

**ASX RELEASE** 

ASX: MGV

30 October 2019

# Mainland drilling commences and more highgrade gold intersected at Lena, Cue Project

- RC drilling has commenced at Mainland to follow-up previous high-grade gold drilling results and surface rock chip assays
- Additional RC drilling is planned for Break of Day and Lena following completion of the Mainland program
- Further high-grade gold intercepts returned from diamond drilling at Lena highlight potential at depth including:
  - o 2.2m @ 10.6g/t Au from 194.8m down hole (19MODD021);
  - Intercept is 30m below the existing JORC resource boundary and remains open down dip highlighting the potential to extend the resource at depth
- Lena, Break of Day and Mainland are all 100% owned by Musgrave and excluded from the recently announced Lake Austin Earn-in and Exploration JV with Evolution Mining Ltd

Musgrave Minerals Ltd (ASX: **MGV**) ("Musgrave" or "the Company") is pleased to report that drilling has recommenced at Mainland to follow-up the high-grade gold drill results released in August and surface high-grade rock-chip sample identified in early October. The Company has also received further high-grade gold assay results from diamond drilling at the Lena deposit. Both Mainland and Lena are part of the Company's 100% owned tenure at the flagship Cue Gold Project in Western Australia's Murchison district (*Figure 1*).

Musgrave Managing Director Rob Waugh said "We are excited to recommence drilling at Mainland in areas where we have previously identified high-grade gold. There is significant untested gold potential within the Mainland tenements and we are only just getting started in terms of applying modern exploration techniques in the area."

"At Lena we continue to define high-grade extensions to the gold mineralisation below the existing JORC resource boundary. The drilling has improved our confidence in the continuity of the high-grade mineralisation at depth and will likely add high-grade ounces as we continue to drill to upgrade the existing resource at Lena."

Assays from the latest diamond drill holes in the current program at Lena returned high-grade gold over potentially mineable widths below the current **JORC** resource boundary and confirm the continuity of the mineralisation at depth. assay results from drill holes reported here are presented in Table 1a.

The Mainland area and Lena deposit are 100% owned by Musgrave and are excluded from the Earn-in and **Exploration** Joint Venture with Evolution Mining Ltd ("Evolution") (see MGV ASX release 17 September 2019 "Musgrave and Evolution sign \$18 million Earn-in JV and \$1.5 million placement to accelerate exploration Cue").

## Mainland

Following the execution of an Option Agreement to acquire the Mainland tenements near Cue (*Figure 1*) in March 2019, the Company completed an initial Reverse

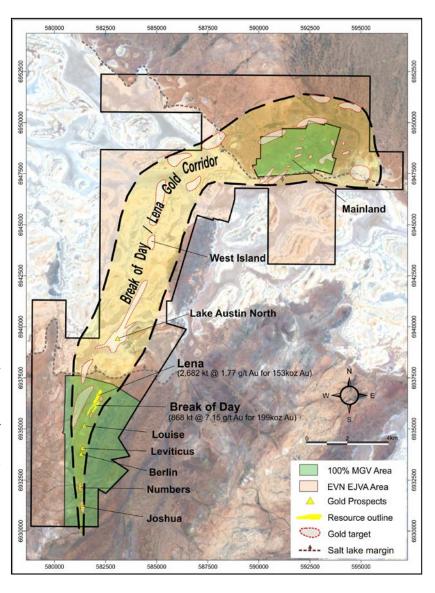


Figure 1: Prospect location plan

Circulation ("RC") drilling program and intersected **3m** @ **5.4g/t Au from 74m** down hole (19MORC008) at the Mainland-Consols target (*Figure 2*) (see *MGV ASX release 20 August 2019, "High-Grade Gold Intersected at Lena and Mainland, Cue Project"*).

This target is open to the south and down dip and follow-up drilling has commenced to further test this area (*Figure 2*) together with other high-priority targets including the area where a high-grade (3,499.4g/t Au) rock-chip sample was identified (see MGV ASX release 9 October 2019, "High-grade Gold intersected at Break of Day and ultra-high-grade rock-chip sample from Mainland, Cue Project"). There is no historical drilling in the area of this high-grade rock-chip sample. The program will consist of up to 18 RC drill holes for approximately 1,000m and take a week to complete before the rig moves to Break of Day and Lena.

