



ASX RELEASE

2 August 2022

ASX: MGV

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## Bonanza Grades from Further Drilling at White Heat-Mosaic

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- Drilling at White Heat-Mosaic, part of the high-grade Break of Day Trend returns high-grade gold results and demonstrates the potential to grow the resource
- New extensional RC drilling intersected:
  - 7m @ 149.7g/t Au from 143m (22MORC130), including;
    - 1m @ 1,040g/t Au from 143m
  - 3m @ 25.8g/t Au from 184m (22MORC129)
  - 5m @ 6.9g/t Au from 135m (22MORC110)
- Infill RC drilling intersections include:
  - 4m @ 116.5g/t Au from 50m (22MORC111), including;
    - 2m @ 230.5g/t Au from 51m
  - 4m @ 24.9g/t Au from 44m (22MORC113)
  - 6m @ 17.3g/t Au from 92m (22MORC115)
  - 4m @ 9.6g/t Au from 14m (22MORC109)
- Infill diamond drilling intersected:
  - 0.5m @ 365g/t Au from 115.1m (22MODD029)
- RC drilling in a new area of the deposit also identified a new splay lode returning:
  - 6m @ 14.0g/t Au from 127m (22MORC137)
  - Follow-up drilling is required to determine the extent and potential of this new lode
- The high-grade lodes at White Heat-Mosaic remain open down plunge with additional drilling to commence this week
- Assay results are pending for additional drilling at Amarillo, Big Sky and regional aircore targets

