



ASX RELEASE

12 August 2016

ASX: MGV

## Gold Mineralisation Extended at Break of Day

- **RC drilling intersects high grade gold mineralisation 80 metres north of original section**
  - **4m @ 12.3g/t Au from 189m down hole (16MORC012) in the interpreted footwall vein**
  - **The footwall vein is open in all directions**
- **Assays received for further five drill holes in the hanging-wall vein**
  - **Footwall vein untested in these drill holes**
- **Assays expected for a further seven drill holes in the next two weeks**
- **A new drill program will re-commence at Break of Day in three weeks**

Musgrave Minerals Ltd ("Musgrave" or "the Company") (ASX: MGV) is pleased to advise that further high grade gold has been intersected in follow-up reverse circulation ("RC") drilling at the Break of Day prospect on the Cue Project in the Murchison region of Western Australia. Assay results have been received for a further five drill holes in the program (*Table 1*).

High grade gold was intersected in the interpreted footwall vein assaying **4m @ 12.3g/t Au** from 189m to 193m down hole in 16MORC012. The intersection is 80m north (*Figure 1*) of drill hole 16MORC004 where Musgrave intersected **6m @ 12.8g/t Au** (see ASX announcement 6 June 2016, "*More High Grade Gold at Break of Day*"). All results are shown in *Table 1*.

The remaining drill holes did not penetrate deep enough to intersect the footwall vein. These drill holes will be extended to intersect the projection of the footwall gold mineralisation in the upcoming program that will recommence in three weeks.

Musgrave Managing Director Rob Waugh said, "*Our understanding of the Break of Day gold system is continuing to grow as we drill more holes. We have successfully extended the high grade mineralisation over 80 metres of strike and it is still open to both the north and south. This is another strong result at Break of Day.*"

Drilling will recommence at Break of Day in late August.

## BREAK OF DAY

RC drilling was undertaken at Break of Day as part of a broader RC drill program on the Cue Project. Fourteen drill holes have been completed at Break of Day as part of the current program and assay results have now been received for the first seven holes. The separation of the footwall and hanging-wall gold veins is varying along strike requiring a number of existing drill holes to be extended to depth to intersect the projected position of the high grade footwall mineralisation

The gold mineralisation is currently open along strike (*Figure 1*) and down dip. Assays for the remaining seven drill holes at Break of Day are expected in the next two weeks.

The mineralisation is interpreted to be steep to moderately dipping twin semi-parallel quartz veins hosting high grade gold mineralisation with minor (1-2%) pyrite, within a basaltic stratigraphic sequence. Sampling was undertaken on one metre intervals in visible quartz lodes and four metre composites outside these zones.

Drill hole 16MORC014 was drilled in the reverse direction to test a steeper dip theory to the vein systems. The drill hole is almost parallel with the interpreted gold veins and supports the current interpretation.

Drilling will recommence at Break of Day in late August. Musgrave's goal is to delineate a high grade gold resource.

