
New high-grade gold trend identified in regional RC program

- Regional exploration RC drilling at Cue continues to intersect further gold mineralisation identifying a new mineralised trend 400m east of Break of Day, called the Waratah trend
- Three new mineralised gold targets identified through broad 200m spaced drilling at Waratah. Significant intersections include:
 - 2m @ 28.1g/t Au from 78m (21MORC359), including;
 - 1m @ 53.2g/t Au from 78m
 - 2m @ 6.1g/t Au from 87m (21MORC361)
 - 2m @ 5.8g/t Au from 31m (21MORC350)
 - 5m @ 2.6g/t Au from 36m (21MORC352)
 - 8m @ 1.7g/t Au from 33m (21MORC344)
 - 5m @ 2.0g/t Au from 98m (21MORC370)
- Follow-up RC drilling at Amarillo (previously named Target 14), 1.2km south-west of Break of Day returns high-grade gold, including:
 - 9m @ 8.7g/t Au from 44m (21MORC371) including;
 - 2m @ 35.1g/t Au from 51m
 - 3m @ 11.3g/t Au from 45m (21MORC375)
- Assay results pending for ~100 drill holes across multiple target areas
- A program of RC drilling at the new high-grade zone, named the Mosaic Lode, where previous drilling intersected 15m @ 111.6g/t Au south of White Heat, has been completed with assays due early February
- Drilling will re-commence at site on or around 10 January 2022

Musgrave Minerals Ltd (ASX: **MGV**) ("Musgrave" or "the Company") is pleased to report further strong assay results from reverse circulation ("RC") drilling at the Amarillo Prospect (previously Target 14), west of Break of Day and additional gold mineralisation identified along a new zone (Waratah zone), 400m east of Break of Day. Both areas are on the Company's 100% owned ground at its flagship Cue Gold Project in Western Australia's Murchison district (*Figure 1*).

Musgrave Managing Director Rob Waugh said: “These are further strong results and support the upside prospectivity of the Cue Project. We continue to define new targets and hit new mineralised zones. The new Waratah zone is only 400m east of Break of Day. All new intersections sit outside the mineral resource estimates and the drill spacing is still very broad at ~200m with further infill required.”

“Interestingly, Waratah was a lower priority target which coincided with the proposed waste and tailings storage facility locations in the early PFS design works. This preliminary design will obviously now need to be re-assessed.”

“The potential for future resource additions at Big Sky and White Heat will likely impact design planning as well. Resource RC drilling and diamond drilling will recommence in the new year at Big Sky. This work will enable a maiden Big Sky resource estimate in late Q2 2022”.

“The results show that exploration continues to identify strong gold mineralisation in previously untested and poorly tested areas as demonstrated by the newly identified near surface high grade Waratah gold trend east of Break of Day.”

This new gold mineralisation is near surface, defined in three prospective zones and remains open down dip.

In addition, Musgrave is continuing to define further high-grade gold in the regolith at the Amarillo Prospect (previously named Target 14) with additional follow-up drilling to continue in late January.

