ASX RELEASE 24 February 2021

ASX: MGV

Outstanding high-grade gold at White Heat, Cue

- **Further assays from RC drilling at the White Heat prospect, 300m south of Break of Day have continued to intersect high-grade gold including:**
  - **3m @ 26.4g/t Au from 32m (21MORC007),**
  - **3m @ 22.5g/t Au from 60m (21MORC0037) and,**
  - **3m @ 11.8g/t Au from 43m,**
  - **4m @ 5.7g/t Au from 16m (21MORC035),**
  - **1m @ 22.5g/t Au from 32m (21MORC033)**
- **Mineralisation remains open down plunge with assays pending for a further 10 drill holes expected late-March**
- **Assays from initial RC follow-up drilling assays at targets 5, 14 and 20 expected in mid-March**
- **Follow-up aircore drilling to extend the mineralised footprint at targets 5, 20, 14 and 15 is underway**
- **Diamond drilling of regolith gold anomalies on Lake Austin is underway within the Evolution JV**

Musgrave Minerals Ltd (ASX: **MGV**) ("Musgrave" or "the Company") is pleased to report further high-grade reverse circulation ("RC") gold assay results from the newly discovered White Heat prospect, 300m south of Break of Day at its 100% owned ground at its flagship Cue Gold Project in Western Australia's Murchison district (*Figure 1*).

Musgrave Managing Director Rob Waugh said: *"This is another great set of results from the White Heat discovery which shows a steep westerly plunge to the high-grade shoot. The proximity to Break of Day would provide strong synergies for potential future development. Drilling is ongoing with two rigs on site and further assay results expected in coming weeks from White Heat and other regional targets".*

White Heat Prospect

Further RC drilling at White Heat (formally Target 2) has identified high-grade gold over a strike extent of up to 100m with a steep westerly plunge (*Figure 2 and 3*). Twenty-five RC drill holes have been

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completed to date at White Heat with assays now received for the first 15 holes (*Tables 1a and 1b*). Drill holes are sited at 40m intervals along 20m spaced traverse lines. Significant new intercepts from 1m individual samples (unless otherwise stated) include:

- **3m @ 26.4g/t Au from 32m (21MORC007) including;**
  - **1m @ 65.4g/t Au from 32m**
- **3m @ 22.5g/t Au from 60m (21MORC0037) and,**
  - **3m @ 11.8g/t Au from 43m,**
- **4m @ 5.7g/t Au from 16m (21MORC035)**
- **1m @ 22.5g/t Au from 32m (21MORC033)**
- **1m @ 5.1g/t Au from 119m (21MORC038)**
- **6m @ 1.6g/t Au from 36m (20MORC009) – single composite sample**
- **6m @ 1.3g/t Au from 56m (20MORC006) – single composite sample**

The mineralisation has a similar orientation to the Starlight lode at Break of Day, located 300m to the north, (*Figure 2*) and is hosted within a basalt package thought to be the same stratigraphy as that hosting Starlight. A leached near surface zone is present (*Figure 3*) where gold is depleted in the upper saprolite. The mineralisation is open down plunge.

A combination of 6m composites and 1m individual samples have been analysed from the RC holes drilled in the current program with new details presented in Tables 1a and 1b. All intervals assaying above 1g/t have been reported in this release.

The regional aircore drilling program that identified White Heat has also identified high-grade gold at five other targets. Individual 1m samples have been received for a further seven holes in this aircore program with the new results supporting the initial composite assay data. New assay results include:

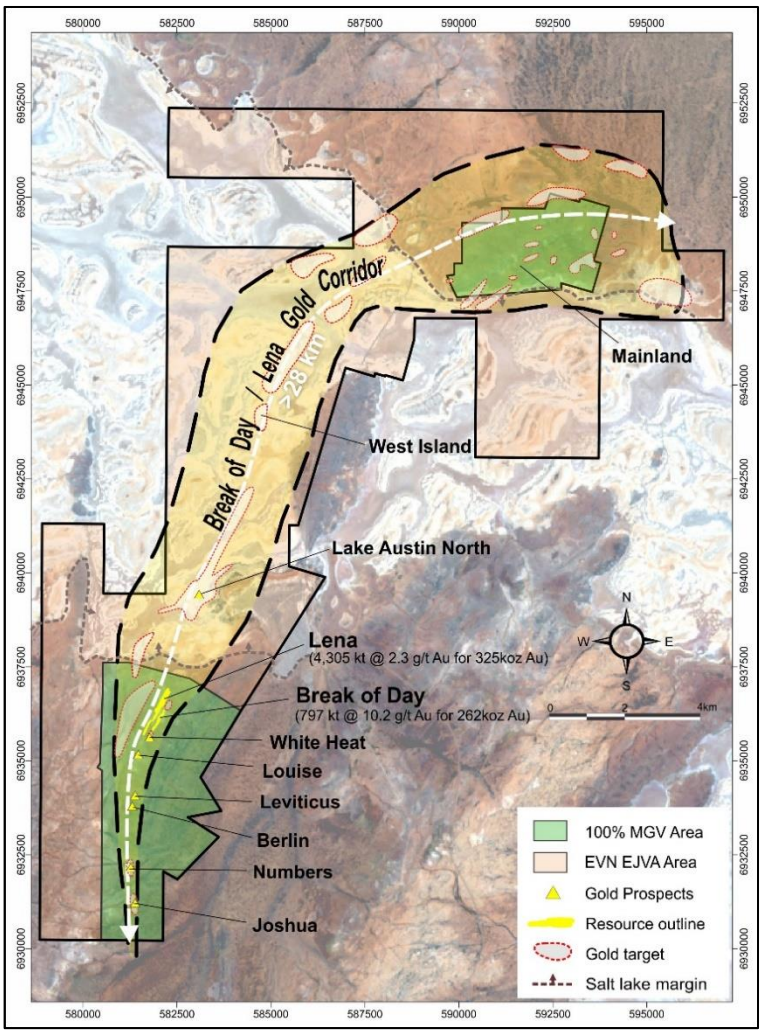


Figure 1: Prospect location plan

Target 5

- **24m @ 2.53g/t Au from 16m (20MUAC402) including,**
  - **2m @ 8.8g/t Au from 20m and**
  - **1m @ 33.9g/t Au from 34m**
- **2m @ 21.1g/t Au from 34m (20MUAC397)**



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Target 20

- **8m @ 2.56g/t Au from 27m (20MUAC395)**
- **1m @ 1.98g/t Au from 36m (20MUAC384)**

These targets are being tested with RC drilling during the current program with assays expected mid-March.

