 11.3g/t from 120 metres down hole, including 8 metres at 28.1g/t, 11 metres at 13.8 g/t gold including 6 metres at 24.5 g/t gold, from 115 metres down hole. Hole 17MORC107 intercepted 10 metres at 7.6 g/t gold from 96 metres down hole and 17MORC117 intercepted 6 metres at 8.2 g/t gold which included 2 metres at 20.9 g/t from 84 metres.

Indicated and inferred JORC resources at Break of Day total 868,000 tonnes at an average grade of 7.15 g/t for 200,000 contained ounces. The combined strike length of the two lodges at Break of Day has been extended to 800 metres.

Other recent high-grade gold intercepts are shown below in Figure 3 and 4.

**Figure 3: Break of Day Cross Section – showing recent high grade intercepts**



Source: Musgrave Minerals Limited

**Figure 4: Moyagee Project recent high grade intercepts.**

Drill Hole #	Drill Type	Intersection	Down Hole Depth (From)	Prospect	Lode
<b>Gold</b>					
17MORC084	RC	11m @ 54.0g/t Au including	217	Break of Day	Twilight
		5m @ 109.6g/t Au and	217		
		4m @ 10.9g/t Au	223		
17MORC086	RC	2m @ 5.2g/t Au	234	Break of Day	Twilight
17MORC090	RC	1m @ 13.6g/t Au	171	Break of Day	Twilight
17MORC093	RC	13m @ 8.8g/t Au including	102	Break of Day	Velvet
		1m @ 28.7g/t Au and	102		
		1m @ 62.0g/t Au	113		
17MORC095	RC	3m @ 2.75g/t Au	116	Louise	
17MORC098	RC	4m @ 10.5g/t Au including	52	Break of Day	Velvet
		2m @ 18.8g/t Au	53		
17MORC100	RC	1m @ 4.6g/t Au	49	Break of Day	Velvet

Source: Musgrave Minerals Limited

**Lena Deposit:** To the north west of the Break of Day deposit is the lower grade Lena deposit with JORC resources of approximately 153,000 ounces at an average grade of 1.8 g/t gold per tonne. Mineralisation at Lena remains open to the North and down plunge. The Leviticus and Numbers deposits south of Break of Day add another 50,000 ounces to the resource base.

**Louise Prospect:** Another prospect shaping up is the Louise Prospect located 750 metres south of Break of Day. Louise is similar to Break of Day in as much that there is a strong gold in soil anomaly (500m x 300m, peaking at 1.3g/t) and historical gold workings with similar scale as the Break of Day workings.

The Louise target south of Break of Day has a similar gold in soil anomaly with values up to 1.3 g/t gold.

MGV recently announced a discovery intercept of 4m at 15.4 g/t gold which included 2m at 29.9g/t from 79 metres. The intercept is open to the north and at depth with only a single historical drill hole testing basement between Louise and Break of Day. Further drilling is currently being planned.

### Development Options for Moyagee.

The Company is targeting gold resources at Break of Day and Lena to support a standalone production facility. We anticipate ongoing exploration will continue to add resources to support a standalone facility producing around 60,000 ounces of gold per annum for a capital cost of approximately \$60 million (Veritas estimate).

The Murchison region is not lacking infrastructure, with four third party mills potentially available for toll milling. Two of these mills are nearby, within 40 kilometres of Break of Day and are shown in Figure 1 as Westgold’s Tuckabianna Mill (currently being refurbished by Westgold) with a capacity of 1.2 million tonnes per annum, and Ramelius’s Mt Magnet Checkers Mill with a capacity of 1.7 million tonnes per annum. There are many reasons why either Ramelius or Westgold would wish to process high-grade ore from Break of Day and this is discussed in brief under Peer Comparison and Share Price Target.

**Risks:** Investors might perceive some risk in as much that Musgrave’s management does not have a history of bringing mines into production and might prefer less risk with third party toll treatment, at least to begin with. Management will need to determine how NPV is

maximised whether by building a standalone facility at Break of Day or paying around a 20% margin on production cost for toll treatment.