Musgrave Minerals Ltd (ASX: **MGV**) ("Musgrave" or "the Company") is pleased to report further high-grade gold assay results from reverse circulation ("RC") and diamond drilling along the Break of Day

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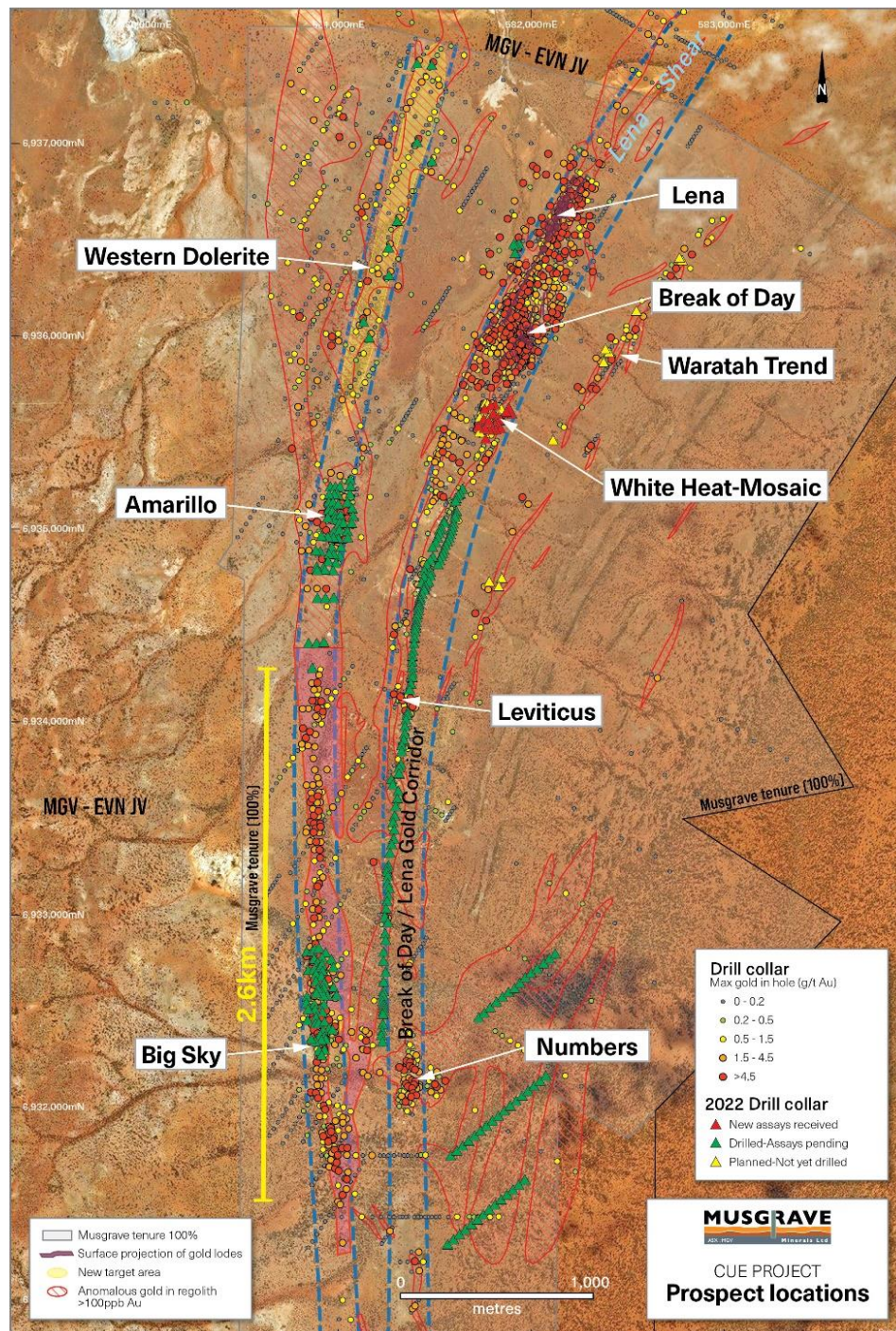
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Trend at the White Heat-Mosaic deposit. The results are from a combination of infill and extensional drilling and highlight the very high-grade nature of the near-surface mineralisation along the Break of Day Trend. The results reflect the unique potential of Musgrave'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 another set of very strong results from *White Heat-Mosaic*, part of the high-grade Break of Day Trend. It would be hard to find better results from a recent Australian exploration program and the Cue Gold Project is fast becoming one of the richest undeveloped high-grade gold deposits in Australia. Drilling continues to turn up new lodes which we will continue to define with further drilling. We are continuing to grow our understanding of the system and the controls on mineralisation. Exploration is continuing while we also progress development studies on our existing resources at Cue."