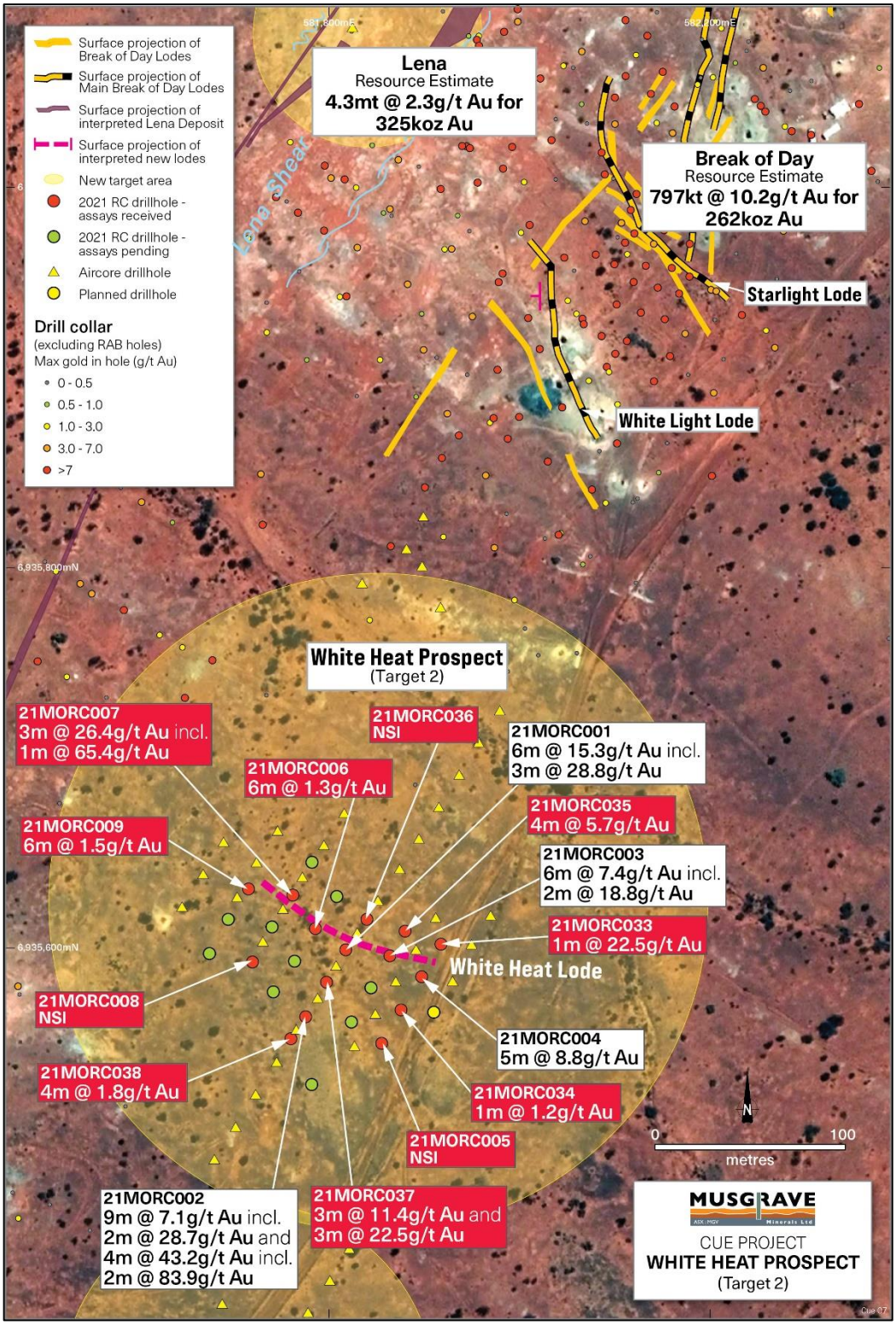


Figure 2: Plan showing drill hole collars at White Heat prospect and new assay results (assays are pending for RC drill holes that are not labelled)

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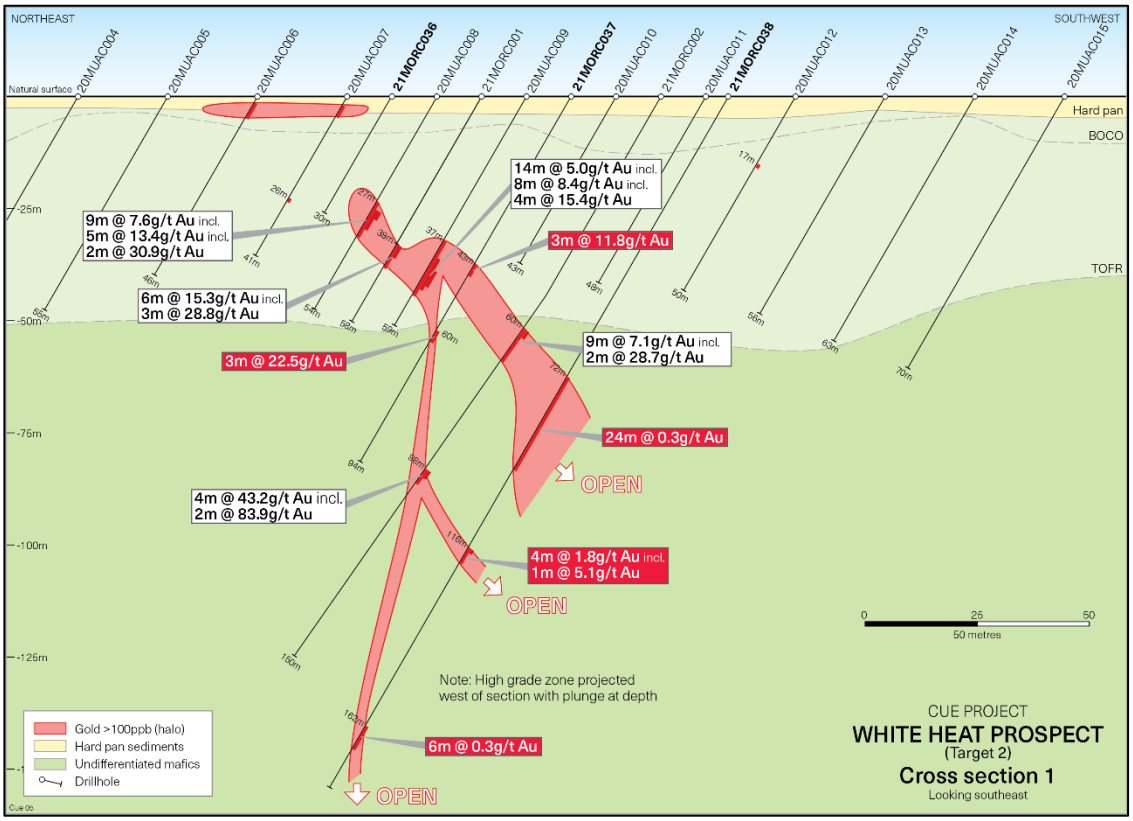