## Hollandaire Base Metal Project

The company is exploring VMS targets within the Mt Eely and Colonel Prospects. Funding for drilling is being aided through co-funding from the Western Australian Government via its Exploration Incentive Scheme (EIS). All drill intercepts of mineralisation to date have been near surface, less than 50 metres depth.

At Mt Eely the best drill intercept was 16 metres grading 3.1% zinc and 0.2% copper from drill hole 17ERPC005. This drill intercept included 2 metres of very high grade zinc mineralisation of 18.1% zinc and 0.5% copper. Drill hole 17ERPC004 located only 25 metres north west of the previous hole intercepted 21 metres with an average grade of 1.9% zinc, 0.4% copper, 0.5 g/t gold and 6 g/t silver. This drill hole also included a much higher grade section of 4 metres grading 8.1% zinc, 1.15% copper, 0.6 g/t gold and 21 g/t silver. Both high grade sections are of ore grade.

Three EM targets have been drilled at the Colonel target. The best intersection, also of ore grade was 6 metres grading 1.0% copper, 1.7 g/t gold and 11 g/t silver.

The results from the DHEM survey are scheduled to be received during November 2017. The DHEM survey is designed to better define the conductors along strike and at depth. The results from the survey will be used to plan the next drilling campaign. Although it's only early days, drilling at Hollandaire indicates significant potential for the discovery of a high grade VMS deposit and add significant value to shareholders.

## Musgrave and Southern Gawler Craton Regions of South Australia.

The company is holding a number of exploration tenements in South Australia. In the Annual Report for 2017 the company stated that little had been spent on these tenements and no exploration results were reported for the period. We expect MGV to sell the tenements and/or find partners to earn-in to at least cover minimum expenditure requirements. We do not ascribe any value to the company for its South Australian tenements.

**Two high-grade intercepts of zinc mineralisation at Mt Eely plus copper, gold and silver. One drill hole intercepted 2 metres at 18.1% zinc and 0.5% copper.**

## Peer Comparison & Price Target

On a peer comparison against other gold companies, we see MGV as undervalued. Figure 5 shown below compares market capitalisation per mineral resource ounce for peers and large gold producers. At this point in time MGV does not have JORC reserves, however the current drill program is designed to infill the existing resource for upgrading.

The relevant comparisons with MGV are Ramelius Resources, West Gold Resources, Kin Mining, Explaurum Limited and Breaker Resources. Ramelius seems fast running out of reserves at its operations at Mt Magnet with reserves of 349,000 ounces contained within a mineral resource base of 2.55 million ounces.

**Figure 5: Break of Day Long Section – shows new high-grade target zones.**

COMPANY	ASX CODE	Gold in mineral resources (Moz)	Shares on issue (M)	Share price (A\$/sh)	Market capitalisation (\$M)	Cash	Enterprise Value (\$M)	Enterprise Value per resource ounce (EV/oz)
<b>Musgrave Minerals Limited</b>	<b>MGV</b>	<b>0.441</b>	<b>278.4</b>	<b>\$0.07</b>	<b>\$18.1</b>	<b>\$4.5</b>	<b>\$13.6</b>	<b>\$31</b>
Explaurum Limited	EXU	0.696	458.5	\$0.10	\$45.8	\$3.3	\$42.5	\$61
Kin Mining NL	KIN	1.023	177.9	\$0.32	\$56.0	\$4.2	\$51.8	\$51
Doray Minerals Limited	DRM	1.411	357.1	\$0.19	\$67.8	\$14.7	\$53.1	\$38
Breaker Resources NL	BRB	0.000	159.2	\$0.50	\$79.6	\$15.3	\$64.3	\$0
Troy Resources Ltd	TRY	0.985	459.5	\$0.10	\$44.6	-\$23.2	\$67.8	\$69
Silver Lake Resources Limited	SLR	3.290	503.9	\$0.33	\$163.8	\$65.6	\$98.2	\$30
Millenium Minerals Limited	MOY	1.300	784.1	\$0.19	\$149.0	\$20.1	\$128.9	\$99
Ramelius Resources Limited	RMS	2.549	526.9	\$0.39	\$205.5	\$55.0	\$150.5	\$59
Perseus Mining Limited	PRU	14.643	1,033.2	\$0.33	\$335.8	\$21.8	\$314.0	\$21
Resolute Mining Limited	RSG	10.714	741.5	\$1.01	\$748.9	\$248.0	\$500.9	\$47
West Gold Resources Limited	WGX	15.957	320.8	\$1.81	\$580.7	\$32.0	\$548.7	\$34
Saracen Mineral Holding Ltd	SAR	9.055	812.9	\$1.51	\$1,227.5	\$60.5	\$1,167.0	\$129
St Barbara Limited	SBM	9.635	515.4	\$3.26	\$1,680.3	\$199.0	\$1,481.3	\$154
<b>OVERALL *</b>		<b>71.699</b>			<b>\$5,239.7</b>		<b>\$4,584.5</b>	<b>\$64</b>