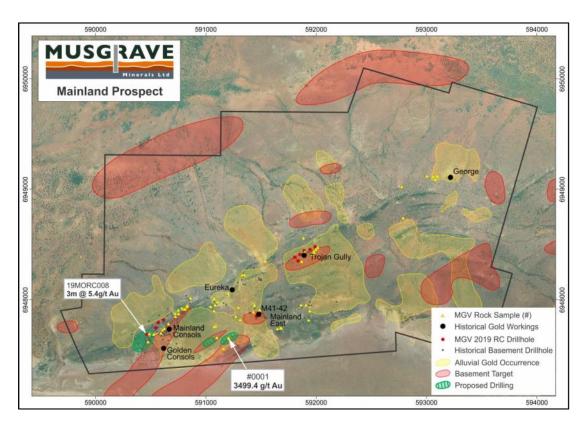


Figure 2: Mainland option area showing proposed follow-up drilling areas

#### Lena

Lena has an existing JORC 2012 resource of 2,682kT @ 1.77g/t Au for 153koz Au (see MGV ASX release 15 October 2018, "Annual Report") which is only estimated to a maximum vertical depth of 160m at the Lena main lode (Figure 3).

The deposit consists of a number of gold lodes, with some having significant high-grade potential at depth below the existing resource, as demonstrated by these new assay results. Reverse circulation drilling will resume at Lena in early November.

Two of the three diamond drill holes completed at Lena and reported here (*Table 1a*) (19MODD020 and 19MODD021) intersected high-grade gold lodes over potentially minable widths (*Figures 3, 4 and 5*).

Results include **6.0m** @ **4.4g/t** Au from 191m down hole (19MODD021), including **2.2m** @ **10.6g/t** Au from 194.8m, which is approximately 30m vertically beneath the existing resource boundary on the eastern high-grade lode (*Figure 5*) and **2.8m** @ **4.8g/t** Au from 384m down hole (19MODD020), 140m below the existing resource on the western lode. The mineralisation is open down plunge on all lodes (*Figure 5*).

Drill hole 16MODD019 drilled at the southern end of the high-grade plunging main shoot at Lena (*Figure 3*) lifted above the intended target position and intersected the lode above and outside the south plunging high-grade shoot at this location (*Figure 4*) and thus did not intersect any significant mineralisation.

The new drilling supports the re-interpretation of historical drill data that identified a southerly plunge on the high-grade gold lodes that remain open at depth below the current JORC

resource boundary. A number of historical high-grade diamond core intercepts also lie within this interpreted extension of the high-grade gold lode as reported in ASX release 12 July 2019, "Opportunity to Extend Lena High-Grade Resource at Cue".

The drilling program has improved the geological confidence in the continuity of the mineralisation beneath the current resource and these results will be incorporated into the geological model to facilitate a re-estimation of the Lena gold resource. Further RC drilling is scheduled to commence at Lena in early November to support an updated JORC compliant resource estimate in early Q1 2020.

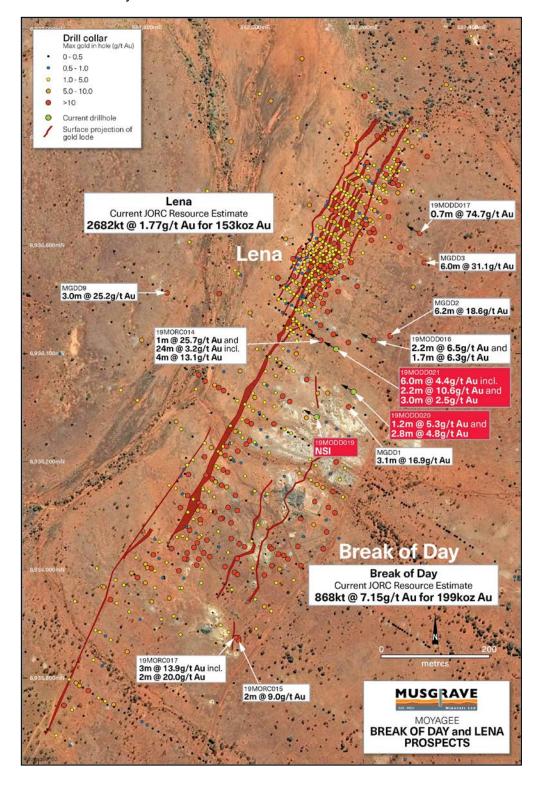


Figure 3: Lena drill hole location plan showing drill hole collars reported in this release

