



ASX RELEASE

27 March 2017

ASX: MGV

## Drilling Identifies Southern Extension to High Grade Gold Lode at Break of Day

- Drilling at the southern end of the Break of Day deposit has extended the high grade gold mineralisation a further 25m to the south
- Drill hole 17MORC003 intersected 1m @ 117.4g/t gold from 173m down hole
- The high grade gold mineralisation is still open to the south and down plunge
- Further drilling is underway to test this southern extension
- Infill drilling at Break of Day has intersected high grade gold in drill hole 17MORC006
  - 2m @ 16.2g/t Au from 120m down hole
- Assay results are still awaited for a further 38 drill holes in the current program

Musgrave Minerals Ltd ("Musgrave" or "the Company") (ASX: **MGV**) is pleased to announce the receipt of assay results for a further two drill holes from the current 4,000m reverse circulation ("RC") drilling program at the Break of Day prospect on the Cue Project in the Murchison region of Western Australia (*Figure 1*).

Musgrave Managing Director Rob Waugh said, "This is another positive result with the high grade gold in 17MORC003 extending the Twilight Lode at Break of Day a further 25m south. The mineralisation is still open to the south (*Figure 2*) and down plunge which creates an opportunity for Musgrave to continue to extend this high grade gold mineralisation to grow the resource."

Musgrave has currently drilled 44 holes for a total of 4,006m in the current program. Assay results have now been received for 6 drill holes with results for the remaining 38 drill holes expected over the next six week period.

The objective of the drilling is to extend and infill the high grade gold mineralisation at both Break of Day and Lena to complete a new resource estimate in the second quarter of 2017. The new resource estimate will underpin studies to demonstrate a viable path to near term development.

## BREAK OF DAY

Assay results for two drill holes from the recent drill program at Break of Day have been received.

Drill hole 17MORC003 intersected **1m @ 117.4g/t Au** from 173m down hole and extends the high grade gold mineralisation on the Twilight Lode a further 25m south on section 13275mN (*Figures 2 and 3*). Drill hole 17MORC006 was drilled on section 13350mN and intersected **2m @ 16.2g/t Au** from 120m down hole (*Figure 4*). Assays are awaited for an additional 38 drill holes at Break of Day and Lena.

There is significant potential to continue to improve the grade and increase the gold resources at Lena and Break of Day with further drilling.

The high grade gold mineralisation at Break of Day occurs in vertical to steep westerly dipping, semi-parallel quartz lodes hosting gold with minor (1-2%) pyrite, within a dolerite-basaltic stratigraphic sequence. The separation of the Twilight and Velvet gold lodes varies along strike from 15 to 60 metres. The gold mineralisation is currently open along strike and down plunge.