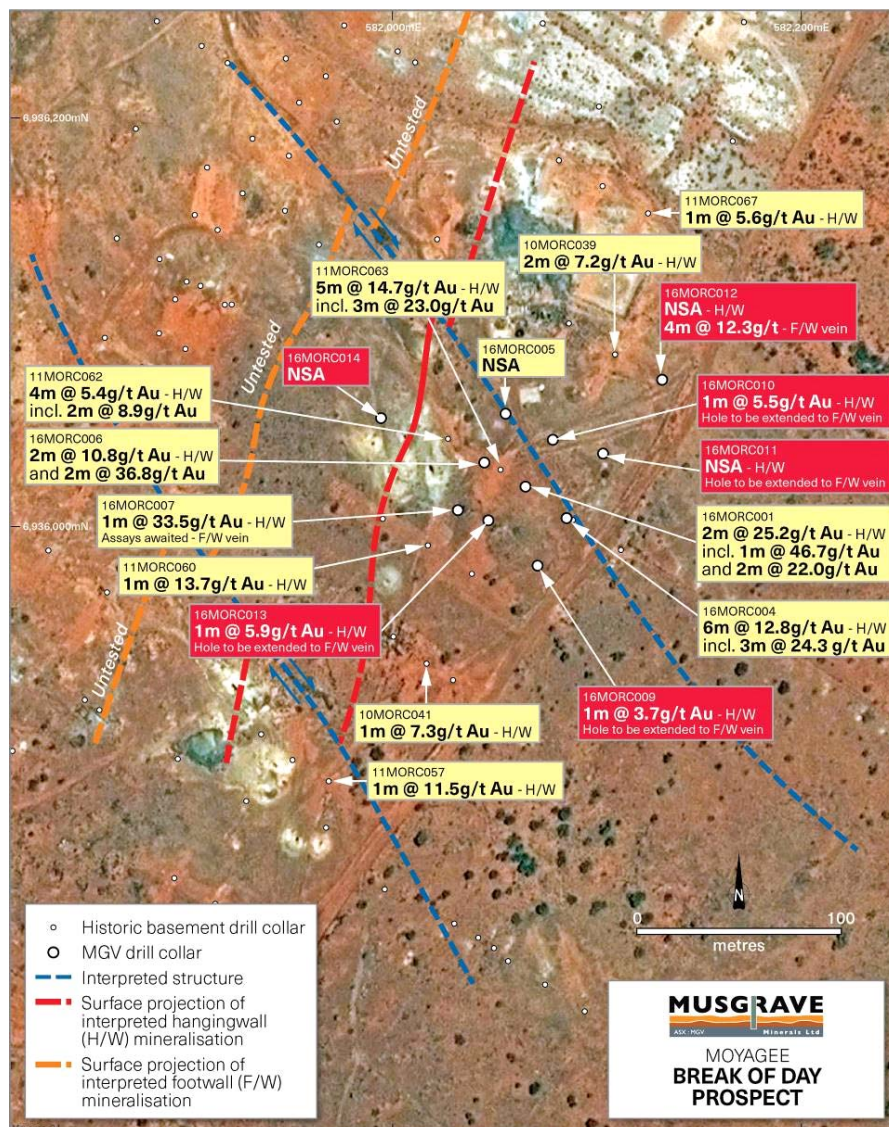


Figure 1: Plan of Break of Day drill hole collar locations showing projected surface trace of mineralisation, interpreted fault offsets and high grade intersections



## ABOUT THE CUE PROJECT

The Cue Project ("The Project") is a Farm-In and Joint Venture Agreement with Silver Lake Resources Limited ("Silver Lake") (ASX: SLR) where Musgrave can earn up to an 80% interest. The Project consists of the Moyagee Gold and Hollandaire Copper Resources (see ASX announcement "25 November 2015, "Musgrave Secures Advanced Gold and Copper Project") and surrounding tenure in the highly prospective Murchison province of Western Australia. The Company met its minimum expenditure commitment for the Cue Project and commenced the Stage 1 Earn-In to acquire a 60% Joint Venture interest in the Project.

There is significant potential to extend existing mineralisation and also discover new mineralisation within the Project area.