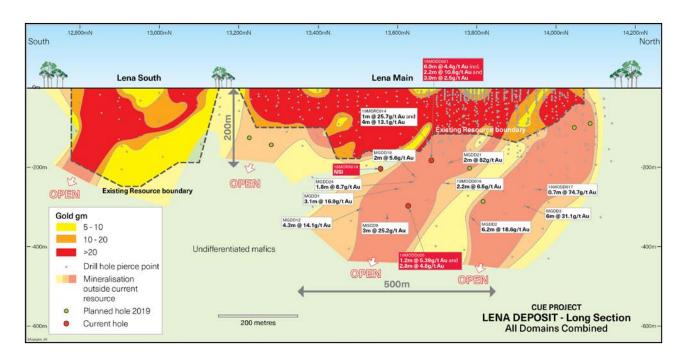


Figure 4: Lena schematic long section showing combined lodes, recent results and planned holes. A long section is a vertical section along the plane of the strike of the deposit

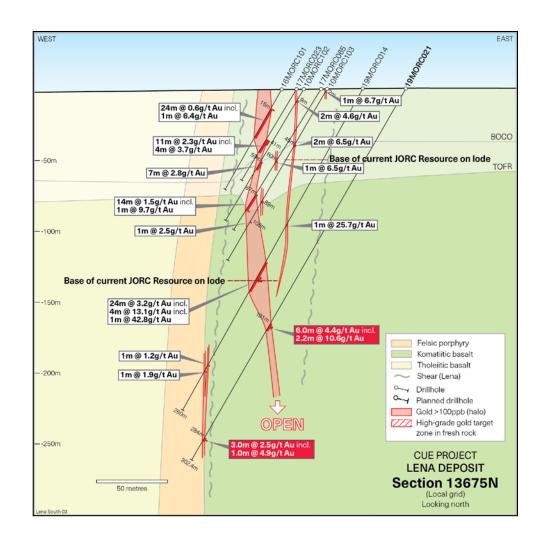


Figure 5: Cross section 13675N at Lena showing drilling. A cross section is a vertical plane sliced perpendicular to the interpreted strike of the mineralisation

# **Ongoing Exploration**

- The Company is working towards delivering a Lena resource update in Q1 2020.
- Follow-up RC drilling of recent high-grade gold drill results and surface rock-chip samples at Mainland has commenced. First assays are expected in late November.
- Further RC drilling at Lena and Break of Day to extend and grow the existing resources is scheduled for early November.
- On the new JV area over Lake Austin at Cue, Musgrave and Evolution are planning follow-up drilling programs at Lake Austin North and other lake targets where there is evidence of a potential large gold system.

#### THE CUE PROJECT

The Cue Project ("the Project") is located in the Murchison district of Western Australia (Figure 6). The Company has defined a +28km-long prospective corridor that hosts the Break of Day and Lena gold resources (Break of Day hosts 868Kt @ 7.15g/t Au for 199Koz Au and Lena 2,682Kt @ 1.77g/t Au for 153Koz Au: see MGV ASX release 15 October 2018, "Annual Report") and the new Lake Austin North gold discovery.

The Company believes there is significant potential to extend existina mineralisation and discover new gold deposits within Project area, demonstrated the by recent drilling success at Break of Day, Lena and Lake Austin North. Musgrave's intent is to investigate options to best develop a lowoperation, capable cost delivering strong financial returns for its shareholders.

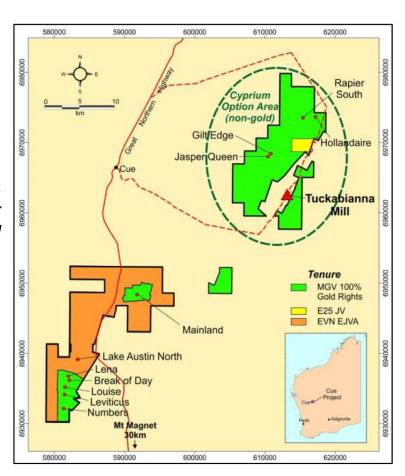


Figure 6: Cue Project location plan and tenure

Musgrave has executed an \$18 million Earn-in and Exploration Joint venture with Evolution Mining Ltd over the Lake Austin portion of the Cue Project (*Figure 6*).

#### **Enquiries:**

Rob Waugh Managing Director Musgrave Minerals Limited +61 8 9324 1061 Luke Forrestal Associate Director Media and Capital Partners +61 411 479 144

#### 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 has had significant exploration success at Cue with the ongoing focus on increasing the 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 a large exploration tenement package in the Ni-Cu-Co prospective Musgrave Province in South Australia.