Figure 3: Cross-section showing current drill holes at the White Heat Prospect

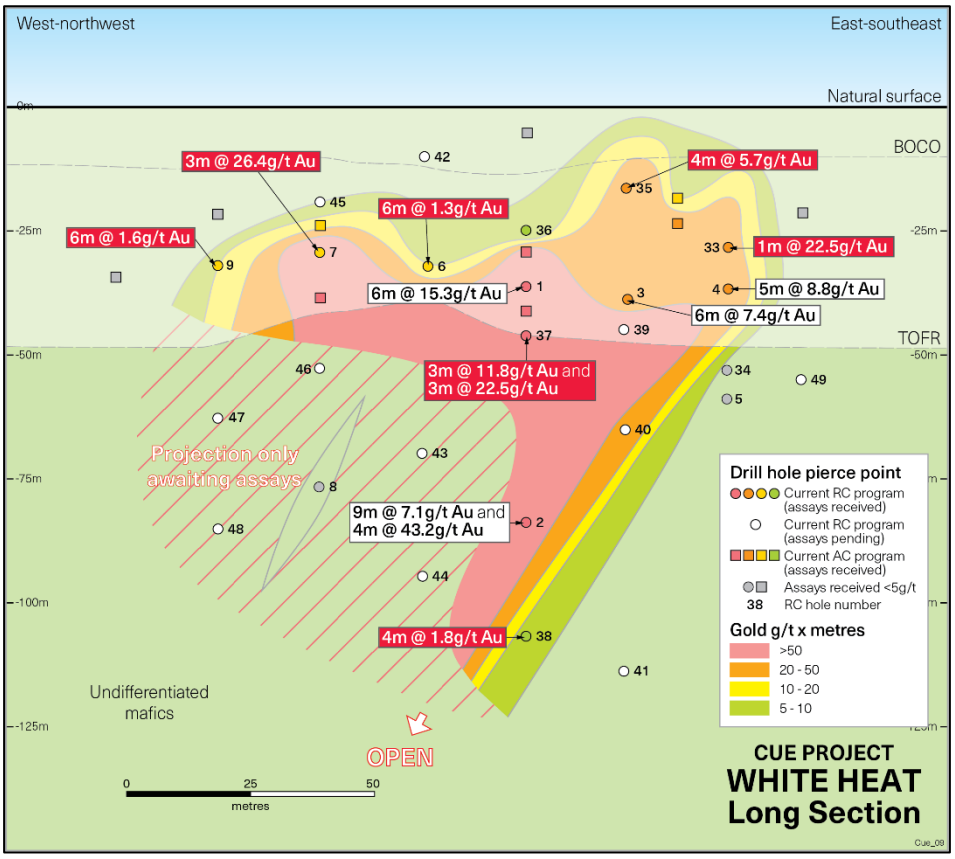


Figure 4: Long section along the plane of the mineralisation showing current drill holes at the White Heat Prospect



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Cue Project - Break of Day

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

The current 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*).

Ongoing Activities

Musgrave 100% tenements

- The first phase of RC drilling at the White Heat target is now complete to approximately 125m vertical depth with further assay results expected in late March.
- Initial RC follow-up drilling to define the basement source of gold anomalism at targets 5, 14 and 20 is now complete with first assay results expected in mid-March.
- A large regional aircore drilling program to define the extent of gold anomalism over existing targets has commenced.
- Work for the prefeasibility study at Break of Day and Lena is underway.