## Break of Day Trend, White Heat-Mosaic Deposit

The Break of Day Trend has a total Mineral Resource Estimate of **982kt @ 10.4g/t Au for 327koz contained gold** with 70% of this in the higher confidence Indicated resource category (see *MGV ASX announcement dated 31 May 2022, "Cue Mineral Resource Increases to 927,000oz"*).

A subset of this inventory (185kt @ 11.0g/t Au for 65koz contained gold) defines the White Heat-Mosaic deposit. The deposit, only 300m south of Break of Day (797kt @ 10.2g/t Au for 262koz contained gold) is currently modelled to a maximum depth of 160m.

This recent drilling (not yet incorporated into the resource estimate) confirms the near surface and high-grade endowment along this trend, which is characterised by quartz lodes within a high-titanium basalt unit. The high-titanium basalt unit is known to extend to the north and south at the Moyagee project and is currently being tested with first pass aircore drilling. Further to this, the infill program confirmed the interpretation and boundaries of the resource, giving MGV further confidence in the resource classification. The current drilling was undertaken at White Heat-Mosaic to infill and extend the gold mineralisation (*Figure 2*).

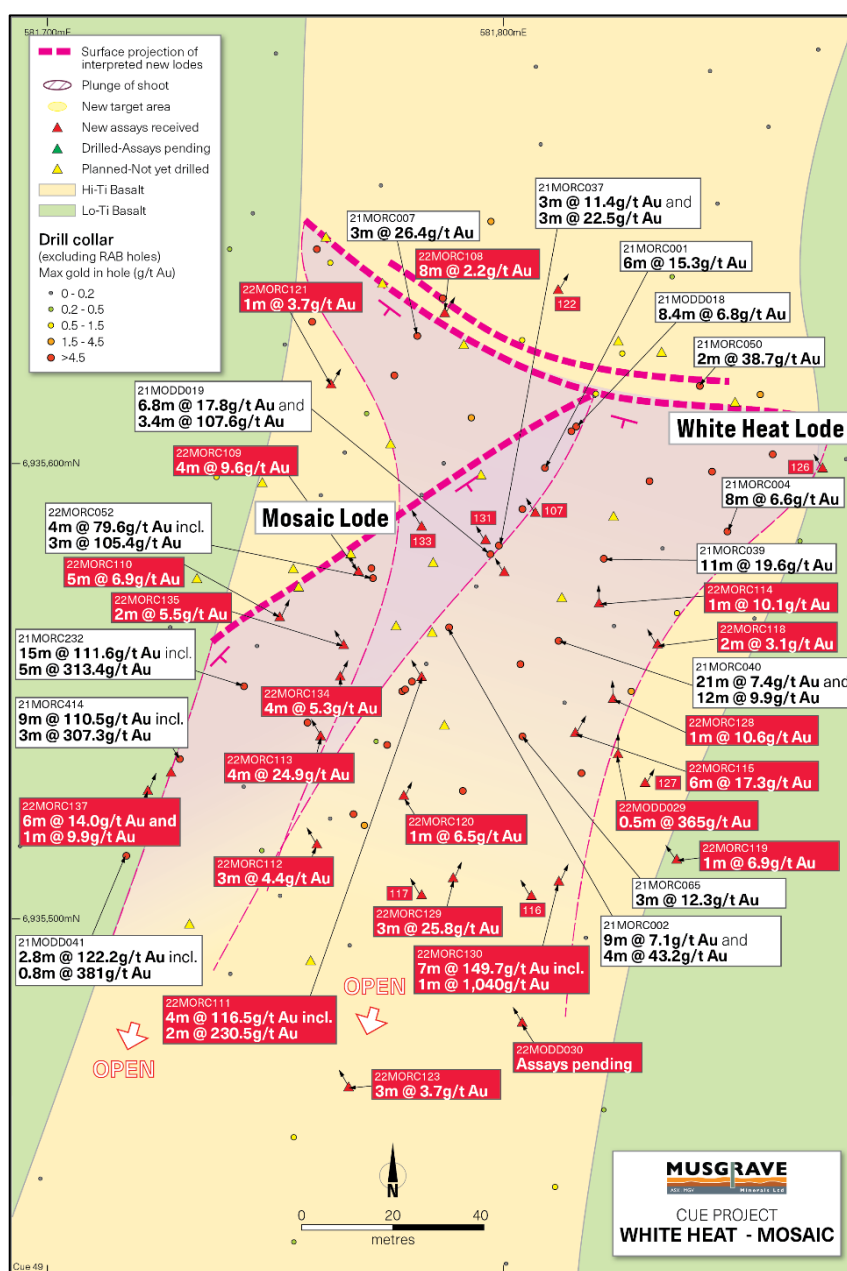


Figure 2: White Heat-Mosaic prospect plan showing drill hole collars and recent assay results



New RC intersections extending the plunge of the high-grade mineralisation include:

- 7m @ 149.7g/t Au from 143m (22MORC130), including;
  - 1m @ 1,040g/t Au from 143m
- 3m @ 25.8g/t Au from 184m (22MORC129)
- 5m @ 6.9g/t Au from 135m (22MORC110)

These new intersections extend the mineralisation approximately 30m below previous high-grade drill results and beyond the current Mineral Resource boundary.

New RC intersections within the current Mineral Resource boundary (infill drilling) include:

- 4m @ 116.5g/t Au from 50m (22MORC111), including;
  - 2m @ 230.5g/t Au from 51m
- 4m @ 24.9g/t Au from 44m (22MORC113)
- 6m @ 17.3g/t Au from 92m (22MORC115)
- 4m @ 9.6g/t Au from 14m (22MORC109)

New diamond drilling within the current Mineral Resource boundary intersected:

- 0.5m @ 365g/t Au from 115.1m (22MODD029), and
- 1.5m @ 9.5g/t Au from 91.5m in a splay lode

RC drilling in a new area of the deposit has identified a new splay lode returning:

- 6m @ 14.0g/t Au from 127m (22MORC137)

Follow-up drilling is required to determine the extent and potential strike of this new lode.