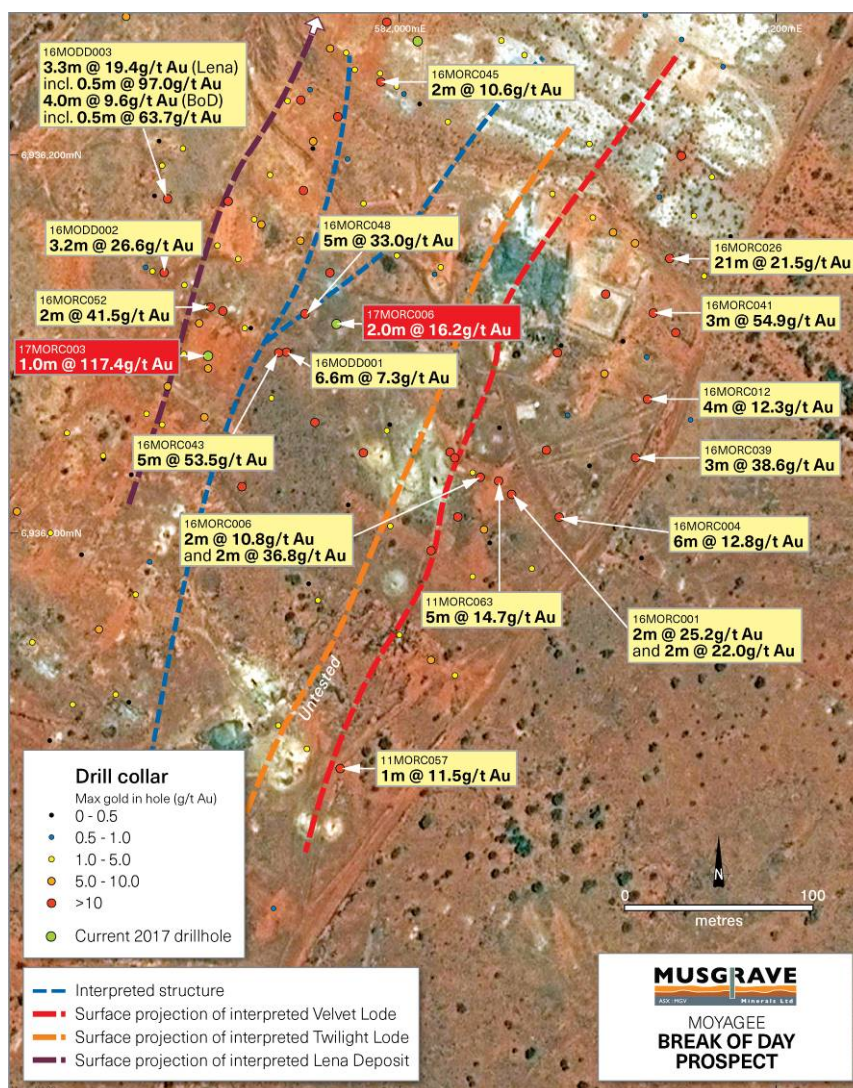


Figure 1: Location plan showing maximum gold in hole plotted at the drill hole collar for Break of Day and Lena gold prospects

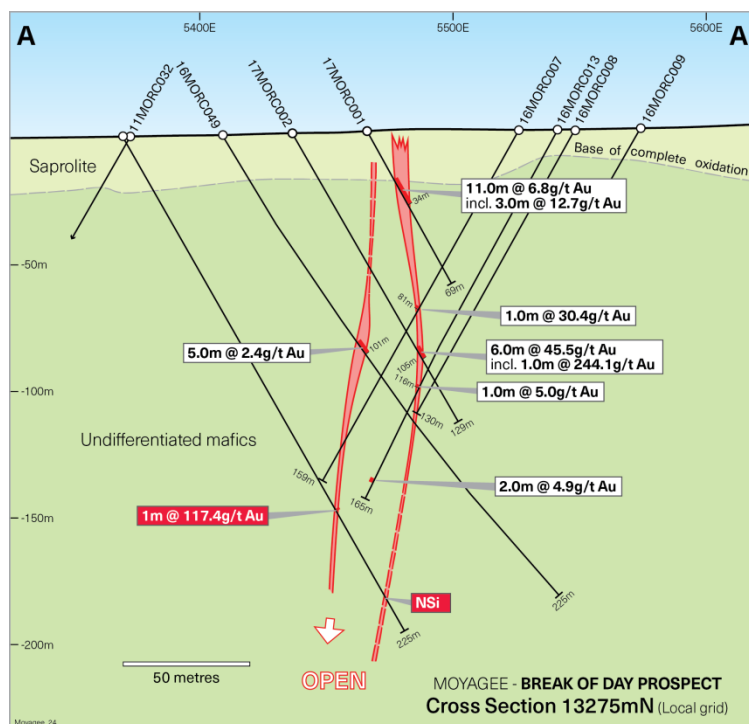


Figure 2: Break of Day cross section 13275mN – local grid  
(vertical section through mineralisation)

