
New lodes identified Stunning high-grade intercept at Cue

- **Successful RC drilling of new ‘Starlight’-type analogue targets along strike from Break of Day has identified four potential new lodes**
- **A new target, ~80m south of White Heat, intersected two new parallel lodes including an exceptionally high-grade, shallow result:**
 - **15m @ 111.6g/t Au from 25m (21MORC232) in new hanging-wall lode, including:**
 - **5m @ 313.4g/t Au from 26m, and;**
 - **18m @ 1.0g/t Au from 62m in new footwall lode**
 - **The mineralisation is open to the west and down dip. Follow-up drilling will commence next week**
- **Drilling at a second ‘Starlight’-type analogue target, ~250m north of Break of Day, intersected:**
 - **1m @ 16.5g/t Au from 73m (21MORC318), and;**
 - **1m @ 14.4g/t Au from 90m**
 - **Only the one hole has tested this interpreted new lode position to date, with the mineralisation open to the east, west and down dip. Follow-up drilling to commence in December**
- **Extensional resource drilling at the White Heat prospect, 300m south of Break of Day, intersected:**
 - **1m @ 21.8g/t Au from 158m (21MORC223)**
 - **3m @ 3.5g/t Au from 23m (21MORC224)**
 - **The White Heat mineralisation remains open down plunge**
- **Assays from further drilling at Big Sky, Target 14 and the EVN JV are expected in December**

Musgrave Minerals Ltd (ASX: **MGV**) (“Musgrave” or “the Company”) is pleased to report further high-grade gold assay results and potential new lodes from regional drilling on its 100% owned ground at its flagship Cue Gold Project in Western Australia’s Murchison District (*Figure 1*).

Musgrave Managing Director Rob Waugh said: *“Drillhole 21MORC232 has a fantastic new high-grade result and has potentially identified two new lodes in close proximity to Break of Day. It supports our view that there is a lot more gold to be found at Cue. We currently only have a few drill holes testing these new lodes with further drilling planned to commence next week. The very high-grade intersection in 21MORC232 is near surface and only 80m south of White Heat. It remains open to the west and down dip. All of the new gold intersections reported in this release are outside the current mineral resource estimates for Cue. We are expecting two additional drill rigs to arrive on site over the next week with a focus on growing the resource base and maintaining a pipeline of prospects for resource definition.”*

New gold lodes – ‘Starlight analogues’

A regional RC drilling program to test for further high-grade ‘Starlight’-type analogue lodes was completed across 12 separate targets. Four potentially significant, new zones of interest were intersected that may represent new lodes. All have very limited drill testing to date and remain open.

Drilling to the south of White Heat intersected two new mineralised positions (*Figures 2 and 3*) that are approximately 80m south of White Heat, 380m south of Break of Day (*Figure 2*). Both new lodes remain open to the west and down dip. Intersections include:

- 15m @ 111.6g/t Au from 25m (21MORC232) in a hanging-wall position, including:
 - 5m @ 313.4g/t Au from 26m, and;
- 18m @ 1.0g/t Au from 62m (21MORC232) in a footwall position
- 1m @ 28.4g/t Au from 76m (21MORC223) in footwall position and approximately 20m from the footwall intersection in 21MORC232

Drilling 250m north of Break of Day intersected another potential new zone with two separate mineralised lodes. Only one drill hole has currently tested this position and it remains open to the east, west and down dip. Drilling returned:

- 1m @ 16.5g/t Au from 73m (21MORC318), and;
- 1m @ 14.4g/t Au from 90m

Follow-up RC drilling on both new target areas will commence next week. All new assay results above 1g/t gold are reported in Tables 1a and 1b.

White Heat Prospect

RC drilling at White Heat, 300m south of Break of Day (*Figure 2*) has returned further gold intersections down plunge and along strike of the previous mineralisation. All new results are reported in Tables 1a and 1b. Significant new intercepts include:

- 1m @ 7.4g/t Au from 175m (21MORC222) – mineralisation remains open down plunge
- 1m @ 21.8g/t Au from 158m (21MORC223) – mineralisation remains open down plunge
- 3m @ 3.5g/t Au from 23m (21MORC224) – mineralisation remains open to the west



The White Heat mineralisation has a similar strike to the Starlight lode at Break of Day, located 400m to the north, (Figures 1 & 2) and is hosted within a basalt package of rocks thought to be the same stratigraphy as that hosting Starlight. A leached near-surface zone is present (Figure 3) where gold is depleted in the upper saprolite. The mineralisation remains open down plunge.