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#### Additional JORC Information

Further details relating to the information provided in this release can be found in the following Musgrave Minerals' ASX announcements:

- 24 October 2019, "September Quarterly Activities and Cashflow Report"
  18 October 2019, "Annual Report"
- 18 October 2019, "Notice of Annual General Meeting / Proxy Form"
- 17 October 2019, "Company Presentation Brisbane Resources Round-up"
  9 October 2019, "High-grade gold intersected at Break of Day and ultra-high-grade rock-chip sample from Mainland, Cue Proiect'
- 24 September 2019, "Further High-grade gold intersected at Lena below the existing resource, Cue Project"
- 17 September 2019, "Musgrave and Evolution sign an \$18 million Earn-In JV and \$1.5M placement to accelerate exploration at
- 3 September 2019, "High-Grade Gold Extension at Break of Day, Cue Project"
- 20 August 2019, "High-Grade Gold Intersected at Lena and Mainland, Cue Project"
- 30 July 2019, "Quarterly Activities and Cashflow Report"
- 12 July 2019, "Opportunity to Extend Lena High-Grade Resource at Cue"
- 4 July 2019, "Drilling commences at newly acquired Mainland Prospect, Cue"
- 28 May 2019, "Scout Drilling Extends Gold Zone to >3km at Lake Austin North"
- 1 May 2019, "Drilling at A-Zone Continues to Deliver Thick, High-Grade Gold Intersections"
- 6 March 2019, "Musgrave Secures More Key Gold Tenure at Cue" 3 December 2018, "Diamond Drilling Confirms Significant Gold Discovery at Lake Austin North"
- 15 October 2018, "Annual Report"
- 16 August 2017, "Further Strong Gold Recoveries at Lena"
- 14 July 2017, "Resource Estimate Exceeds 350koz Au" 6 July 2017, "Excellent Gold Recoveries Achieved from Initial Metallurgical Test Work at Lena"
- 16 June 2017, "More Gold Intersected Near Surface at Lena" 6 June 2017, "High Grade Gold Intersected Near Surface at Lena"
- 24 May 2017, "High Gold Grades Continue at Break of Day and Lena" 20 April 2017, "Excellent High Grade Gold Hits at Break of Day and Lena"
- 18 April 2017, "More High Grade Gold Results at Lena"
- 3 April 2017, "Strong Gold Results Continue at Break of Day and Lena"
- 17 March 2017, "Drilling Extends High Grade Gold at Break of Day and Lena"
- 30 January 2017, "Diamond Drilling Confirms High Grade Gold at Break of Day and Extends High Grade Gold at Lena"

#### 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 1a: Summary of New MGV Drill Assay Intervals

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Drill Hole ID	Drill Type	Prospect	Sample Type	From (m)	Interval (m)	Au (g/t)	Comment
19MODD019	Diamond	Lena	Individual	NSI			Drill hole lifted and intersected target lode above projected high-grade shoot position
		Lena	Individual	287.0	3.5	2.4	Hangingwall lode
			Includes	287.0	1.2	5.3	Hangingwall lode
	Diamond		Individual	302.0	4.0	1.5	
19MODD020			Individual	317.1	4.9	1.2	
			Individual	336.6	2.7	2.1	
			Individual	379.0	9.0	2.0	Footwall lode
			Includes	384.0	2.8	4.8	Footwall lode
			Individual	191.0	6.0	4.4	Hangingwall lode
			Includes	194.8	2.2	10.6	Hangingwall lode
			Individual	236.0	1.0	1.4	intersected target lode above projected high-grade shoot position  Hangingwall lode  Hangingwall lode  Footwall lode  Footwall lode  Hangingwall lode
			Individual	242.8	1.1	1.3	
19MODD021	Diamond	Diamond Lena	Individual	258.0	0.75	1.5	
			Individual	261.0	1.0	1.3	
			Individual 278.65 1.1 1.3				
			Individual	284.0	3.0	2.5	Footwall lode
			Includes	285.0	1.0	4.9	Footwall lode

# Table 1b: Summary of New MGV Drill Collars

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (deg)	Dip (deg)	RL (m)	Total Depth (m)
19MODD019	Diamond	Lena	582113	6936284	300	-60	414	381.6
19MODD020	Diamond	Lena	582181	6936330	300	-60	414	400.0
19MODD021	Diamond	Lena	582149	6936409	300	-60	414	302.4