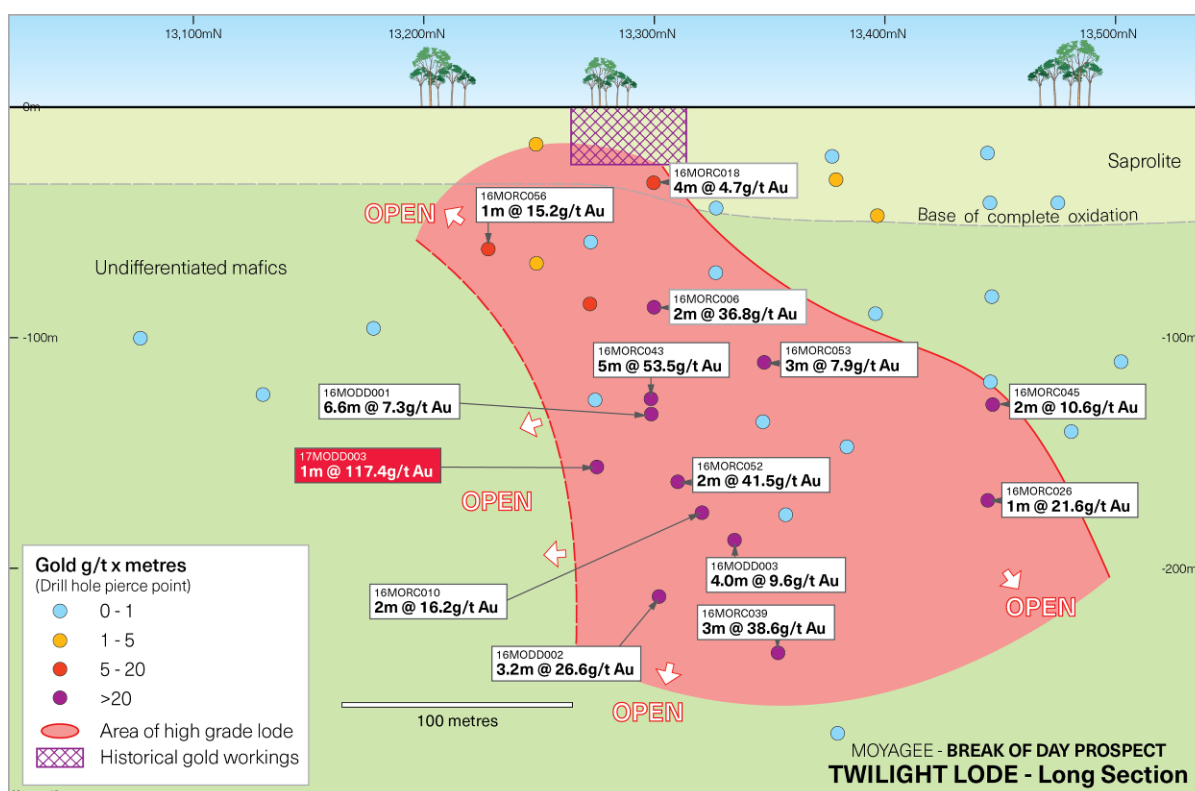


Figure 3: Break of Day long section of Twilight gold lode (a long section or longitudinal section is a section along the plane of the lode and in this instance shows gold grade x thickness variability with depth of the Twilight Lode)