The mineralisation remains open down plunge (*Figure 3*) with further infill and extensional drilling scheduled to commence this week. This drilling aims to infill key areas to further de-risk the resource and includes drillholes further down plunge, together with defining the strike potential of the new lode identified in 22MORC137.

Development works are progressing well with preliminary optimised resource shells aiding in our resource conversion and follow-up drill planning as we continue to de-risk the project and move forward on the development pathway.

## **Cue Project**

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

The current resource estimate for the Cue Gold Project totals 12.3Mt @ 2.3g/t Au for 927koz including the Break of Day High-Grade Trend (982kt @ 10.4g/t Au for 327koz contained gold) and the Moyagee Western Trend (9.8Mt @ 1.7g/t Au for 541koz contained gold) both in the southern area of the project (see *MGV ASX announcement dated 31 May 2022, "Cue Mineral Resource Increases to 927,000oz"*). The new gold discoveries at Amarillo and along the Waratah trend are all outside the existing resource areas.



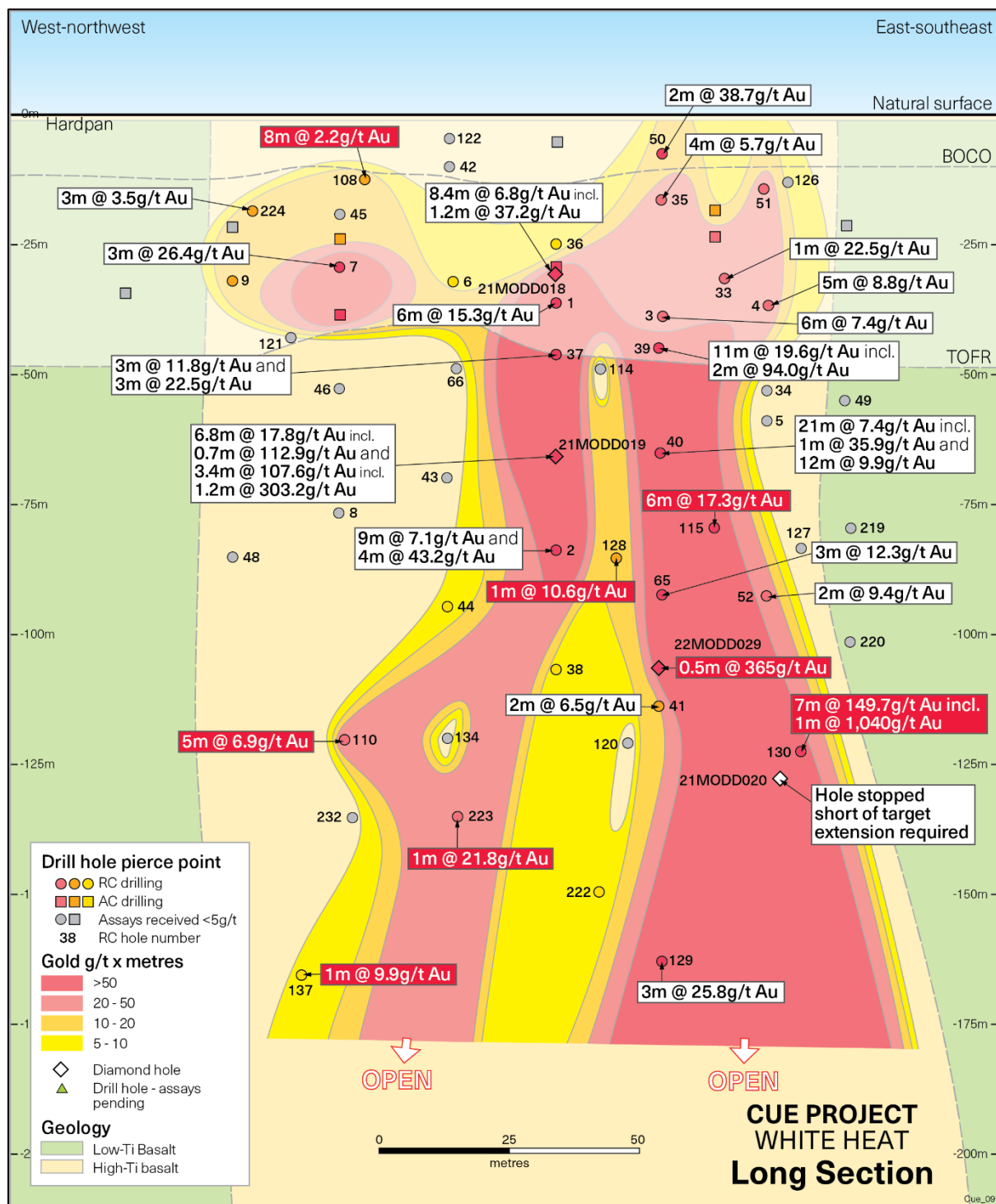


Figure 3: White Heat long-section showing drill hole pierce points and recent assay results.  
Note: Only intersections in the White Heat lode are depicted on this long-section



## **Ongoing Activities**

### **Musgrave 100% tenements**

- RC drilling at the Amarillo prospect is continuing with further assay results pending. A maiden Mineral Resource Estimate is expected for Amarillo in early 2023.
- Phase 1 infill diamond drilling at Break of Day and Lena to support conversion of Inferred to Indicated resources in the top 300m has been completed. Assay results are pending.
- Infill and extensional drilling at the Big Sky prospect is underway with further assay results expected in September.
- All existing deposits remain open at depth with Big Sky and White Heat-Mosaic currently only systematically drill tested to 120m and 170m respectively. Further drilling at White Heat-Mosaic will commence this week with results expected in September.
- Aircore drilling to further test the stratigraphic unit that hosts the high-grade Break of Day and White Heat-Mosaic deposits has recently been completed. This program is also testing new targets at Mainland. Assay results are pending.
- Works to progress the prefeasibility level studies including the new Big Sky and White Heat-Mosaic resources has commenced with the appointment of Anthony Buckingham to the new position of General Manager-Development.