#### Notes to Tables 1a & 1b

- 1. An accurate dip and strike and the controls on mineralisation are only interpreted and the true width of the mineralisation are unconfirmed at this time
- In diamond drilling individual samples are collected and analysed at geological intervals with a maximum individual sample interval of 1.5m and minimum of 0.25m.
- 3. 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
- 4. g/t (grams per tonne), ppm (parts per million), ppb (parts per billion), NSI (no significant intercept)
   5. Intersections are generally calculated over intervals >1.0g/t Au where zones of internal dilution are not weaker than 2m <</li>
- All Drill holes are reported in Tables 1a and 1b above.
- 7. Drill type; AC = Aircore, RC = Reverse Circulation, Diam = Diamond
- 8. Coordinates are in GDA94, MGA Z50

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# JORC TABLE 1 Section 1 Sampling Techniques and Data

Criteria	Explanation	Commentary
Sampling techniques	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.	Diamond drill program Diamond samples are marked at geological intervals with individual samples generally not larger than 1.5m and smaller than 0.25m.  Historical sampling criteria are unclear for pre 2009 drilling. MGV 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 for 1m drill intervals.  A Thermo Scientific Niton GoldD XL3+ 950 Analyser is available on site to aid geological interpretation. No XRF results are
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	reported.  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.
	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.	Diamond drill program All diamond core was NQ2 and cut with an automatic diamond saw.  Reverse circulation (RC) pre-collar drilling was used to obtain 1m samples from which 3kg was cyclone split and pulverised to produce a 50g charge for fire assay with ICP-MS finish for gold.  Historical sampling criteria are unclear for pre 2009 drilling.  MGV RC samples were collected as 6m composites for all drill holes in the current program. 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).
Drilling techniques	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).	Diamond drill program RC pre-collars and diamond tails were used in this MGV program. Central Kal drilling Pty Ltd utilised a 8x4 Mercedes mounted Sandvik 810 multi-purpose drill rig with 1150/500onboard compressor.  Historical drilling was a combination of RAB, aircore, RC and diamond at Lena.  MGV undertook this diamond drilling program utilising Central Kal drilling with a 5 5/8 inch hammer for RC pre-collars and NQ2 diamond core.  The current program consisted of 7 diamond drill holes. A total of more than 178 RC holes and 14 diamond drill holes have been drilled by MGV at Break of Day & Lena. 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 including Perilya Mines Ltd (1991-2007). 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	Method of recording and assessing core and chip sample recoveries and results assessed.	Diamond drill program Half NQ2 diamond core is sampled on geological intervals. RC 6m bulk samples are collected in pre-collars and re-assayed at 1m intervals were 6m comps are above 0.1g/t Au. Sample weights and core recoveries are observed and noted in a field Toughbook computer by MGV field staff.

	Measures taken to maximise sample recovery and ensure representative nature of the samples.	MGV contracted drillers use industry appropriate methods to maximise sample recovery and minimise downhole contamination including using compressed air to maintain a dry sample in RC drilling. 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.  Historical sampling recovery is unclear for pre 2009 drilling.
Logging	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.  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.	No significant sample loss or bias has been noted in current drilling or in the historical reports or from other MGV drill campaigns.  All geological, structural and alteration related observations are stored in the database.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging of lithology, structure, alteration, mineralisation, colour and other features of core or RC chips is undertaken on a routine 1m basis or on geological intervals for diamond core.
	The total length and percentage of the relevant intersections logged.	All drill holes are logged in full on completion.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Diamond drill program  All diamond drilling was cut with a diamond saw and half core sampled. Core is dominantly NQ2 at Lena including the current program.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Diamond drill program  RC samples are routinely cyclone split and kept dry by the use of pressurised air. Very minimal wet sampling occurred and none during this program.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	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.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	MGV 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.  Historical QA/QC procedures are unclear for pre 2009 drilling.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/secondhalf sampling.	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. Duplicate sampling criteria is unclear for historical pre 2009 drilling.  Historical QA/QC procedures are unclear for pre 2009 drilling.
	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 gold mineralisation. Samples are 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.	In diamond core 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 RC 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.
	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.	MGV 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.  Historical QA/QC procedures are unclear for pre 2009 drilling.
Verification of sampling and	The verification of significant intersections by either independent or alternative company personnel.	MGV samples are verified by the geologist before importing into the main MGV database (Datashed).
assaying	The use of twinned holes.	No twin holes have been drilled by Musgrave Minerals Ltd during this program.