Evolution JV

- Diamond drilling to follow-up the extensive regolith gold anomalies identified in the regional aircore drilling program on Lake Austin has commenced.

Approved 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:

- *16 February 2021, "RIU Explorers Conference - Company Presentation"*
- *4 February 2021, "Appointment of Non-executive Director"*
- *28 January 2021, "Quarterly Activities and Cashflow Report"*
- *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, "Investor Update Presentation"*
- *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"*
- *19 November 2020, "AGM Presentation"*
- *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"*
- *27 October 2020, "Quarterly Activities and Cashflow Report"*
- *16 October 2020, "Annual Report to Shareholders"*
- *13 October 2020, "Starlight Shines – Diggers and Dealers Company Presentation"*
- *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"*
- *31 July 2020, "Quarterly Activities and Cashflow Report"*
- *28 July 2020, "Bonanza gold grades continue at Starlight with 3m @ 884.7g/t Au"*
- *6 July 2020, "85m@11.6g/t gold intersected near surface at Starlight"*
- *29 June 2020, "New gold lode discovered 75m south of Starlight"*
- *9 June 2020, "Bonanza near surface hit of 18m@179.4g/t gold at Starlight"*
- *5 June 2020, "Scout drilling defines large gold targets at Cue, Evolution JV"*
- *3 June 2020, "12m@112.9g/t Au intersected near surface at Starlight"*
- *21 April 2020, "High grades confirmed at Starlight"*
- *1 April 2020, "More High-grade gold at Starlight Link-Lode, Break of Day"*
- *16 March 2020, "Starlight Link-lode shines at Break of Day"*
- *28 February 2020, "High-grade gold intersected Link-lode, Break of Day"*
- *17 February 2020, "Lena Resource Update"*
- *3 December 2019, "New high-grade 'link-lode' intersected at Break of Day, Cue Project"*
- *27 November 2019, "High-grade gold intersected in drilling at Mainland, Cue Project"*
- *9 October 2019, "High-grade gold intersected at Break of Day and ultra-high-grade rock-chip sample from Mainland, Cue Project"*
- *17 September 2019, "Musgrave and Evolution sign an $18 million Earn-In JV and $1.5M placement to accelerate exploration at Cue"*
- *28 May 2019, "Scout Drilling Extends Gold Zone to >3km at Lake Austin North"*
- *16 August 2017, "Further Strong Gold Recoveries at Lena"*
- *14 July 2017, "Resource Estimate Exceeds 350koz Au"*

Competent Person's Statement
Exploration Results
The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled and/or thoroughly reviewed by Mr Robert Waugh, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and a Member of the Australian Institute of Geoscientists (AIG). Mr Waugh is Managing Director and a full-time employee of Musgrave Minerals Ltd. Mr Waugh has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Waugh consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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



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Table 1a: ***Summary of new RC drill hole assay intersections from White Heat prospect***

Drill Hole ID	Drill Type	Prospect	Sample Type	EOH	From (m)	Interval (m)	Au (g/t)	Comment
21MORC005	RC	White Heat	6m Composite	148	NSI			Below plunge of shoot
21MORC006	RC	White Heat	6m Composite	57	36	6	1.3	Shallow low-grade leached zone
21MORC007	RC	White Heat	1m Individual	58	32	3	26.4	High-grade shoot
			including		32	1	65.4	
21MORC008	RC	White Heat	6m Composite	143	NSI			Weak veining – no gold
21MORC009	RC	White Heat	6m Composite	65	36	6	1.5	Saprolitic low-grade leached zone Western edge of shoot
21MORC010	RC	Target 14	6m Composite	150	NSI			Source of regolith gold not identified
21MORC011	RC	Target 14	6m Composite	150	NSI			Source of regolith gold not identified
21MORC012	RC	Target 14	6m Composite	175	NSI			Source of regolith gold not identified
21MORC031	RC	Target 17	6m Composite	50	NSI			Further interpretation required
21MORC032	RC	Target 17	6m Composite	100	NSI			Further interpretation required
21MORC033	RC	White Heat	1m Individual	40	32	1	22.5	Eastern edge of shoot
21MORC034	RC	White Heat	1m Individual	100	60	1	1.2	Below eastern edge of plunging shoot
21MORC035	RC	White Heat	1m Individual	50	16	4	5.7	Near surface gold mineralisation
21MORC036	RC	White Heat	1m Individual	30	NSI			Saprolitic leached zone
21MORC037	RC	White Heat	1m Individual	94	43	3	11.4	Main lode
			Including		49	1	1.2	Stringer
			and		60	3	22.5	Footwall lode
21MORC038	RC	White Heat	1m Individual	178	72	24	0.27	Main lode
			and		116	4	1.8	Eastern edge of plunging shoot
			Including		119	1	5.1	
			and		162	6	0.3	Footwall lode