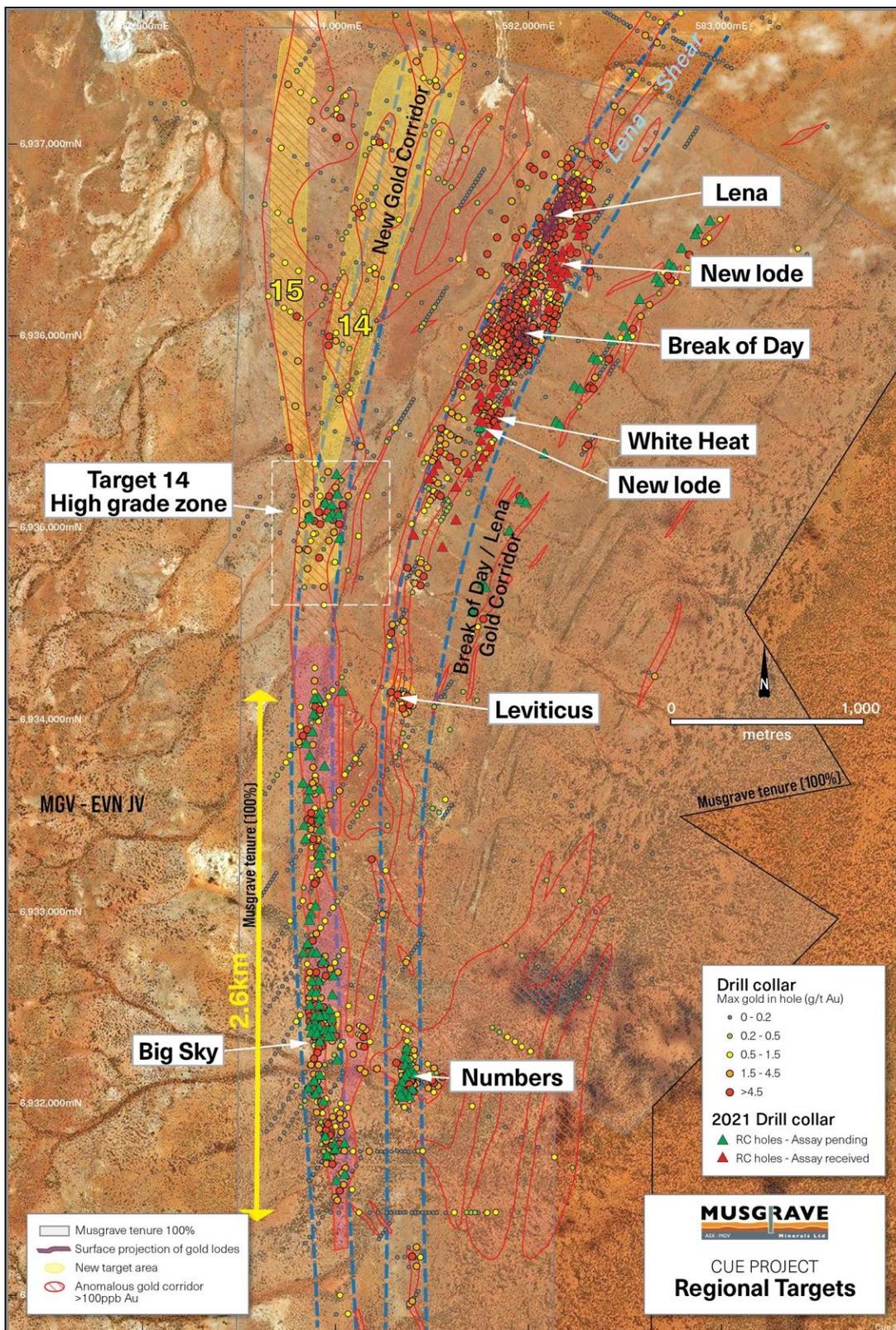


Figure 1: Prospect and drill hole location plan



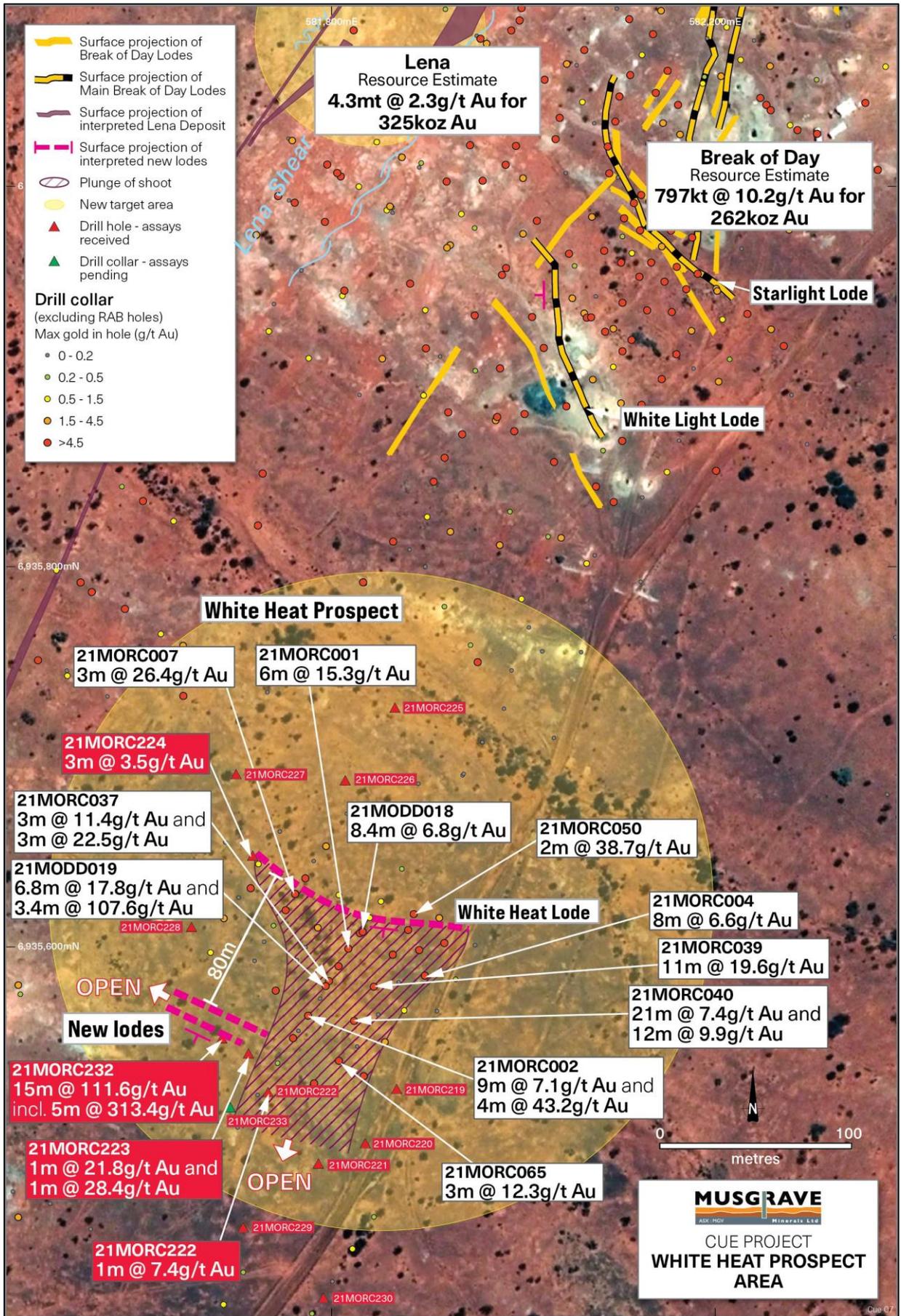


Figure 2: Regional plan showing drill hole collars and new assay results at White Heat including new lodes 80m to the south