### **Evolution JV**

- Diamond drilling to test the basement beneath regolith gold mineralisation on Lake Austin is continuing with on-going focus on the West Island target.
- The current phase of regional aircore drilling to identify additional targets for diamond drill testing is continuing. This drilling is focussed on identifying new targets along and adjacent to, the favourable dolerite host unit along strike from West Island.
- Evolution has proposed an additional budget of approximately \$5M for exploration on the joint venture in H1 FY23

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 explorer and developer. Musgrave's mission is to safely and responsibly deliver exploration success and advance development opportunities to build a profitable gold mining business at Cue for the benefit of our shareholders and the communities within which we operate*

*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 packages near Mt Magnet in Western Australia and in the Ni-Cu-Co prospective Musgrave Province of 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:

- 28 July 2022, "Quarterly Activities and Cashflow Report"
- 21 July 2022, "Company Presentation – Noosa Mining Conference"
- 21 July 2022, "Further high-grade gold at West Island, Cue JV"
- 29 June 2022, "High grade gold at Amarillo and new regional targets"
- 21 June 2022, "Appointment of General Manager - Development"
- 31 March 2022, "Musgrave consolidates its position in the Murchison"
- 31 May 2022, "Cue Mineral Resource increases to 927,000 ounces"
- 21 April 2022, "Thick basement gold intersections at West Island, Cue JV"
- 5 April 2022, "High grades confirm Big Sky's upside potential"
- 31 March 2022, "Musgrave consolidates its position in the Murchison"
- 25 March 2022, "Strong drill results at Amarillo"
- 15 March 2022, "Further near-surface high grades intersected at Mosaic"
- 10 March 2022, "Half yearly report and accounts"
- 2 February 2022, "Exceptional gold grades near-surface at new Mosaic Lode"
- 27 January 2022, "High-grade gold intersected at West Island, Cue JV"
- 6 January 2022, "New high-grade gold trend identified in regional RC program"
- 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"
- 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"
- 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"
- 2 November 2020, "Exceptional metallurgical gold recoveries at Starlight"
- 8 October 2020, "Drilling hits high-grade gold at new target, 400m south of Starlight"
- 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"
- 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 and to the activity being undertaken 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 RC drill hole assay intersections at White Heat-Mosaic**