Note: \* Excludes BRB, DRM - Andy Well 520koz  
RMS - Mt Magnet 349koz

Source: FactSet, Veritas Securities Limited

Breaker Resources (BRB) is scheduled to announce a maiden resource in December quarter 2017. Investors have given BRB the benefit of-the-doubt because of high-grade near surface gold mineralisation – we would expect BRB to announce mineral resources in excess of 1 million ounces.

Kin Mining (KIN) is a low grade project with production from many pits and grade varying from 1.2 g/t to 2.1 g/t gold. On the basis of grade we would expect MGV to be valued at a significant premium to KIN. Explaurum is in a similar situation to KIN with resources grading below 2.0 g/t gold.

WGX has consolidated nearly all the historical gold mining centres in the Murchison (Central Murchison Gold Project or CMPG). Ore grades are unspectacular with head grade from underground averaging 4.06 g/t gold in the September quarter with head grade from open pit mining averaging 1.77 g/t gold. In fact most of WGX's gold production is from low grade open pit mines with head grades below 2.0 g/t gold. However, WGX reports an acceptable margin on its gold production; sales at \$1,642 per ounce against AISC of \$1,229 per ounce.

A market valuation of only \$34 per mineral resource ounce seems low against an operating margin of \$413 per ounce.

High-grade ore from the Break of Day deposit that is treated at mills owned either by WGX or RMS could only enhance production and economics at their respective mills located only 40 kilometres from Break of Day.

Four key factors that have to be considered in establishing a price target for MGV are:

- High-grade gold mineralisation at Break of Day;
- Exploration potential;
- Relative market valuations; and
- Potential for takeover by either WGX or RMS.

On the basis of grade or quality of the ore deposit, Break of Day rightly deserves a much larger premium versus market valuations for WGX and RMS. The Break of Day and Lena shear zones have a combined strike length of around 20 kilometers with multiple targets to drill, some beneath a salt lake. This belt is under explored and exploration potential remains very high.

Irrespective of the company's decision to construct its own production facility, it seems likely that MGV will develop a resource that will support a mine life of at least 5 years with an annual production of around 60,000 ounces. Such an outcome would necessitate mineral resources of some 400,000 ounces at Break of Day. This is double the current resource and is the current target.

A valuation between RMS and Saracen Mineral Holdings (SAR) might reasonably be expected. Somewhat arbitrarily, we have applied a valuation of \$90 per ounce, valuing MGV at \$36 million based on current known resources only. Based on the number of shares on issue we therefore place a valuation of \$0.13 plus \$0.05 for exploration potential as an initial price target. Over coming weeks the company will announce the drill results for a further drill holes from Break of Day. More excellent drill results are anticipated that will move gold resources down the pathway to double in size.

We have not ascribed a value for the Hollandaire area which has potential to add significant value to the company and its shareholders or the value upside that further additional drilling will provide extending the Break of Day resource.



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RATING

BUY – anticipated stock return is greater than 10%

SELL – anticipated stock return is less than -10%

HOLD – anticipated stock return is between -10% and +10%

SPECULATIVE – High risk with stock price likely to fluctuate by 50% or more

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