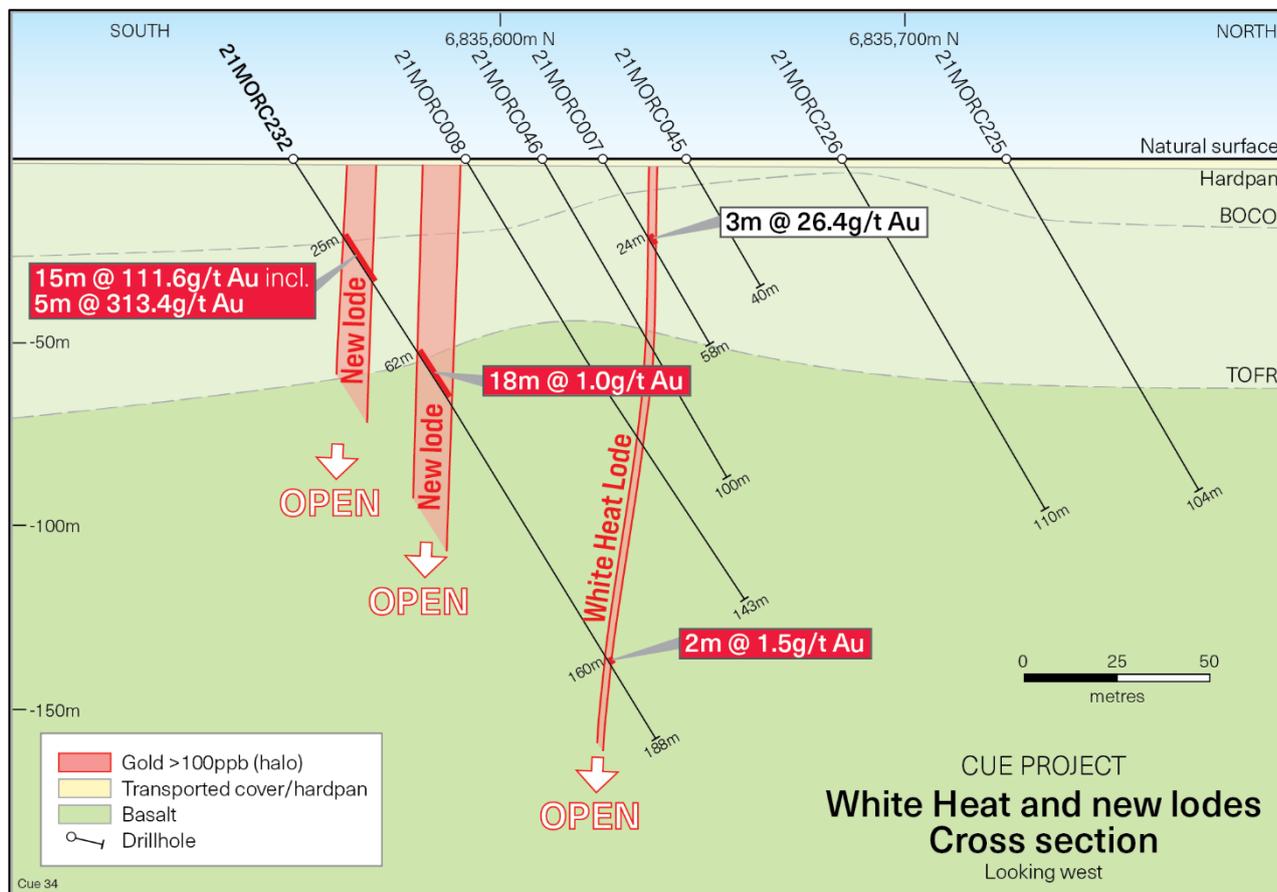


Figure 3: Cross-section at White Heat showing the potential new gold lodes 80m to the south

Cue Project - Break of Day

The Break of Day deposit is located approximately 30km south of Cue in the Murchison district of Western Australia. The deposit is only 5km from the Great Northern Highway, approximately 600km north of Perth.

The current mineral resource estimate for the Cue Gold Project totals 6.4Mt @ 3.2g/t Au for 659koz including the Break of Day deposit (797Kt @ 10.2g/t Au for 262koz contained gold) and the Lena deposit (4.3Mt @ 2.3g/t Au for 325koz contained gold) located 130m to the west of Break of Day (see *MGV ASX announcements dated 17 February 2020 and 11 November 2020*). The new gold discoveries at White Heat and Big Sky are both outside the existing mineral resource estimates.



Ongoing Activities

Musgrave 100% tenements

- Follow-up drilling of the new high-grade gold lode identified south of White Heat is currently will commence next week.
- Infill resource definition RC drilling at the Big Sky prospect is continuing. Further assay results from this drilling are expected in December. Diamond drilling is scheduled to commence next week with the aim of delivering a maiden Mineral Resource estimate in Q2 2022.
- Assay results from RC drilling at Target 14 are expected in late December.
- First pass broad spaced RC drill testing of new regional targets east of Break of Day (Waratah Prospect) is now complete with assays expected in January.
- RC pre-collars for resource conversion diamond drilling at Break of Day and Lena has commenced with diamond tails to be completed in the new year.
- A regional aircore program is scheduled to commence next week to test the southern extension of the prospective West Island dolerite identified on the EVN JV to the north.
- Works to progress the prefeasibility level studies at Break of Day and Lena are ongoing with mining studies, environmental monitoring and assessments, metallurgical, processing, design and geotechnical test work continuing.

Evolution JV

- Follow-up diamond drilling on Lake Austin to test the basement beneath the new regolith gold mineralisation identified in recent aircore drilling at West Island is ongoing.
- Further assay results for diamond drill holes at West Island are pending.
- The current aircore drilling program on Lake Austin is now completed with assay results pending for further aircore drill holes in the current program.

Approved for release by the Board of Musgrave Minerals Limited.

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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 project. Musgrave has had significant exploration success at Cue with the ongoing focus on increasing the gold resources through discovery and extensional drilling to underpin studies that will demonstrate a viable path to near-term development. 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:

- 18 November 2020, "AGM Presentation"
- 27 October 2021, "Bonanza hit highlights high-grade potential at Big Sky"
- 26 October 2021, "Quarterly Activities and Cashflow Report"
- 15 October 2021, "Annual report to Shareholders"
- 12 October 2021, "Thick aircore intercepts enhance West Island Prospect"
- 13 September 2021, "More thick intervals of near-surface gold at Target 14 and Big Sky"
- 16 August 2021, "Bonanza gold grades at White Heat"
- 12 August 2021, "Big Sky delivers more near-surface gold"
- 19 July 2021, "Significant gold intersections enhance Big Sky"
- 30 June 2021, "High-grade gold at West Island target – EVN JV, Cue"
- 18 June 2021, "Thick gold intersections in RC drilling at Big Sky"
- 25 May 2021, "Further RC drill results from White Heat and Numbers prospects"
- 17 May 2021, "Big Sky gold mineralisation strike length more than doubled"
- 21 April 2021, "New high-grade gold results at Target 14, Cue"
- 8 April 2021, "New Big Sky target extends high-grade gold anomaly to >1.2km"
- 19 March 2021, "High grades continue at White Heat, Cue"
- 8 March 2021, "New Gold Corridor Identified at Cue"
- 24 February 2021, "Outstanding high-grade gold at White Heat, Cue"
- 4 February 2021, "Appointment of Non-executive Director"
- 27 January 2021, "New basement gold targets defined on Evolution JV"
- 19 January 2021, "High-grade near-surface gold extended at target 5, Cue"
- 18 January 2021, "Results of SPP Offer"
- 12 January 2021, "Share Purchase Plan closes early"
- 18 December 2020, "Share Purchase Plan Offer Document"
- 14 December 2020, "\$18M raising to fund resource growth and commence PFS"
- 9 December 2020, "High-grade near surface gold at Target 17, Cue"
- 3 December 2020, "Scout drilling intersects high-grade gold and defines large gold zones under Lake Austin, Evolution JV"
- 23 November 2020, "New White Heat discovery and further regional drilling success"
- 11 November 2020, "Break of Day High-Grade Mineral Resource Estimate"
- 4 November 2020, "Regional drilling hits more high-grade gold"
- 2 November 2020, "Exceptional metallurgical gold recoveries at Starlight"
- 8 October 2020, "Drilling hits high-grade gold at new target, 400m south of Starlight"
- 24 September 2020, "Infill drilling at Break of Day confirms high grades"
- 19 August 2020, "Starlight gold mineralisation extended"
- 28 July 2020, "Bonanza gold grades continue at Starlight with 3m @ 884.7g/t Au"
- 6 July 2020, "85m@11.6g/t gold intersected near surface at Starlight"
- 29 June 2020, "New gold lode discovered 75m south of Starlight"
- 9 June 2020, "Bonanza near surface hit of 18m@179.4g/t gold at Starlight"
- 5 June 2020, "Scout drilling defines large gold targets at Cue, Evolution JV"
- 3 June 2020, "12m@112.9g/t Au intersected near surface at Starlight"
- 21 April 2020, "High grades confirmed at Starlight"
- 1 April 2020, "More High-grade gold at Starlight Link-Lode, Break of Day"
- 16 March 2020, "Starlight Link-lode shines at Break of Day"
- 28 February 2020, "High-grade gold intersected Link-lode, Break of Day"
- 17 February 2020, "Lena Resource Update"
- 3 December 2019, "New high-grade 'link-lode' intersected at Break of Day, Cue Project"
- 27 November 2019, "High-grade gold intersected in drilling at Mainland, Cue Project"
- 9 October 2019, "High-grade gold intersected at Break of Day and ultra-high-grade rock-chip sample from Mainland, Cue Project"
- 17 September 2019, "Musgrave and Evolution sign an \$18 million Earn-In JV and \$1.5M placement to accelerate exploration at Cue"
- 28 May 2019, "Scout Drilling Extends Gold Zone to >3km at Lake Austin North"
- 16 August 2017, "Further Strong Gold Recoveries at Lena"
- 14 July 2017, "Resource Estimate Exceeds 350koz Au"

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 RC drill hole assay results from White Heat and Break of Day area

Drill Hole ID	Drill Type	Prospect	Sample Type	From (m)	Interval (m)	Au (g/t)	Comment
21MORC222	RC	White Heat & new lode	1m individual	102	1	1.4	East end of new lode
			and	175	1	7.4	White Heat mineralisation down plunge
21MORC223	RC	White Heat & new lode	1m individual	76	1	28.4	High-grade – new lode
			and	158	1	21.8	White Heat mineralisation extended to west
21MORC223	RC	White Heat	1m individual	158	1	21.8	Gold mineralisation extended to west
21MORC224	RC	White Heat	1m individual	16	1	2.0	Oxide mineralisation
			and	23	3	3.5	Gold mineralisation – Lower Saprolite
21MORC231	RC	White Heat	6m composite	42	6	1.0	Gold mineralisation – Lower Saprolite
21MORC232	RC	New lode south of White Heat	1m individual	25	15	111.6	High-grade gold mineralisation Potential new hanging-wall lode
			including	26	5	313.4	
			and	62	18	1.0	Potential new footwall lode
			and	160	2	1.5	White Heat lode west of high-grade shoot
21MORC233	RC	White Heat	1m individual			Assays pending	
21MORC234	RC	White Heat	6m composite	54	6	1.0	Gold mineralisation – Fresh rock Unknown lode
21MORC309	RC	Break of Day North	1m individual	33	2	2.3	Weak gold mineralisation – Lower Saprolite Unknown lode
			and	97	1	2.6	Weak gold mineralisation Unknown lode
21MORC318	RC	Break of Day North	1m individual	73	1	16.5	Gold mineralisation – Fresh rock Single hole test of potential new lodes
			and	90	1	14.4	