	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
	Discuss any adjustment to assay data.	database. Geological logging of all samples is undertaken.  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 >±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.
	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 post drilling. Differential GPS is used to p drill hole collars with an accuracy of +-0.01 metre including RL's. Drill hole collars are planned and set up using standard GPS (accuracy +-2m).
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. At Lena a general pattern of approximately 25-75m drill spacings on 25m spaced sections has been completed through multiple phases over many years.  Historical drill hole spacings at Break of Day and Lena are variable although Perilya, SLR and MGV drilled a number of holes at approximately 12.5m, 25m or 50m sections from 1991-2019.
	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 2012 Mineral Resource at Break of Day and Lena defined by Musgrave Minerals Ltd.  The Mineral Resources estimate at Break of Day and Lena was prepared and disclosed in accordance with the 2012 Edition of the Australian Code of Reporting of Mineral Resources and Ore Reserves (JORC 2012).  For further details refer to MGV ASX announcement 14 July 2017: "Resource Estimate Exceeds 350koz Au".
	Whether sample compositing has been applied.	No sample compositing has been undertaken in the diamond drilling. One metre individual RC samples routinely split by the drill rig cyclone are undertaken for all RC drill holes but only 6m composite samples are submitted for analysis. Where 6m composite assays are above 0.1g/t Au, individual 1m samples are submitted for gold assay.  Six metre sample compositing has also been undertaken using a stainless steel scoop for all RC 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. Historical QA/QC procedures are unclear for pre 2009 drilling.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Drilling is designed to cross the mineralisation as close to perpendicular as possible on current interpretation whilst allowing for some minor access restrictions and mitigating safety risks.  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. An accurate dip and strike of mineralisation at Mainland is unknown at this time.  Drill intersections at Break of Day and Lena are interpreted to be between 50-80% of the drill intersection width.
	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.	No orientation based sampling bias is known at this time.
Sample security	The measures taken to ensure sample security.	Chain of custody is managed by MGV 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).
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	During the resource estimate an external review of the geological interpretation, data and modelling techniques was undertaken by CSA global.

**Section 2 Reporting of Exploration Results** 

Criteria	Section 2 Reporting of Ex	Commentary
Mineral tenement and land tenure status	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.	Musgrave Minerals secured 100% of the Moyagee Project area (see MGV ASX announcement 2 August 2017: "Musgrave Secures 100% of Key Cue Tenure").  A new Earn-in and Exploration Joint Venture was executed with Evolution Mining Ltd on 16 September 2019 covering Lake Austin and some surrounding tenure but excludes all existing resources including Break of Day and Lena (see MGV ASX release dated 17 September 2019, "Musgrave and Evolution sign an \$18 million Earn-in JV and \$1.5 million placement to accelerate exploration at Cue") and the new Mainland option area.  The Break of Day and Lena prospects are located on granted mining lease M21/106 and the primary tenement holder is Musgrave Minerals Ltd.  The Mainland prospects are on tenements P21/731, 732, 735, 736, 737, 739, 741 where MGV has an option to acquire 100% of the tenements (not part of the EVN JV).  The Cue project tenements consist of 38 licences (Lena and Break of Day is on M21/106 and Hollandaire E20/699).  The tenements are subject to standard Native Title heritage agreements and state royalties. Third party royalties are present on some individual tenements.
	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.	The tenements are in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	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, Lena and Mainland historical exploration and drilling has been undertaken by a number of companies and at Break of Day and Lena most recently by Silver Lake Resources Ltd in 2009-13 and prior to that by Perilya Mines Ltd form 1991-2007. Musgrave Minerals has undertaken exploration since 2016.
Geology	Deposit type, geological setting and style of mineralisation.	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 drill hole information has previously been reported by Perilya, SLR and MGV.
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.	Significant assay intervals are recorded above 1g/t Au with a minimum internal interval dilution of 2m @ 0.5g/t Au. No cutoff 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.  The assumptions used for any reporting of metal	No cut-off has been applied to any sampling. Reported intervals are aggregated using individual assays above 1g/t Au with no more than 2m of internal dilution <0.5g/t Au for any interval. Short high-grade intervals are tabulated in Table 1a.  No metal equivalent values have been reported.
Relationship between mineralisation widths and intercept lengths	equivalent values should be clearly stated.  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').	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 historical data can 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 older MGV drilling data has previously been reported. Higher grade historical results are reported selectively in this release to highlight the follow-up areas for priority drilling. All data pierce points and collars are shown in the diagrams within 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 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.