Table 1b: ***Summary of new 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
21MORC005	RC	White Heat	581828	6935550	030	-60	418	148	Reported Above
21MORC006	RC	White Heat	581793	6935610	030	-60	418	57	Reported Above
21MORC007	RC	White Heat	581781	6935628	030	-60	418	58	Reported Above
21MORC008	RC	White Heat	581760	6935593	030	-60	418	143	Reported Above
21MORC009	RC	White Heat	581758	6935631	030	-60	418	65	Reported Above
21MORC010	RC	Target 14	581518	6937330	030	-60	418	150	Reported Above
21MORC011	RC	Target 14	581480	6937265	030	-60	418	150	Reported Above
21MORC012	RC	Target 14	581509	6937117	030	-60	418	175	Reported Above
21MORC013	RC	Target 14	581465	6937050	030	-60	418	175	Assays Pending
21MORC014	RC	Target 14	581202	6936352	030	-60	418	150	Assays Pending
21MORC015	RC	Target 14	581164	6936287	030	-60	418	150	Assays Pending
21MORC016	RC	Target 14	581004	6936014	030	-60	418	150	Assays Pending
21MORC017	RC	Target 14	580965	6935950	030	-60	418	150	Assays Pending
21MORC018	RC	Target 14	580959	6935082	030	-60	418	150	Assays Pending



21MORC019	RC	Target 14	580919	6935019	030	-60	418	150	Assays Pending
21MORC020	RC	Target 14	580979	6931844	030	-60	418	75	Assays Pending
21MORC021	RC	Target 20	581000	6931878	210	-60	418	75	Assays Pending
21MORC021	RC	Target 20	581064	6931978	210	-60	418	100	Assays Pending
21MORC022	RC	Target 20	581054	6931890	210	-60	418	75	Assays Pending
21MORC023	RC	Target 20	580979	6931844	210	-60	418	75	Assays Pending
21MORC024	RC	Numbers	581341	6932196	120	-60	418	125	Assays Pending
21MORC025	RC	Target 5	580916	6932319	030	-60	418	90	Assays Pending
21MORC026	RC	Target 5	580965	6932395	030	-60	418	90	Assays Pending
21MORC027	RC	Target 5	581008	6932463	210	-60	418	80	Assays Pending
21MORC028	RC	Target 5	580900	6932367	030	-60	418	100	Assays Pending
21MORC029	RC	Target 5	580954	6932451	210	-60	418	82	Assays Pending
21MORC030	RC	Target 5	580938	6932503	210	-60	418	76	Assays Pending
21MORC031	RC	Target 17	582417	6935872	030	-60	418	50	Assays Pending
21MORC032	RC	Target 17	582402	6935850	030	-60	418	100	Assays Pending
21MORC033	RC	White Heat	581859	6935602	030	-60	418	46	Reported Above
21MORC034	RC	White Heat	581838	6935567	030	-60	418	100	Reported Above
21MORC035	RC	White Heat	581840	6935609	030	-60	418	52	Reported Above
21MORC036	RC	White Heat	581820	6935615	030	-60	418	40	Reported Above
21MORC037	RC	White Heat	581799	6935582	030	-60	418	94	Reported Above
21MORC038	RC	White Heat	582402	6935850	030	-60	418	178	Reported Above
21MORC039	RC	White Heat	581822	6935579	030	-60	418	90	Assays Pending
21MORC040	RC	White Heat	581812	6935561	030	-60	418	120	Assays Pending
21MORC041	RC	White Heat	581791	6935528	030	-60	418	178	Assays Pending
21MORC042	RC	White Heat	581804	6935627	030	-60	418	40	Assays Pending
21MORC043	RC	White Heat	581782	6935593	030	-60	418	100	Assays Pending
21MORC044	RC	White Heat	581771	6935577	030	-60	418	147	Assays Pending
21MORC045	RC	White Heat	581791	6935645	030	-60	418	40	Assays Pending
21MORC046	RC	White Heat	581770	6935611	030	-60	418	100	Assays Pending
21MORC047	RC	White Heat	581747	6935615	030	-60	418	80	Assays Pending
21MORC048	RC	White Heat	581737	6935597	030	-60	418	124	Assays Pending