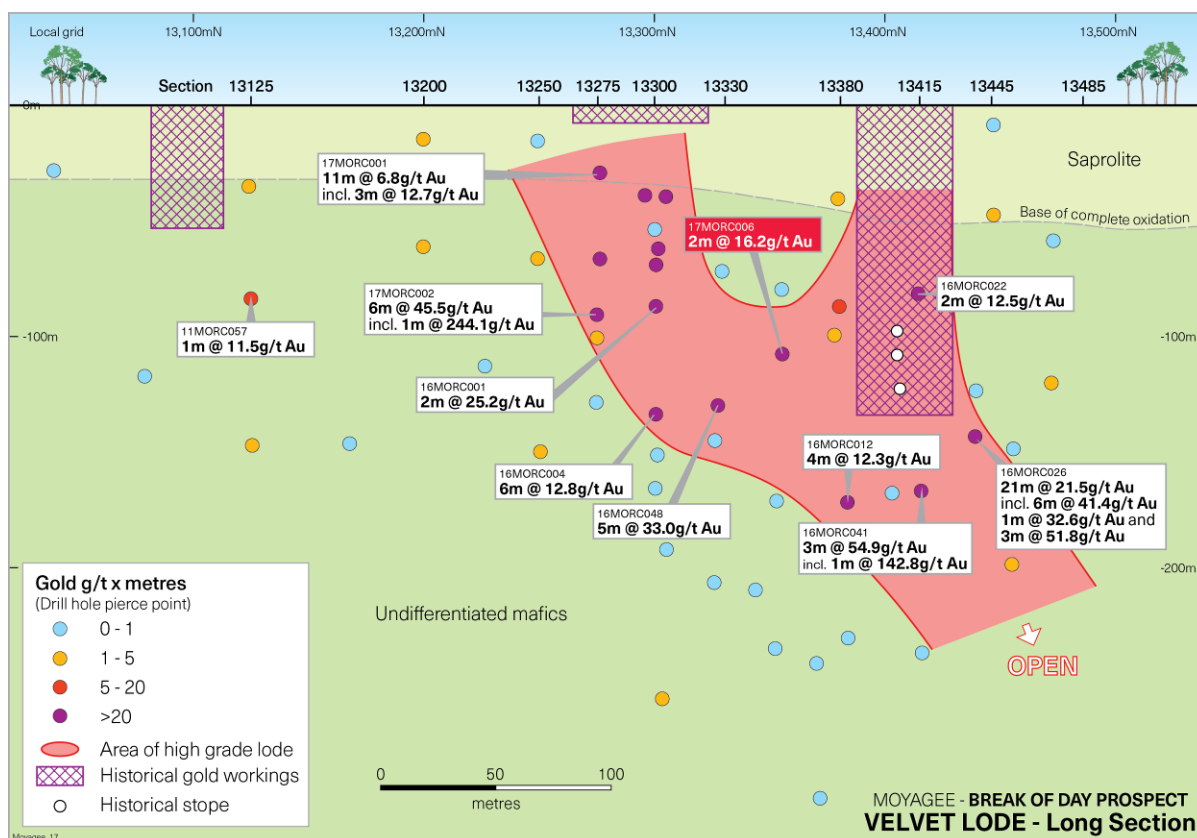


Figure 4: Break of Day long section of Velvet gold lode (a long section or longitudinal section is a section along the plane of the lode and in this instance shows gold grade x thickness variability with depth of the Velvet Lode)

## 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). Musgrave has met the Stage 1 Earn-In holding a 60% Joint Venture interest in the Project and has elected to progress to Stage 2 and increase its equity to 80%. 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 (Figure 5).

The Company believes there is significant potential to extend existing mineralisation and also discover new high grade mineralisation within the Project area, shown by the recent drilling success at Break of Day and Lena.

### Enquiries:

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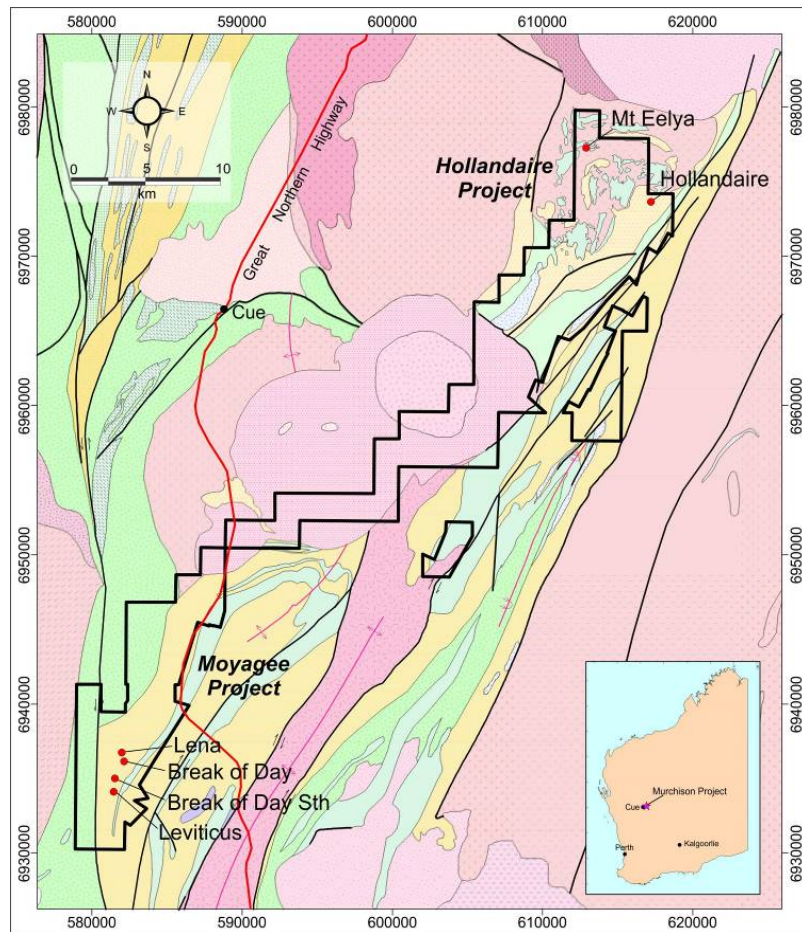