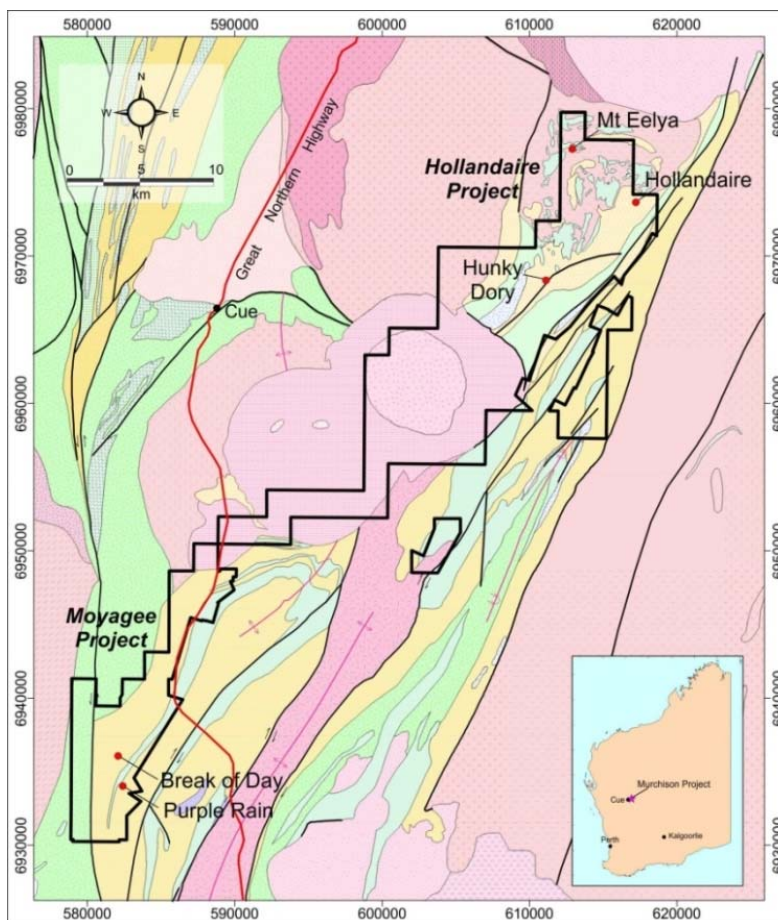


Figure 2: Cue Project location plan

### Enquiries:

Rob Waugh  
Managing Director  
Musgrave Minerals Limited  
+61 8 9324 1061

### About Musgrave Minerals

Musgrave Minerals Limited is an active Australian gold and base metals explorer. The Cue Project in the Murchison region of Western Australia is an advanced gold and copper project. Musgrave's focus is to increase gold and copper resources through discovery and extensional drilling to underpin studies that will demonstrate a viable path to development in the near term. Musgrave also holds the highly prospective Mamba Ni-Cu sulphide project in the Fraser Range of Western Australia and an active epithermal Ag-Pb-Zn-Cu project in the prospective silver and base metals province of the southern Gawler Craton of South Australia and a large exploration footprint in the Musgrave Province in South Australia. Musgrave has a powerful shareholder base with four mining and exploration companies currently participating as cornerstone investors.

### Competent Person's Statement Exploration Results

The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled and/or thoroughly reviewed by Mr Robert Waugh, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and a Member of the Australian Institute of Geoscientists (AIG). Mr Waugh is Managing Director and a full-time employee of Musgrave Minerals Ltd. Mr Waugh has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Waugh consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Table 1(a): **Summary of Drill Hole Locations and Significant Assay Intervals**

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (degrees)	Dip (degrees)	RL (m)	Total Depth (m)	Sample Type	From (m)	Interval (m)	Au (g/t)	Vein
16MORC006	RC	Break of Day	582045	6936031	300	-60	418	135	Individual 1m	66	*2	10.8	H/W
									Including	66	*1	20.5	H/W
									Individual 1m	101	*2	36.8	F/W
									Including	101	*1	57.5	F/W
									Composite 4m	120	4	1.2	
16MORC007	RC	Break of Day	582032	6936008	300	-60	418	159	Individual 1m	80	*1	33.5	H/W
									Assays awaited				F/W
16MORC008	RC	Break of Day	582050	6935995	300	-60	-60	129	Hole blocked – did not reach target depth				
16MORC009	RC	Break of Day	582071	6935981	295	-60	-60	195	Individual 1m	133	1	3.7	H/W
									Individual 1m	176	1	1.2	
									Individual 1m	179	1	1.3	
									Drill hole to be extended to intersect F/W target				
16MORC010	RC	Break of Day	582078	6936043	290	-60	-60	153	Individual 1m	139	1	5.5	H/W
									Drill hole to be extended to intersect F/W target				
16MORC011	RC	Break of Day	582103	6936036	290	-60	-60	195	NSA				H/W
									Drill hole to be extended to intersect F/W target				
16MORC012	RC	Break of Day	582132	6936072	300	-60	-60	201	Individual 1m	189	4	12.3	F/W
16MORC013	RC	Break of Day	582047	6936002	300	-60	-60	165	Individual 1m	115	1	5.9	H/W
									Composite 4m	156	4	2.8	
									Drill hole to be extended to intersect F/W target				
16MORC014	RC	Break of Day	581994	6936054	120	-60	-60	69	NSA				