Drill Hole ID	Drill Type	Prospect	Sample Type	EOH	From (m)	Interval (m)	Au (g/t)	Comment
22MORC107	RC	White Heat-Mosaic	1m Individual	44	NSI			East edge of Mosaic lode
22MORC108	RC	White Heat-Mosaic	1m Individual	32	11	8	2.2	Gold mineralization in regolith Western edge of White Heat lode
22MORC109	RC	White Heat-Mosaic	1m Individual	25	14	4	9.6	High-grade gold mineralization in regolith - Mosaic lode
22MORC110	RC	White Heat-Mosaic	1m Individual	159	135	5	6.9	High-grade gold mineralization in fresh rock – White Heat lode
22MORC111	RC	White Heat-Mosaic	1m Individual	79	50	4	116.5	High-grade gold mineralization in regolith - Mosaic lode
			including		51	2	230.5	
22MORC112	RC	White Heat-Mosaic	1m Individual	89	68	3	4.4	Gold mineralization in fresh rock Mosaic lode
22MORC113	RC	White Heat-Mosaic	1m Individual	74	24	1	1.7	Gold mineralization in regolith New splay
			and		44	4	24.9	High-grade gold mineralization in regolith Mosaic lode
22MORC114	RC	White Heat-Mosaic	1m Individual	89	52	1	1.2	Gold mineralization in regolith, splay lode
			and		59	1	10.1	Gold mineralization in fresh rock splay lode
			and		71	1	3.9	Gold mineralization in fresh rock White Heat lode
22MORC115	RC	White Heat-Mosaic	1m Individual	109	78	1	1.1	Gold mineralization in fresh rock Splay lode
			and		92	6	17.3	High-grade gold mineralization in fresh rock White Heat lode
22MORC116	RC	White Heat-Mosaic	1m Individual	144	42	1	1.3	Mineralization in regolith - splay lode
22MORC117	RC	White Heat-Mosaic	1m Individual	129	54	1	1.1	Mineralization in regolith - splay lode
22MORC118	RC	White Heat-Mosaic	1m Individual	99	66	2	3.1	Mineralization in regolith - splay lode
22MORC119	RC	White Heat-Mosaic	1m Individual	149	113	1	6.9	Gold mineralization in fresh rock Deeper Mosaic lode
22MORC120	RC	White Heat-Mosaic	1m Individual	175	26	1	6.9	Gold mineralization in regolith Mosaic lode
22MORC121	RC	White Heat-Mosaic	1m Individual	80	54	1	3.7	Gold mineralization in regolith Western edge White Heat Lode
22MORC122	RC	White Heat-Mosaic	1m Individual	30	NSI			Too far north to intersect lode
22MORC123	RC	White Heat-Mosaic	1m Individual	170	127	3	3.7	Gold mineralization in fresh rock Western edge of Mosaic lode
22MORC124	RC	White Heat-Mosaic	1m Individual	100	NSI			Too far east to intersect lode
22MORC125	RC	White Heat-Mosaic	1m Individual	99	NSI			Too far east to intersect lode
22MORC126	RC	White Heat-Mosaic	1m Individual	89	NSI			Too far east to intersect lode
22MORC127	RC	White Heat-Mosaic	1m Individual	109	96	1	1.0	Gold mineralization in fresh rock
22MORC128	RC	White Heat-Mosaic	1m Individual	114	70	1	4.0	Gold mineralization in fresh rock Splay
			and		100	1	10.6	Gold mineralization in fresh rock White Heat Lode
22MORC129	RC	White Heat-Mosaic	1m Individual	206	184	3	25.8	High-grade gold mineralization in fresh rock Depth extension to White Heat lode
22MORC130	RC	White Heat-Mosaic	1m Individual	164	103	1	1.7	Gold mineralization in fresh rock Splay