Figure 5: Cue Project location plan

### 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 near term development. Musgrave also holds the highly prospective active epithermal Ag-Pb-Zn-Cu Corunna Project in the prospective silver and base metals province of the southern Gawler Craton and a large exploration footprint in the Musgrave Province in South Australia. Musgrave has a powerful shareholder base with three 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.

#### Forward Looking Statements

This document may contain certain forward-looking statements. Forward-looking statements include, but are not limited to statements concerning Musgrave Minerals Limited's (Musgrave's) current expectations, estimates and projections about the industry in which Musgrave operates, and beliefs and assumptions regarding Musgrave's future performance. When used in this document, words such as "anticipate", "could", "plan", "estimate", "expects", "seeks", "intends", "may", "potential", "should", and similar expressions are forward-looking statements. Although Musgrave believes that its expectations reflected in these forward-looking statements are reasonable, such statements are subject to known and unknown risks, uncertainties and other factors, some of which are beyond the control of Musgrave and no assurance can be given that actual results will be consistent with these forward-looking statements.

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)	Lode
17MORC003	RC	Break of Day	581898	6936094	120	-60	417	225	Individual 1m	173	1	117.4	Twilight
17MORC006	RC	Break of Day	581967	6936110	120	-60	416	141	Individual 1m	120	2	16.2	Twilight

*Notes to Table 1(a)*

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 is likely be 50-80% of the intersection width.
2. At Break of Day and Lena composite 6 metre samples outside the gold lode systems were collected with assay results still awaited. One metre individual samples within the vein lodes were submitted for priority analysis. All samples are analysed using a 50g fire assay with ICP-MS (inductively coupled plasma - mass spectrometry) finish gold analysis (0.005ppm detection limit) by Genalysis-Intertek in Maddington, Western Australia.
3. g/t (grams per tonne), ppm (parts per million), ppb (parts per billion), X = below detection limit
4. NSI (No Significant intersection) – No gold assay above 1g/t.
5. Velvet = Interpreted Velvet Gold Lode; Twilight = Interpreted Twilight Gold Lode