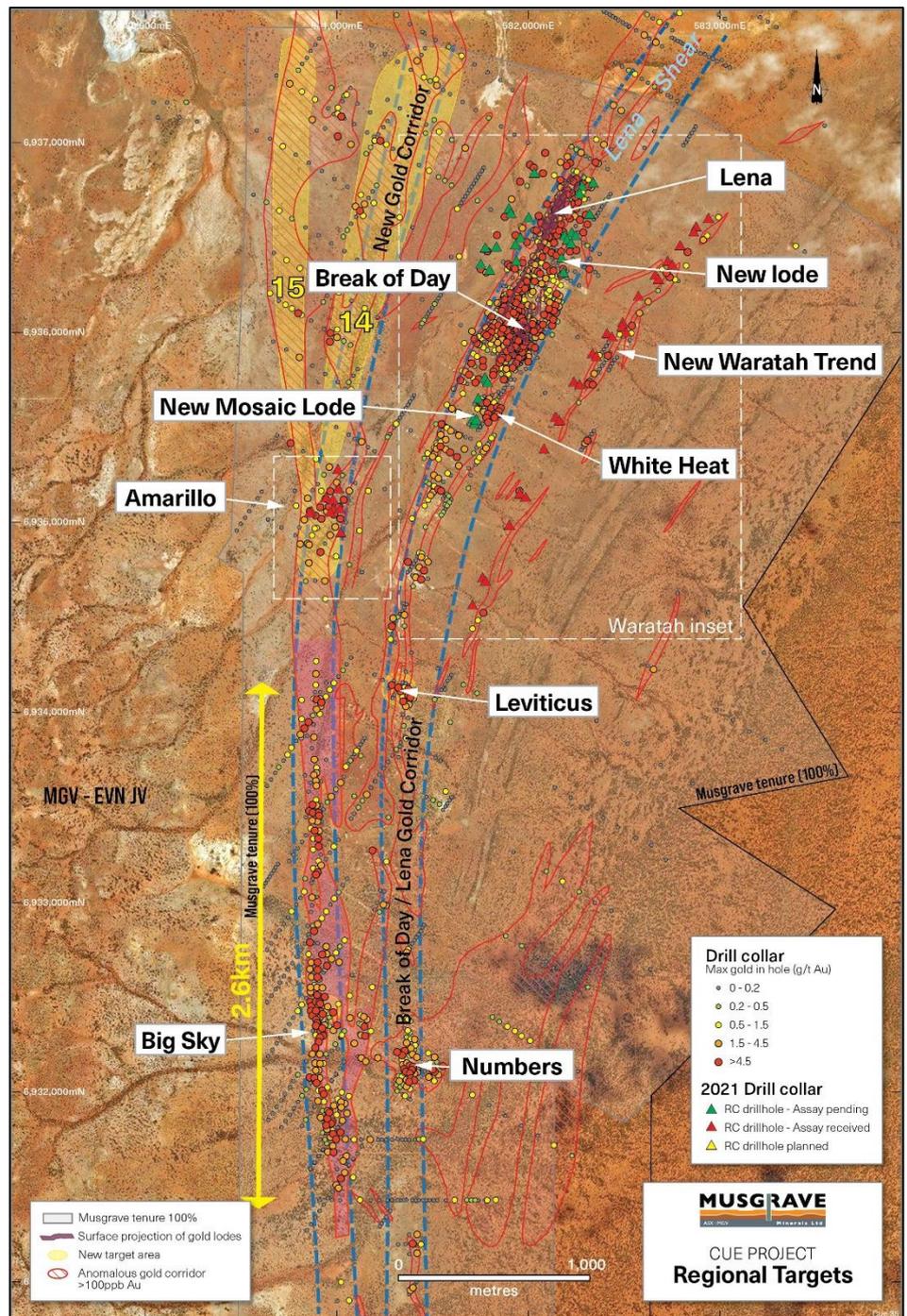


Figure 1: Regional plan showing drill hole collars and significant prospect locations



Waratah Trend

The Waratah trend is approximately 400m east of and runs parallel to the Lena/Break of Day corridor (*Figure 1*). It is interpreted to extend for over 4km of strike with gold mineralisation identified in at least three separate zones that are individually between 200m and 400m of strike. The mineralisation is hosted within a sequence of sedimentary iron formation and dolerites. Mineralisation remains open down plunge and is also open to the south in Zone 3 (*Figure 2*).

Twenty-seven RC drill holes were drilled to test this new corridor with a highlight of significant results listed below and presented in Tables 1a and 1b.