Table 1(b): **Individual Assay Data for Drill Hole 16MORC012**

Drill Hole ID	Sample Number	From (m)	To (m)	Interval (m)	Au (g/t)
16MORC012	MGV101149	188	189	1	0.016
16MORC012	MGV101150	189	190	1	15.713
16MORC012	MGV101151	190	191	1	16.337
16MORC012	MGV101152	191	192	1	10.279
16MORC012	MGV101153	192	193	1	7.002

*Notes to Table 1(a) & 1(b)*

1. An accurate dip and strike and the controls on mineralisation are only interpreted and the true width of mineralisation is not yet confirmed although it could be 50-90% of the intersection width
2. Composite 4 metre samples outside the vein lode systems and one metre individual samples within the vein lodes were submitted for analysis. Composites samples are analysed using aqua regia digest and 10g SAA (0.01ppm) gold analysis by Genalysis-Intertek. Individual one metre samples were analysed using 50g fire assay with MS finish.
3. g/t (grams per tonne), ppm (parts per million), ppb (parts per billion), X = below detection limit
4. NSA (No Significant Assay) – No gold assay above 1g/t
5. \* result previously reported
6. H/W = Interpreted hanging-wall vein; F/W = Interpreted footwall vein

---ENDS---

## JORC TABLE 1

### Section 1 Sampling Techniques and Data

Criteria	Explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	Sampling is undertaken using standard industry practices including the use of duplicates and standards at regular intervals. All Reverse circulation (RC) samples are split to 1-3kg in weight through a cyclone splitter. A Thermo Scientific Niton GoldD XL3+ 950 Analyser is available on site to aid geological interpretation. No XRF results are reported.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	All co-ordinates are in UTM grid (GDA94 Z50) and have been either surveyed or measured by hand-held GPS with an accuracy of >±5 metres.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	RC samples were collected as 4m composites for all drill holes. One metre individual samples are immediately submitted for analysis where a high probability of mineralisation occurs (e.g. quartz vein lode or massive sulphide). All one metre samples are split to 1-3kg in weight through a cyclone splitter which is air blasted clean at the end of each 6m rod. Individual samples weigh less than 3kg to ensure total preparation at the laboratory pulverization stage. The sample size is deemed appropriate for the grain size of the material being sampled.  Samples are sent to the Genalysis – Intertek laboratory in Maddington. Samples are pulverized to 85% passing -75um and four metre composite samples are analysed using a four acid digest with 30 element ICP-OES MS (inductively coupled plasma - optical emission spectrometry) multi-element analysis and 10g MS (mass spectrometry) gold assay . Individual one metre gold samples are analysed using a 50g fire assay with ICP-MS (inductively coupled plasma - mass spectrometry) finish for gold.
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	An RC drilling program was undertaken by Ausdrill with a 5 5/8 inch hammer. Fourteen RC holes were drilled at Break of Day. Historically Silver Lake Resources Ltd (SLR) undertook RC drilling at Break of Day with a number of companies intermittently drilling prior to 2008. A combination of historical RAB, aircore, RC and diamond drilling has been utilised by multiple companies over a thirty year period across the broader project area.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	RC bulk sample weights are observed and noted in a field Toughbook computer by MGV field staff.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Drillers use industry appropriate methods to maximise sample recovery and minimise downhole contamination. A cyclone splitter was utilised to split 1-3kg of sample by weight. The splitter is air blasted clean at the end of each 6m rod.
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	No significant sample loss or bias has been noted.
Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	All geological, structural and alteration related observations are stored in the database.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging of lithology, structure, alteration, mineralisation, colour and other features of core or RC chips is undertaken on a routine 1m basis. Photography of diamond core is undertaken prior to cutting and sampling.
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill holes are logged in full on completion.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No diamond drilling was undertaken during this program.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	RC samples are routinely cyclone split and kept dry by the use of pressurised air. Wet samples are speared using a PVC sampler.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Drill sample preparation and base metal and precious metal analysis is undertaken by a registered laboratory (Genalysis – Intertek). Sample preparation by dry pulverisation to 85% passing 75 micron.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Field QC procedures involve the use of certified reference standards (1:50), duplicates (1:50) and blanks (1:50) at appropriate intervals for early stage exploration programs.