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## 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 on the drill rig. 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 drill hole collars have been surveyed by differential GPS to an accuracy of 0.01m.
	<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 6m 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 50g fire assay with ICP-MS (inductively coupled plasma - mass spectrometry) finish gold analysis (0.005ppm detection limit). Individual one metre gold samples are analysed using a 50g fire assay with ICP-MS 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. A total of 44 RC holes have to date been drilled in this program at Break of Day and Lena. Prior to this program a total of more than 40 RC holes and 7 diamond drill holes have been drilled by MGCV at Break of Day to date. This is MGCV's first drilling campaign specifically targeting the Lena deposit. Historically Silver Lake Resources Ltd (SLR) undertook RC drilling at Break of Day and Lena between 2010 and 2013 with a number of companies intermittently drilling prior to 2009. 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 MGCV 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.
	<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. No wet sampling occurred.
	<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 (~1:30) and blanks (1:50) at appropriate intervals for early stage exploration programs. High, medium and low gold standards are used.
	<i>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.</i>	Sampling is carried out using standard protocols and QAQC procedures as per industry practice. Duplicate samples are inserted (~1:30) and more frequently when in high grade gold veins, and routinely checked against originals.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are considered appropriate for grain size of sample material to give an accurate indication of gold mineralisation at Break of Day. Sample is collected from full width of sample interval to ensure it is representative of samples lithology.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	One metre individual samples are analysed through potential gold mineralised zones. Analysis is by 50g fire assay with ICP-MS finish for gold. On six metre composite samples, analysis is undertaken by Intertek-Genalysis (a registered laboratory), with 50g fire assay with ICP-MS finish 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.
	<i>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.</i>	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.
	<i>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.</i>	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	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Samples are verified by the geologist before importing into the main database (Datashed).
	<i>The use of twinned holes.</i>	No twin holes have been drilled by Musgrave Minerals Ltd during this program.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	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.
	<i>Discuss any adjustment to assay data.</i>	No adjustments or calibrations are made to any assay data reported.
Location of data points	<i>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.</i>	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 using the axis digital clinometer down hole tool in either continuous reading mode or at regular 20m intervals.
	<i>Specification of the grid system used.</i>	Drill hole and sample site co-ordinates are in UTM grid (GDA94 Z50) and converted from local grid references.
	<i>Quality and adequacy of topographic control.</i>	Historical drill hole collars and RL's are surveyed by qualified surveyors in most instances in the resource areas. Differential GPS is used to survey drill hole collars with an accuracy of $\pm 0.01$ metre including RL's.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	Variable drill hole spacings are used to adequately test targets and are determined from geochemical, geophysical and geological data together with historical drilling information. At present at Break of Day a general pattern of 20-40m drill spacings on 25m spaced sections is underway.  Historical drill hole spacings at Break of Day are variable although SLR drilled a number of holes at approximately 20m on 50m sections in 2011-12.
	<i>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.</i>	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 26 August 2016: "Mineral Resources and Ore Reserves Update".



	<i>Whether sample compositing has been applied.</i>	One metre individual samples routinely split by the drill rig cyclone 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. Six metre sample compositing has also been undertaken for all drill holes in the current program. Composite sampling is undertaken using a stainless steel spear (trowel) at one metre samples and combined in a calico bag.
<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 -60 degrees. The mineralisation at Break of Day and Lena is interpreted to dip between 70-90 degrees to the west. Drill intersections at Break of Day are interpreted to be between 50-80% 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". Musgrave has secured a 60% equity interest in the joint venture (see MGV ASX announcement 8 February 2017: "Musgrave Completes Stage 1 Earn-In on Cue Project". The Mt Eelya prospect is located on granted exploration licence E20/608 and the primary tenement holder is Silver Lake Resources Ltd. The Hollandaire and Hollandaire West deposits are located on E20/699 and the primary tenement holder is Cue Minerals Pty Ltd a 100% subsidiary of Silver Lake Resources Ltd. The Hunky Dory prospect is located on granted mining leases M20/225, M20/245, M20/277 and the primary tenement holder is Silver Lake Resources Ltd. Purple Rain is located on M58/224 and the primary tenement holder is Silver Lake Resources Ltd. The Cue project tenements consist of 32 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 and Lena 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.

Drill hole Information	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.	All relevant historical drill hole information has previously been reported by SLR and MGW. All new drill holes completed and assayed by MGW are referenced in this release.
Data aggregation methods	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.	All significant new drill hole assay data are reported in this release. No cut-off has been applied to any sampling.
	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.	All significant new drill hole assay data are reported in this release. No cut-off has been applied to any sampling.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been reported.
Relationship between mineralisation widths and intercept lengths	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').	All significant new drill hole assay data are reported in this release. True widths are not confirmed but all drilling is planned close to perpendicular to interpreted targets.
Diagrams	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.	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.
Balanced reporting	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.	All assays received from Musgrave's drilling are reported in this release.
Other substantive exploration data	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.	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.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	A range of exploration techniques will be considered to progress exploration including additional surface sampling and drilling.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to figures in the body of this announcement.