Intersections include:

- 2m @ 28.1g/t Au from 78m (21MORC359), including;
 - 1m @ 53.2g/t Au from 78m
- 2m @ 6.1g/t Au from 87m (21MORC361)
- 2m @ 5.8g/t Au from 31m (21MORC350)
- 5m @ 2.6g/t Au from 36m (21MORC352)
- 8m @ 1.7g/t Au from 33m (21MORC344)
- 5m @ 2.0g/t Au from 98m (21MORC370)

Amarillo (previously named Target 14)

At **Amarillo**, 1.2km south-west of Break of Day (*Figure 1*) and 800m north of Big Sky, RC drilling continues to intersect significant regolith gold mineralisation (*Figure 3*) including:

- 9m @ 8.7g/t Au from 44m (21MORC371) including;
 - 2m @ 35.1g/t Au from 51m
- 3m @ 1.4g/t Au from 45m (21MORC372)
- 3m @ 11.3g/t Au from 45m (21MORC375)

Basement follow-up drilling will be planned for late January. Drill hole and assay details are presented in Tables 1a and 1b.



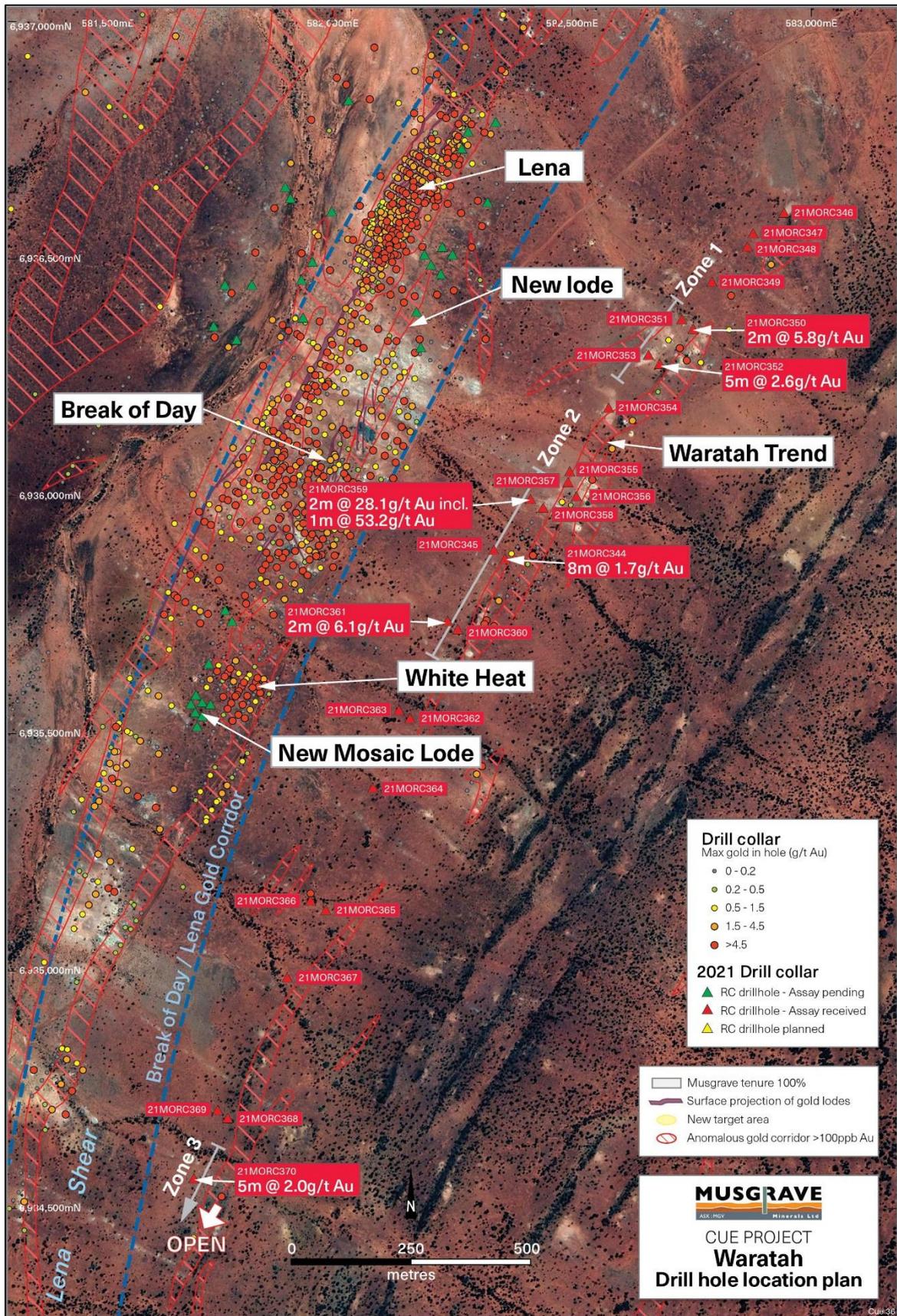


Figure 2: Inset plan showing the Waratah trend, mineralised zones, new drill hole collars and new assay results