	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Sampling is carried out using standard protocols and QAQC procedures as per industry practice. Duplicate samples are inserted (1:50) and routinely checked against originals.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate for grain size of sample material to give an accurate indication of base metal anomalism at Mt Eelya. Sample is collected from full width of sample interval to ensure it is representative of samples lithology.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	One metre individual samples are analysed through potential gold mineralised zones. Analysis is by 50g fire assay with ICP-MS finish for gold.  On four metre composite samples, analysis is undertaken by Intertek-Genalysis (a registered laboratory), with multi element analysis by aqua regia digest and ICP-OES (Ag, As, Al, Ba, Bi, Ca, Cd, Ce, Co, Cu, Fe, K, La, Mg, Mn, Mo, Ni, P, Pb, S, Sb, Sc, Sr, Te, Ti, Tl, V, W, Zn) to acceptable detection limits with standard 10g MS analysis undertaken for gold.  Internal certified laboratory QAQC is undertaken including check samples, blanks and internal standards. This methodology is considered appropriate for base metal mineralisation and gold at the exploration phase.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools were used to estimate mineral or element percentages. Musgrave utilise a Thermo Scientific Niton GoldD XL3+ 950 Analyser to aid geological interpretation.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Standards, duplicates, blanks, and repeats are utilised as standard procedure. Certified reference materials that are relevant to the type and style of mineralisation targeted are inserted at regular intervals.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Samples are verified by the geologist before importing into the main database (Datashed).
	The use of twinned holes.	No twin holes have been drilled by Musgrave Minerals Ltd.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data is collected using a standard set of templates. Geological sample logging is undertaken on one metre intervals for all RC drilling with colour, structure, alteration and lithology recorded for each interval. Data is verified before loading to the database. Geological logging of all samples is undertaken.
	Discuss any adjustment to assay data.	No adjustments or calibrations are made to any assay data reported.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	All maps and locations are in UTM grid (GDA94 Z50) and have been surveyed or measured by hand-held GPS with an accuracy of $\pm 5$ metres. Down hole surveys are undertaken at nominal 30m intervals using a digital down hole camera and spear.
	Specification of the grid system used.	Drill hole and sample site co-ordinates are in UTM grid (GDA94 Z50) and converted from local grid references.
	Quality and adequacy of topographic control.	Historical drill hole collars and RL's are surveyed by qualified surveyors in most instances in the resource areas. Hand held GPS is used for exploration drill holes including at Break of Day and Mt Eelya with an accuracy of $\pm 5$ metres.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Variable drill hole spacings are used to adequately test targets and are determined from geochemical, geophysical and geological data together with historical drilling information. Historical drill hole spacings at Break of Day are variable although SLR drilled a number of holes at approximately 20m intervals on 50m sections in 2011-12.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	There is a current JORC 2004 mineral resource at Break of Day defined by Silver Lake Resources. The Mineral Resources and Ore Reserve estimate at Break of Day was first prepared and disclosed in accordance with the 2004 Edition of the Australian Code of Reporting of Mineral Resources and Ore Reserves (JORC 2004) and have not have not been updated since to comply with JORC 2012 on the basis that the information had not materially changed since it was last reported. For further details refer to SLR ASX announcement 28 August 2015: "Mineral Resources-Ore Reserves - August 2015".
	Whether sample compositing has been applied.	One metre individual samples are undertaken for all RC drill holes but only submitted for analysis where there is a high probability of mineralisation from geological interpretation of the drill samples. Four metre sample compositing has also been undertaken for all drill holes. Composite sampling is undertaken using a stainless steel spear (trowel) at one metre samples and combined.