Notes to Table 1a and 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.
2. In Aircore and RC drilling six metre composite samples are collected and analysed for gold together with selected 1m intervals on visual geology while individual one metre samples are collected and analysed pending composite results. Composite samples assaying >0.1g/t Au are re-analysed at one metre intervals.
3. All samples are analysed using either a 50g fire assay with ICP-MS (inductively coupled plasma - mass spectrometry) finish gold analysis (0.005ppm or 0.01ppm detection limit) by Genalysis-Intertek in Maddington or Bureau Veritas in Canning Vale (0.01ppm detection limit), WA, Western Australia or a 500g sample by Photon Assay at MinAnalytical in Canning Vale.
4. g/t (grams per tonne), ppm (parts per million), ppb (parts per billion), NSI (no significant intercept)
5. Higher grade intersections reported here are generally calculated over intervals >0.5g/t gram metres where zones of internal dilution are not weaker than 6m < 0.5g/t Au. Bulked thicker intercepts may have more internal dilution between higher grade zones.
6. All drill holes referenced in this announcement are reported in Tables 1a, 1b, 2a and 2b.
7. Drill type; AC = Aircore, RC = Reverse Circulation, Diam = Diamond.
8. Coordinates are in GDA94, MGA Z50.



Table 1b: Drill hole details of RC holes in current program at White Heat and regional Break of Day trend

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (deg)	Dip (deg)	RL (m)	Total Depth (m)	Assays
21MORC219	RC	White Heat	581834	6935525	090	-60	423		Assays results in table above
21MORC220	RC	White Heat	581818	6935496	090	-60	423	186	Assays results in table above
21MORC221	RC	White Heat	581793	6935485	090	-60	423	240	Assays results in table above
21MORC222	RC	White Heat	581767	6935523	090	-60	423	194	Assays results in table above
21MORC223	RC	White Heat	581757	6935543	090	-60	423	188	Assays results in table above
21MORC224	RC	White Heat	581759	6935647	090	-60	423	50	Assays results in table above
21MORC225	RC	White Heat	581833	6935725	090	-60	423	104	Assays results in table above
21MORC226	RC	White Heat	581807	6935687	090	-60	423	110	Assays results in table above
21MORC227	RC	White Heat	581750	6935690	090	-60	423	122	Assays results in table above
21MORC228	RC	White Heat	581727	6935610	090	-60	423	116	Assays results in table above
21MORC229	RC	White Heat	581754	6935452	090	-60	423	122	Assays results in table above
21MORC230	RC	White Heat	581796	6935415	090	-60	423	110	Assays results in table above
21MORC231	RC	White Heat	581762	6935359	090	-60	423	128	Assays results in table above
21MORC232	RC	White Heat	581743	6935551	090	-60	423	188	Assays results in table above
21MORC233	RC	White Heat	581747	6935515	030	-60	423	236	Assays pending
21MORC234	RC	White Heat	581736	6935314	030	-60	423	128	Assays results in table above
21MORC235	RC	White Heat	581701	6935245	030	-60	423	128	Assays results in table above
21MORC236	RC	White Heat	581687	6935177	030	-60	423	134	Assays results in table above
21MORC306	RC	Break of Day North	582222	6936459	40	-60	414	90	Assays results in table above
21MORC307	RC	Break of Day North	582174	6936407	40	-60	415	102	Assays results in table above
21MORC308	RC	Break of Day North	582129	6936364	40	-60	414	114	Assays results in table above
21MORC309	RC	Break of Day North	582150	6936349	220	-60	415	114	Assays results in table above
21MORC310	RC	Break of Day North	582174	6936331	40	-60	415	90	Assays results in table above
21MORC311	RC	Break of Day North	582113	6936305	220	-60	415	114	Assays results in table above
21MORC312	RC	Break of Day North	582128	6936271	40	-60	415	90	Assays results in table above
21MORC313	RC	Break of Day North	582166	6936245	40	-60	4167	90	Assays results in table above
21MORC314	RC	Break of Day North	582156	6936280	220	-60	416	114	Assays results in table above
21MORC315	RC	Break of Day North	582205	6936324	40	-60	416	90	Assays results in table above
21MORC316	RC	Break of Day North	582203	6936372	40	-60	415	90	Assays results in table above
21MORC317	RC	Break of Day North	582127	6936394	40	-60	414	90	Assays results in table above
21MORC318	RC	Break of Day North	582176	6936440	40	-60	414	90	Assays results in table above
21MORC319	RC	Break of Day North	582260	6936522	40	-60	414	90	Assays results in table above
21MORC320	RC	Break of Day North	582251	6936561	40	-60	414	90	Assays results in table above
21MORC321	RC	Break of Day North	582287	6936574	40	-60	414	90	Assays results in table above
21MORC322	RC	Break of Day North	582340	6936657	40	-60	414	90	Assays results in table above
21MORC323	RC	Break of Day North	582315	6936701	40	-60	414	90	Assays results in table above
21MORC324	RC	Break of Day North	582137	6936344	40	-60	415	90	Assays results in table above
21MORC325	RC	Break of Day North	582030	6936180	40	-60	415	90	Assays results in table above
21MORC326	RC	Break of Day North	582104	6936144	40	-60	416	90	Assays results in table above
21MORC327	RC	Break of Day South	581890	6935657	40	-60	420	90	Assays results in table above
21MORC328	RC	Break of Day South	581690	6935285	40	-60	421	90	Assays results in table above
21MORC329	RC	Break of Day South	581624	6935213	40	-60	421	90	Assays results in table above
21MORC330	RC	Break of Day South	581533	6935330	90	-60	419	90	Assays results in table above
21MORC331	RC	Break of Day South	581506	6935294	90	-60	419	90	Assays results in table above
21MORC332	RC	Break of Day South	581487	6935257	90	-60	419	90	Assays results in table above
21MORC333	RC	Break of Day South	581403	6934961	60	-60	420	90	Assays results in table above
21MORC334	RC	Break of Day South	581626	6935040	40	-60	422	90	Assays results in table above
21MORC335	RC	Break of Day South	581555	6934898	40	-60	423	90	Assays results in table above