Table 2a: ***Summary of new aircore drill hole assay intervals from regional program***

Drill Hole ID	Drill Type	Prospect	Sample Type	EOH	From (m)	Interval (m)	Au (g/t)	Comment
20MUAC384	AC	Target 25	1m Individual	45	36	3	1.98	Dispersion halo in saprolite Composite assays 6m @ 1.08g/t Au
20MUAC387	AC	Target 20	1m Individual	42	23	3	1.98	Dispersion halo in saprolite Composite assays 12m @ 1.36g/t Au
20MUAC391	AC	Target 20	1m Individual	42	36	1	1.84	Dispersion halo in saprolite Composite assays 6m @ 1.02g/t Au
20MUAC395	AC	Target 20	1m Individual	42	12	1	1.0	Dispersion halo in saprolite Composite assays 24m @ 0.66g/t Au
			and		27	8	2.56	
20MUAC396	AC	Target 5	1m Individual	42	10	13	0.80	Dispersion halo in upper saprolite Composite assays 24m @ 0.66g/t Au
			and		41 to EOH	1	3.77	Gold mineralisation at EOH
20MUAC397	AC	Target 5	1m Individual	42	34	2	21.1	High-grade gold in saprolite with qtz veining Composite assays 6m @ 10.6g/t Au
20MUAC402	AC	Target 5	1m Individual	42	16	24	2.53	Composites assayed 30m @ 1.1g/t Au
			Including		20	2	8.8	
			and		34	1	33.9	



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Table 2b: ***Summary of MGV drill collars from aircore drilling program***

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (deg)	Dip (deg)	RL (m)	Total Depth (m)	Assays
20MUAC384	Aircore	Target 25	581386	6930953	30	-60	418	45	One metre samples reported Above
20MUAC387	Aircore	Target 20	580962	6931891	30	-60	418	42	One metre samples reported Above
20MUAC391	Aircore	Target 20	581028	6931848	30	-60	418	42	One metre samples reported Above
20MUAC395	Aircore	Target 20	580985	6931780	30	-60	418	42	One metre samples reported Above
20MUAC396	Aircore	Target 5	580916	6932392	30	-60	418	42	One metre samples reported Above
20MUAC397	Aircore	Target 5	580906	6932375	30	-60	418	42	One metre samples reported Above
20MUAC402	Aircore	Target 5	580915	6932465	30	-60	418	42	One metre samples reported Above

Notes to Tables 1a, 1b, 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.*
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, 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 >1g/t Au where zones of internal dilution are not weaker than 2m < 0.1g/t Au. Bulked thicker intercepts may have more internal dilution between high-grade zones.*
6. *All drill holes referenced in this announcement are reported in Tables 1a, 1b, 2a and 2b above.*
7. *Drill type; AC = Aircore, RC = Reverse Circulation, Diam = Diamond.*
8. *Coordinates are in GDA94, MGA Z50.*

---ENDS---

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JORC TABLE 1
Section 1 Sampling Techniques and Data

Criteria	Explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	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. Historical sampling criteria are unclear for pre 2009 drilling. <u>Current RC and aircore drill programs</u> 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.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	All co-ordinates are in UTM grid (GDA94 Z50) and drill hole collars have been surveyed by GPS to an accuracy of 0.5m.
	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.	<u>Current drill programs</u> 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. All 1m samples are sampled to 1-3kg in weight to ensure total preparation at the laboratory pulverization stage. The sample size is deemed appropriate for the grain size of the material being sampled. Some samples are sent to the Genalysis – Intertek laboratory in Maddington 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 detection limit). 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). 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).
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	RC and aircore drilling was undertaken by Strike Drilling Pty Ltd utilised an X350 tracked drill rig with an on-board compressor with 350psi/950cfm and an auxiliary booster with 350psi/1150 cfm. RC holes were drilled with an 83mm diameter blade bit. The drill rig has the capacity to switch between aircore and RC pending ground conditions. A combination of historical RAB, aircore, RC and diamond drilling has been utilised by multiple companies over a thirty-year period across the broader project area.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	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.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	MGV contracted drillers use industry appropriate methods to maximise sample recovery and minimise downhole contamination including using compressed air to maintain a dry sample in aircore drilling. Historical sampling recovery is unclear for pre 2009 drilling.