<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Drilling is designed to cross the mineralisation as close to perpendicular as possible. Most drill holes are designed at a dip of approximately 50-60 degrees. The mineralisation at Break of Day is interpreted to dip between 50 degrees to the east and sub vertical. Drill intersections at Break of Day are interpreted to be between 50-90% of the drill intersection width.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	No orientation based sampling bias is known at this time.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Chain of custody is managed by internal staff. Drill samples are stored on site and transported by a licenced reputable transport company to a registered laboratory in Perth (Genalysis-Intertek at Maddington). When at the laboratory samples are stored in a locked yard before being processed and tracked through preparation and analysis (Lab-Trak system).
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No external audits or reviews of modelling techniques and data have been undertaken.

## Section 2 Reporting of Exploration Results

<b>Criteria</b>	<b>Explanation</b>	<b>Commentary</b>
<i>Mineral tenement and land tenure status</i>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	The Break of Day prospect is located on granted mining lease M21/106 and the primary tenement holder is Silver Lake Resources Ltd. Musgrave minerals commenced a Farm-In and Joint Venture on the project on 24 November 2015 (see MGV ASX announcement 25 November 2015: "Musgrave Secures Advanced Gold and Copper Project". The Cue project tenements consist of 39 licences (Lena and Break of Day is M21/106 and Hollandaire E20/699) as outlined in the Farm-In and Joint Venture Agreement. The tenements are subject to standard Native Title heritage agreements and state royalties. Third party royalties are present on some individual tenements.
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	The tenements are in good standing and no known impediments exist.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Historical drilling, soil sampling and geophysical surveys have been undertaken in different areas on the tenements intermittently by multiple third parties over a period of more than 30 years. At Break of Day historical exploration and drilling has been undertaken by a number of companies and most recently by Silver Lake Resources Ltd in 2010-11.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	Geology comprises typical Archaean Yilgarn greenstone belt lithologies and granitic intrusives. Two main styles of mineralisation are present, typical Yilgarn Archaean lode gold and volcanic massive sulphide (VMS) base metal and gold mineralisation within the Eelya Felsic Complex.
<i>Drill hole Information</i>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.</i>	All relevant historical drill hole information has previously been reported by SLR. All new drill holes completed by MGV are referenced in this release.
<i>Data aggregation methods</i>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	All significant new drill hole assay data are reported in this release. No cut-off has been applied to any sampling.
	<i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i>	All significant new drill hole assay data are reported in this release. No cut-off has been applied to any sampling.



	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values have been reported.
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	All significant new drill hole assay data are reported in this release. True widths are not known but all drilling is planned close to perpendicular to interpreted targets.
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Diagrams referencing new data can be found in the body of this release. Some diagrams referencing historical data can also be found in the body of this report.
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	All assays received from Musgrave's drilling are reported in this release.
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	All new meaningful data is reported in this release. All material results from geochemical and geophysical surveys and drilling related to these prospects has been reported or disclosed previously.
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	A range of exploration techniques will be considered to progress exploration including additional surface sampling and drilling.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to figures in the body of this announcement.