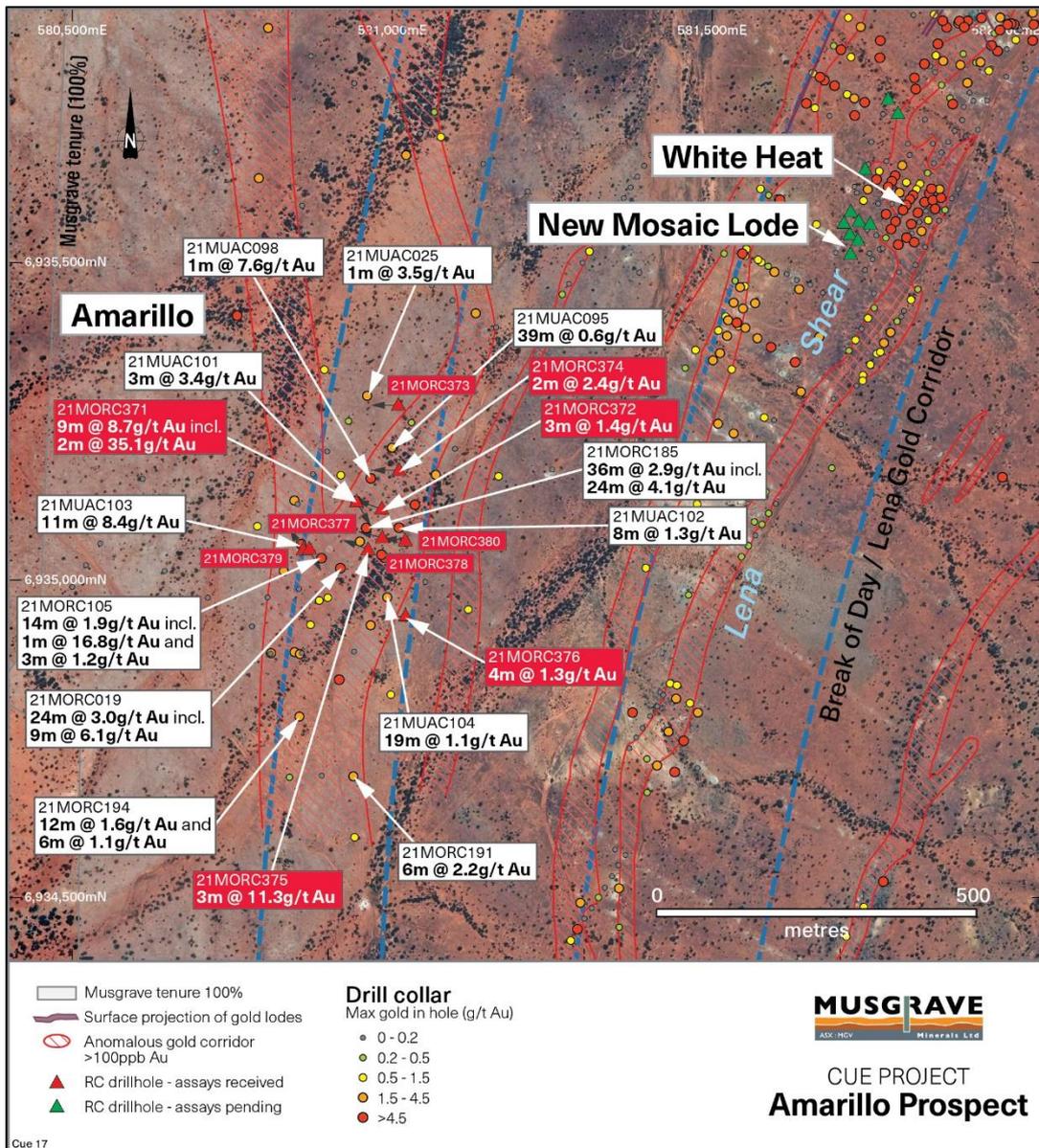


Figure 3: Plan showing the Amarillo Prospect (previously referred to as Target 14) with follow-up drill collars and significant assays

Cue Project

The Cue Gold Project is located approximately 30km south of the township of Cue in the Murchison district of Western Australia. The Lena and Break of Day deposits are only 5km from the Great Northern Highway, approximately 600km north of Perth.

The current 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, Big Sky, Amarillo, Waratah and Mosaic are all outside the existing resource areas.



Ongoing Activities

Musgrave 100% tenements

- All on site drilling was temporarily suspended for the Christmas-New Year break. Drilling will recommence around 10 January 2022.
- Initial follow-up drilling of the new high-grade gold lode (the Mosaic Lode) identified south of White Heat is complete with assays due in early February.
- Resource definition diamond drilling at the Big Sky Prospect is continuing with further assay results from RC drilling expected in February. The aim is to deliver a maiden Mineral Resource estimate at Big Sky in Q2 2022.
- RC pre-collars for resource conversion diamond drilling at Break of Day and Lena have commenced with diamond tails to commence in February.
- A regional aircore program is underway to test the southern extension of the prospective West Island dolerite identified on the Evolution 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 will be ongoing following a Christmas-New Year hiatus.
- Further assay results for diamond drill holes at West Island are pending.
- Assay results for the recently completed aircore drilling program on Lake Austin are pending.

Authorised 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:

- 15 December 2021, "High grades continue at Big Sky"
- 1 December 2021, "New lodes identified. Stunning high-grade intercept at Cue"
- 18 November 2021, "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, "Change of Director's Interest Notice x 3"
- 15 October 2021, "Letter to Shareholders"
- 15 October 2021, "Annual report to Shareholders"
- 15 October 2021, "Notice of Annual General Meeting/Proxy Form"
- 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"
- 4 August 2021, "Company Presentation – Diggers and Dealers Mining Forum"
- 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"
- 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"
- 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"

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 intersections from the new Waratah Zone and Amarillo (Target 14) prospects