			1m Individual		143	7	149.7	High-grade gold mineralization in fresh rock White Heat lode
			including		143	1	1,040.0	High-grade gold mineralization in fresh rock White Heat lode
22MORC131	RC	White Heat-Mosaic	1m Individual	49	NSI			Eastern edge of Mosaic lode
22MORC132	RC	White Heat-Mosaic	1m Individual	64	NSI			Eastern edge of Mosaic lode
22MORC133	RC	White Heat-Mosaic	1m Individual	39	NSI			Eastern edge of Mosaic lode
22MORC134	RC	White Heat-Mosaic	1m Individual	164	63	4	5.3	Gold mineralization in fresh rock Mosaic lode
22MORC135	RC	White Heat-Mosaic	1m Individual	69	29	2	5.5	Gold mineralization in regolith Mosaic lode
22MORC137	RC	White Heat-Mosaic	1m Individual	217	118	1	1.1	Gold mineralization in fresh rock New splay
			and		127	6	14.0	Gold mineralization in fresh rock New splay lode
			and		194	1	9.9	Gold mineralization in fresh rock Depth extension to White Heat lode

Table 1b: *Summary of MGV drill collars from current RC drill program*

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (deg)	Dip (deg)	RL (m)	Total Depth (m)	Assays
22MORC107	RC	White Heat-Mosaic	581807	6935589	329	-57	420	44	Assays results in table above
22MORC108	RC	White Heat-Mosaic	581787	6935633	30	-56	419	32	Assays results in table above
22MORC109	RC	White Heat-Mosaic	581768	6935576	330	-60	420	25	Assays results in table above
22MORC110	RC	White Heat-Mosaic	581751	6935566	25	-60	421	159	Assays results in table above
22MORC111	RC	White Heat-Mosaic	581782	6935553	329	-57	421	79	Assays results in table above
22MORC112	RC	White Heat-Mosaic	581759	6935516	328	-58	421	89	Assays results in table above
22MORC113	RC	White Heat-Mosaic	581760	6935540	329	-57	421	74	Assays results in table above
22MORC114	RC	White Heat-Mosaic	581821	6935569	359	-57	421	89	Assays results in table above
22MORC115	RC	White Heat-Mosaic	581816	6935541	28	-58	421	109	Assays results in table above
22MORC116	RC	White Heat-Mosaic	581806	6935505	326	-59	422	144	Assays results in table above
22MORC117	RC	White Heat-Mosaic	581782	6935505	326	-59	422	129	Assays results in table above
22MORC118	RC	White Heat-Mosaic	581834	6935560	328	-58	421	99	Assays results in table above
22MORC119	RC	White Heat-Mosaic	581838	6935513	325	-60	422	149	Assays results in table above
22MORC120	RC	White Heat-Mosaic	581778	6935527	25	-60	421	175	Assays results in table above
22MORC121	RC	White Heat-Mosaic	581762	6935617	29	-57	420	80	Assays results in table above
22MORC122	RC	White Heat-Mosaic	581812	6935638	30	-56	420	30	Assays results in table above
22MORC123	RC	White Heat-Mosaic	581766	6935463	325	-60	422	170	Assays results in table above
22MORC124	RC	White Heat-Mosaic	581880	6935617	330	-60	421	100	Assays results in table above
22MORC125	RC	White Heat-Mosaic	581892	6935599	330	-60	421	99	Assays results in table above
22MORC126	RC	White Heat-Mosaic	581870	6935599	330	-56	421	89	Assays results in table above
22MORC127	RC	White Heat-Mosaic	581831	6935530	28	-58	422	109	Assays results in table above
22MORC128	RC	White Heat-Mosaic	581824	6935548	358	-58	421	114	Assays results in table above
22MORC129	RC	White Heat-Mosaic	581789	6935509	24	-61	422	206	Assays results in table above
22MORC130	RC	White Heat-Mosaic	581812	6935508	25	-60	422	164	Assays results in table above
22MORC131	RC	White Heat-Mosaic	581796	6935583	330	-60	421	49	Assays results in table above
22MORC132	RC	White Heat-Mosaic	581800	6935576	330	-60	421	64	Assays results in table above
22MORC133	RC	White Heat-Mosaic	581782	6935586	330	-60	420	39	Assays results in table above
22MORC134	RC	White Heat-Mosaic	581764	6935553	25	-60	421	164	Assays results in table above
22MORC135	RC	White Heat-Mosaic	581765	6935560	329	-57	421	69	Assays results in table above
22MORC136	RC	White Heat-Mosaic	581727	6935532	23	-60	421	44	Dill hole abandoned
22MORC137	RC	White Heat-Mosaic	581722	6935528	23	-60	421	217	Assays results in table above