---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>	<p>MGV sampling is undertaken using standard industry practices including the use of duplicates and standards at regular intervals. A Thermo Scientific Niton GoldD XL3+ 950 Analyser is available on site to aid geological interpretation. No XRF results are reported.</p> <p>Historical sampling criteria are unclear for pre 2009 drilling.</p> <p><u>Current RC and aircore drill programs</u></p> <p>RC and aircore samples are composited at 6m intervals using a stainless-steel scoop with all composite intervals over 0.1g/t Au resampled at 1m intervals using a cyclone splitter. Individual 1m samples are submitted for initial gold assay where significant obvious mineralisation is intersected (e.g. quartz vein lode within altered and sheared host) and are split with a cyclone splitter.</p> <p>Diamond samples were collected at geologically defined intervals (minimum sample length 0.25m, maximum sample length 1.5m) for all drill holes in the current program Samples are cut using an automated diamond saw and half core is submitted for analysis.</p> <p>Individual samples weigh less than 5kg to ensure total preparation at the laboratory pulverization stage. The sample size is deemed appropriate for the grain size of the material being sampled.</p>
	<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 GPS to an accuracy of 0.5m.
	<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>	<p><u>Current drill programs</u></p> <p>RC and aircore drill samples are composited at 6m intervals using a stainless-steel scoop with all composite intervals over 0.1g/t Au resampled at 1m intervals using a cyclone splitter. Individual 1m samples are submitted for initial gold assay where significant obvious mineralisation is intersected and are split with a cyclone splitter (e.g. quartz vein lode within altered and sheared host). The 3kg samples are pulverised to produce a 50g charge for fire assay with ICP-MS finish for gold.</p> <p>All 1m samples are sampled to 1-3kg in weight to ensure total preparation at the laboratory pulverization stage.</p> <p>The sample size is deemed appropriate for the grain size of the material being sampled.</p> <p>Some samples are sent to the Genalysis – Intertek laboratory in Maddington or Bureau Veritas in Canning Vale, WA, where they are pulverized to 85% passing -75um and analysed using a 50g fire assay with ICP-MS (inductively coupled plasma - mass spectrometry) finish gold analysis (0.005ppm or 0.01ppm detection limit).</p> <p>Some samples are sent to the NATA accredited MinAnalytical Laboratory in Canning Vale, Perth and analysed via PhotonAssay technique (method code PAAU2) along with quality control samples and duplicates. Individual samples are assayed for gold after drying and crushing to nominally 85% passing 2mm and a 500g linear split taken for PhotonAssay (method code PAP3512R).</p> <p>The PhotonAssay technique was developed by CSIRO and Chrysol Corporation and is a fast, chemical free non-destructive, alternative using high-energy X-rays to traditional fire assay and uses a significantly larger sample size (500g v's 50g for fire assay). This technique is accredited by the National Association of Testing Authorities (NATA).</p> <p>Coarse gold is present in some samples and may affect sample accuracy. Repeat analysis and screen fire assay is regularly undertaken on samples with coarse gold.</p>