Drill Hole ID	Drill Type	Prospect	Sample Type	EOH	From (m)	Interval (m)	Au (g/t)	Comment
21MORC344	RC	Waratah	1m Individual	72	33	8	1.7	Gold mineralisation in regolith
21MORC345	RC	Waratah	1m Individual	120	65	1	2.3	Gold mineralisation in fresh rock
			and		76	1	2.2	
21MORC346	RC	Waratah	1m Individual	78	40	1	1.5	Weak gold anomalism in regolith
21MORC349	RC	Waratah	1m Individual	102	74	1	2.9	Gold mineralisation in fresh rock
21MORC350	RC	Waratah	1m Individual	84	31	2	5.8	Gold anomalism in regolith
			and		42	2	1.9	Gold anomalism in regolith
21MORC352	RC	Waratah	1m Individual	84	36	5	2.6	Gold mineralisation in regolith
21MORC353	RC	Waratah	1m Individual	120	55	7	0.7	Gold mineralisation in fresh rock
21MORC354	RC	Waratah	1m Individual	102	40	1	1.3	Weak gold mineralisation in regolith
			and		47	1	1.0	Weak gold mineralisation in fresh rock
21MORC355	RC	Waratah	1m Individual	102	27	1	1.4	Weak gold mineralisation in regolith
			and		35	1	1.1	Weak gold mineralisation in regolith
21MORC356	RC	Waratah	1m Individual	114	67	2	1.5	Weak gold mineralisation in fresh rock
21MORC358	RC	Waratah	1m Individual	78	25	1	1.0	Weak gold mineralisation in regolith
21MORC359	RC	Waratah	1m Individual	126	78	2	28.1	Gold mineralisation in fresh rock
			including		78	1	53.2	
21MORC360	RC	Waratah	1m Individual	90	40	2	1.8	Gold mineralisation in regolith
21MORC361	RC	Waratah	1m Individual	138	87	2	6.1	Gold mineralisation in fresh rock
21MORC365	RC	Waratah	1m Individual	120	73	1	2.1	Gold mineralisation in fresh rock
21MORC367	RC	Waratah	1m Individual	90	47	1	1.9	Weak gold mineralisation in fresh rock
21MORC368	RC	Waratah	1m Individual	120	52	3	1.0	Gold mineralisation in fresh rock
21MORC369	RC	Waratah	1m Individual	120	82	3	1.2	Gold mineralisation in fresh rock
21MORC370	RC	Waratah	1m Individual	120	98	5	2.0	Gold mineralisation in fresh rock
21MORC371	RC	Amarillo	1m Individual	150	44	9	8.7	Gold mineralisation in regolith
			including		51	2	35.1	
			and		101	1	1.0	Weak gold mineralisation in fresh rock
21MORC372	RC	Amarillo	1m Individual	90	36	1	1.2	Weak gold mineralisation in regolith
			and		45	3	1.4	
21MORC373	RC	Amarillo	1m Individual	150	54	1	1.7	Weak gold mineralisation in regolith
21MORC374	RC	Amarillo	1m Individual	72	30	1	1.7	Weak gold mineralisation in regolith
			and		51	2	2.4	
21MORC375	RC	Amarillo	1m Individual	78	45	3	11.3	Gold mineralisation in regolith
			and		62	1	2.5	
21MORC376	RC	Amarillo	1m Individual	150	57	1	2.9	Gold mineralisation in regolith
			and		78	4	1.3	
21MORC378	RC	Amarillo	1m Individual	96	7	1	1.2	Weak gold mineralisation in regolith



Table 1b: Summary of MGV drill collars from current RC drill program with assay results in the table and images above