Table 2a: **Summary of new MGV diamond drill hole assay intersections at White Heat-Mosaic**

Drill Hole ID	Drill Type	Prospect	Sample Type	EOH	From (m)	Interval (m)	Au (g/t)	Comment
22MODD029	Diam	White Heat-Mosaic	Geological	140.0	81.3	1.0	5.6	Gold mineralization in fresh rock Splay
			Geological		91.5	1.5	9.5	Gold mineralization in fresh rock Hangingwall splay
			including		92.7	0.3	27.6	
			and		115.1	0.5	365	High grade gold mineralization in fresh rock White heat lode

Table 2b: **Summary of new MGV drill collars from diamond drilling at White Heat-Mosaic**

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (deg)	Dip (deg)	RL (m)	Total Depth (m)	Assays
22MODD029	Diam	White Heat-Mosaic	581825	6935536	0	-60	421	140.0	Assays results in table above
22MODD030	Diam	White Heat-Mosaic	581804	6935477	330	-60	422	180.5	Assays result pending

*Notes to Tables 1a and 1b and 2a and 2b*

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 although all drill holes are planned to intersect lodes perpendicular to interpreted targets.
2. In RC drilling one metre individual samples are collected and analysed for gold.
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. Screen fire assay was undertaken on the high grade gold interval at 115.1m in diamond drill hole 22MODD029
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.
6. All drill holes referenced in this announcement are reported in Tables 1a and 1b and 2a and 2b.
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. 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><u>Diamond drilling</u></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>	<p>All co-ordinates are in UTM grid (GDA94 Z50) and drill hole collars have been surveyed by handheld GPS to an accuracy of ~1.0m. The accuracy of historical drill collars pre-2009 is unknown.</p>
	<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>Regional 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>In this RC drill program 1m samples were immediately submitted for laboratory analysis from the cyclone splitter on the rig.</p> <p>The sample size is deemed appropriate for the grain size of the material being sampled.</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. 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>	In this RC drill program 1m samples were immediately submitted for laboratory analysis from the cyclone splitter on the rig. In regional RC drilling 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 MGVS 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.

Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<p>On composite sampling and 1m Aircore re-samples, analysis is undertaken by Intertek-Genalysis or Bureau Veritas (registered laboratory's), with 50g fire assay with ICP-MS finish undertaken for gold.</p> <p>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).</p> <p>Internal certified laboratory QAQC is undertaken including check samples, blanks and internal standards.</p> <p>This methodology is considered appropriate for base metal mineralisation and gold at the exploration phase.</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>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.
Verification of sampling and assaying	<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.
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	All maps and locations are in UTM grid (GDA94 Z50) and have been surveyed or measured by hand-held GPS with an accuracy of $\pm 2$ 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 $\pm 2$ m).
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	Variable drill hole spacings are used to complete 1 <sup>st</sup> 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.
Orientation of data in relation to geological structure	<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>	<p>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.</p> <p>Most drill holes are designed at a dip of approximately -60 degrees.</p>
	<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 MGCV 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

<b>Criteria</b>	<b>Explanation</b>	<b>Commentary</b>
<i>Mineral tenement and land tenure status</i>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	Musgrave Minerals secured 100% of the Moyagee Project area in August 2017 (see MGCV ASX announcement 2 August 2017: "Musgrave Secures 100% of Key Cue Tenure"). The Break of Day, Starlight, Lena and White Heat-Mosaic deposits are located on granted mining lease M21/106 and the primary tenement holder is Musgrave Minerals Ltd. Other deposits including Big Sky and Numbers are located on M21/106 and E58/335 in an area held 100% by MGCV. 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 MGCV 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 MGCV 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.



	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.	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.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been reported.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	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.
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 avoiding misleading reporting of Exploration Results.	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.
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.