<i>Drilling techniques</i>	<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>	RC drilling was undertaken by Challenge Drilling Pty Ltd utilising a KWL350 with an 350psi/1100 cfm on board compressor with a 1000cfm auxiliary. RC holes were drilled with a 5.75-inch hammer. 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. The diamond drilling program reported here was undertaken by West Core Drilling Pty Ltd utilising a LF90D drill rig. PQ, HQ and NQ core is obtained.
<i>Drill sample recovery</i>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	RC 6m composite samples are collected and re-assayed at 1m intervals where comps are above 0.1g/t Au. Sample weights, dryness and recoveries are observed and noted in a field Toughbook computer by MGV field staff. Diamond core samples are considered dry. The sample recovery and condition is recorded every metre. Generally, recovery is 98-100% but occasionally down to 70% on rare occasions when ground is very broken.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	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 aircore drilling. Historical sampling recovery is unclear for pre 2009 drilling.
	<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 in current drilling or in the historical reports or from other MGV drill campaigns.
<i>Logging</i>	<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. Air core holes would not be used in any resource estimation, mining or metallurgical studies.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging of lithology, structure, alteration, mineralisation, weathering, colour and other features of core or RC/aircore chips is undertaken on a routine 1m basis or on geological intervals for diamond core.
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill holes are logged in full on completion.
<i>Sub-sampling techniques and sample preparation</i>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	All diamond core samples are routinely kept dry. Pre 2009 drilling results noted in this report are historical and not reported in detail. As such these details are unknown.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	RC samples are taken from 1m sample piles and composited at 6m intervals using a stainless-steel scoop, with all intervals over 0.1g/t Au resampled at 1m using a stainless-steel scoop. Diamond samples were collected at geologically defined intervals (minimum sample length 0.25m, maximum sample length 1.5m) for all drill holes in the current program Samples are cut using an automated diamond saw and half core is submitted for analysis.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Drill sample preparation and precious metal analysis is undertaken by registered laboratories (Genalysis – Intertek, Bureau Veritas and MinAnalytical). 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>	MGV field QC procedures involve the use of certified reference standards (1:50), duplicates (~1:30) and blanks at appropriate intervals for early-stage exploration programs. High, medium and low gold standards are used. Where high grade gold is noted in logging, a blank quartz wash is inserted between individual samples at the laboratory before analysis. Historical QA/QC procedures are unclear for pre 2009 drilling.
	<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. Duplicate sampling criteria is unclear for historical pre 2009 drilling. Historical QA/QC procedures are unclear for pre 2009 drilling.
	<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. Samples are collected from full width of sample interval to ensure it is representative of sample complete interval.

<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	On composite and 1m Aircore samples, analysis is undertaken by Intertek-Genalysis (a registered laboratory), with 50g fire assay with ICP-MS finish undertaken for gold. Some RC samples are sent to Intertek, Bureau Veritas or the NATA accredited MinAnalytical Laboratory in Canning Vale, Perth and analysed via PhotonAssay technique. Individual samples are assayed for gold after drying and crushing to nominally 85% passing 2mm and a 500g linear split taken for PhotonAssay (method code PAP3512R). 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. Coarse gold is present in some samples and may affect sample accuracy. Repeat analysis and screen fire assay is regularly undertaken on samples with coarse gold.
	<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>	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.
<i>Verification of sampling and assaying</i>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	MGV samples are verified by the geologist before importing into the main MGV 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.
<i>Location of data points</i>	<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 >±2 metres.
	<i>Specification of the grid system used.</i>	Drill hole and sample site co-ordinates are in UTM grid (GDA94 Z50) and historical drill holes are converted from local grid references.
	<i>Quality and adequacy of topographic control.</i>	All current aircore drill hole collars are planned and set up using hand-held GPS (accuracy +-2m).
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Variable drill hole spacings are used to complete 1 st pass testing of targets and are determined from geochemical, geophysical and geological data together with historical drilling information. For the reported drilling drill hole spacing was approximately 20m along traverse lines.
	<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>	No resources have been calculated on regional drilling targets as described in this release due to the early-stage nature of the drilling
	<i>Whether sample compositing has been applied.</i>	6m composite samples are submitted for initial analysis in most cases. Composite sampling is undertaken using a stainless-steel scoop at one metre samples and combined in a calico bag. Where composite assays are above 0.1g/t Au, individual 1m samples are submitted for gold assay. One metre individual samples may be submitted without composites in certain intervals of visibly favourable gold geology.
<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 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.
	<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 can be confirmed at this time and true widths are not yet known.

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, Bureau Veritas in Canning Vale or MinAnalytical in Canning Vale). When at the laboratory samples are stored in a locked yard before being processed and tracked through preparation and analysis (e.g. Lab-Trak system at Genalysis-Intertek).
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits have been completed on sampling techniques and data due to the early-stage nature of the drilling

Section 2 Reporting of Exploration Results

Criteria	Explanation	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 in August 2017 (see MGV ASX announcement 2 August 2017: "Musgrave Secures 100% of Key Cue Tenure"). The Break of Day, Starlight, Lena and White Heat prospects are located on granted mining lease M21/106 and the primary tenement holder is Musgrave Minerals Ltd. Regional targets including Big Sky and Numbers are located on M21/106 and E58/335. The Cue project tenements consist of 38 licences. The tenements are subject to standard Native Title heritage agreements and state royalties. Third party royalties are present on some individual tenements. The Mainland prospects are on tenements P21/731, 732, 735, 736, 737, 739, 741 where MGV has an option to acquire 100% of the basement gold rights on the tenements (not part of the EVN JV). 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 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 from 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: eastings 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 and hole length.	All RC drill hole collars with assays received for the current regional drill program at Cue and reported in this announcement are in Tables 1a and 1b of this announcement. All relevant historical drill hole information has previously been reported by Musgrave, Perilya, Silver Lake Resources and various other companies over the years.
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 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>	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.
	<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>	True widths are not confirmed at this time although all drilling is planned close to perpendicular to interpreted strike of the target lodes at the time of drilling.
<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 historical data can 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 avoiding misleading reporting of Exploration Results.</i>	All older MGV drilling data has previously been reported. Some higher-grade historical results may be 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.
<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 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.