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (deg)	Dip (deg)	RL (m)	Total Depth (m)	Assays
21MORC344	RC	Waratah	582359	6935868	128	-60	426	72	Assays results in table above
21MORC345	RC	Waratah	582337	6935885	128	-60	425	120	Assays results in table above
21MORC346	RC	Waratah	582943	6936596	128	-60	423	78	Assays results in table above
21MORC347	RC	Waratah	582877	6936551	128	-60	423	120	Assays results in table above
21MORC348	RC	Waratah	582867	6936526	128	-60	424	120	Assays results in table above
21MORC349	RC	Waratah	582793	6936453	130	-60	424	102	Assays results in table above
21MORC350	RC	Waratah	582751	6936351	130	-60	426	84	Assays results in table above
21MORC351	RC	Waratah	582730	6936368	130	-60	424	119	Assays results in table above
21MORC352	RC	Waratah	582684	6936275	130	-60	427	84	Assays results in table above
21MORC353	RC	Waratah	582660	6936295	130	-60	425	120	Assays results in table above
21MORC354	RC	Waratah	582575	6936185	130	-60	425	102	Assays results in table above
21MORC355	RC	Waratah	582495	6936050	110	-60	425	114	Assays results in table above
21MORC356	RC	Waratah	582509	6935998	110	-60	427	84	Assays results in table above
21MORC357	RC	Waratah	582492	6936029	110	-60	426	126	Assays results in table above
21MORC358	RC	Waratah	582437	6935973	128	-60	425	78	Assays results in table above
21MORC359	RC	Waratah	582413	6935991	128	-60	424	126	Assays results in table above
21MORC360	RC	Waratah	582263	6935718	128	-60	428	90	Assays results in table above
21MORC361	RC	Waratah	582242	6935734	128	-60	427	138	Assays results in table above
21MORC362	RC	Waratah	582162	6935532	128	-60	430	78	Assays results in table above
21MORC363	RC	Waratah	582139	6935549	128	-60	428	120	Assays results in table above
21MORC364	RC	Waratah	582084	6935383	128	-60	430	84	Assays results in table above
21MORC365	RC	Waratah	581987	6935126	128	-60	431	120	Assays results in table above
21MORC366	RC	Waratah	581954	6935146	128	-60	430	78	Assays results in table above
21MORC367	RC	Waratah	581903	6934985	128	-60	430	90	Assays results in table above
21MORC368	RC	Waratah	581781	6934689	128	-60	434	78	Assays results in table above
21MORC369	RC	Waratah	581760	6934704	128	-60	433	90	Assays results in table above
21MORC370	RC	Waratah	581710	6934562	128	-60	433	78	Assays results in table above
21MORC371	RC	Amarillo	580945	6935122	150	-60	421	150	Assays results in table above
21MORC372	RC	Amarillo	580984	6935114	290	-60	421	90	Assays results in table above
21MORC373	RC	Amarillo	581009	6935275	270	-60	420	150	Assays results in table above
21MORC374	RC	Amarillo	581011	6935173	270	-60	421	72	Assays results in table above
21MORC375	RC	Amarillo	580963	6935049	290	-60	422	78	Assays results in table above
21MORC376	RC	Amarillo	581022	6934943	270	-60	422	150	Assays results in table above
21MORC377	RC	Amarillo	580871	6935049	150	-60	422	126	Assays results in table above
21MORC378	RC	Amarillo	580985	6935066	285	-60	422	96	Assays results in table above
21MORC379	RC	Amarillo	580862	6935049	330	-60	422	120	Assays results in table above
21MORC380	RC	Amarillo	581021	6935063	270	-60	422	90	Assays results in table above
21MORC371	RC	Amarillo	580945	6935122	150	-60	421	150	Assays results in table above
21MORC372	RC	Amarillo	580984	6935114	290	-60	421	90	Assays results in table above
21MORC373	RC	Amarillo	581009	6935275	270	-60	420	150	Assays results in table above
21MORC374	RC	Amarillo	581011	6935173	270	-60	421	72	Assays results in table above
21MORC375	RC	Amarillo	580963	6935049	290	-60	422	78	Assays results in table above
21MORC376	RC	Amarillo	581022	6934943	270	-60	422	150	Assays results in table above
21MORC377	RC	Amarillo	580871	6935049	150	-60	422	126	Assays results in table above
21MORC378	RC	Amarillo	580985	6935066	285	-60	422	96	Assays results in table above

Notes to Tables 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 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 and 1b.
7. Drill type; AC = Aircore, RC = Reverse Circulation, Diam = Diamond.
8. Coordinates are in GDA94, MGA Z50.

---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.</p> <p>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 Chrysos 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.

<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	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).
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	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
<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>	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.
	<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, 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.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	Geology comprises typical Archaean Yilgarn greenstone belt lithologies and granitic intrusives. Two main styles of mineralisation are present, typical Yilgarn Archaean lode gold and volcanic massive sulphide (VMS) base metal and gold mineralisation within the Eelya Felsic Complex.
<i>Drill hole Information</i>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: 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.</i>	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.
<i>Data aggregation methods</i>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	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.

	<p><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></p>	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.
	<p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	No metal equivalent values have been reported.
<p><i>Relationship between mineralisation widths and intercept lengths</i></p>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>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></p>	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.
<p><i>Diagrams</i></p>	<p><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></p>	Diagrams referencing historical data can be found in the body of this report.
<p><i>Balanced reporting</i></p>	<p><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></p>	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.
<p><i>Other substantive exploration data</i></p>	<p><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></p>	All material results from geochemical and geophysical surveys and drilling, related to these prospects has been reported or disclosed previously.
<p><i>Further work</i></p>	<p><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></p>	A range of exploration techniques will be considered to progress exploration including additional surface sampling and drilling.
	<p><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></p>	Refer to figures in the body of this announcement.