	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.	No significant sample loss or bias has been noted in current drilling or in the historical reports or from other MGV drill campaigns.
Logging	*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.*	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.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	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.
	The total length and percentage of the relevant intersections logged.	All drill holes are logged in full on completion.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	N/A
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	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
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Drill sample preparation and precious metal analysis is undertaken by registered laboratories (Genalysis – Intertek and MinAnalytical). Sample preparation by dry pulverisation to 85% passing 75 micron.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	MGV field QC procedures involve the use of certified reference standards (1:50), duplicates (~1:30) and blanks 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.
	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.	Sampling is carried out using standard protocols and QAQC procedures as per industry practice. Duplicate samples are inserted (~1:30) and more frequently when in high-grade gold veins, and routinely checked against originals. Duplicate sampling criteria is unclear for historical pre 2009 drilling. Historical QA/QC procedures are unclear for pre 2009 drilling.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate for grain size of sample material to give an accurate indication of gold mineralisation. Samples are collected from full width of sample interval to ensure it is representative of sample complete interval.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	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 samples are sent to 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.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools were used to estimate mineral or element percentages. Musgrave utilise a Thermo Scientific Niton GoldD XL3+ 950 Analyser to aid geological interpretation.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	MGV field QC procedures involve the use of certified reference standards (1:50), duplicates (~1:30) and blanks (1:50) at appropriate intervals for early-stage exploration programs. Historical QA/QC procedures are unclear for pre 2009 drilling.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	MGV samples are verified by the geologist before importing into the main MGV database (Datashed).
	The use of twinned holes.	No twin holes have been drilled by Musgrave Minerals Ltd during this program.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data is collected using a standard set of templates. Geological sample logging is undertaken on one metre intervals for all RC drilling with colour, structure, alteration and lithology recorded for each interval. Data is verified before loading to the database. Geological logging of all samples is undertaken.
	Discuss any adjustment to assay data.	No adjustments or calibrations are made to any assay data reported.

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Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	All maps and locations are in UTM grid (GDA94 Z50) and have been surveyed or measured by hand-held GPS with an accuracy of >±2 metres.
	Specification of the grid system used.	Drill hole and sample site co-ordinates are in UTM grid (GDA94 Z50) and historical drill holes are converted from local grid references.
	Quality and adequacy of topographic control.	All current aircore drill hole collars are planned and set up using hand-held GPS (accuracy +-2m).
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Variable drill hole spacings are used to complete 1st 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.
	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.	No resources have been calculated on regional drilling targets as described in this release due to the early-stage nature of the drilling
	Whether sample compositing has been applied.	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	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Drilling is designed to cross the mineralisation as close to perpendicular as possible on current interpretation whilst allowing for some minor access restrictions and mitigating safety risks. Most drill holes are designed at a dip of approximately -60 degrees.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No orientation-based sampling bias can be confirmed at this time and true widths are not yet known.
Sample security	*The measures taken to ensure sample security.*	Chain of custody is managed by MGV internal staff. Drill samples are stored on site and transported by a licenced reputable transport company to a registered laboratory in Perth (Genalysis-Intertek at Maddington 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 (Lab-Trak system at Genalysis-Intertek).
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No audits have been completed on sampling techniques and data due to the early-stage nature of the drilling

Section 2 Reporting of Exploration Results

Criteria	***Explanation***	**Commentary**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	Musgrave Minerals secured 100% of the Moyagee Project area in August 2017 (see MGV ASX announcement 2 August 2017: "Musgrave Secures 100% of Key Cue Tenure"). The Break of Day, Starlight and Lena prospects are located on granted mining lease M21/106 and the primary tenement holder is Musgrave Minerals Ltd. Regional targets in this release are 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.



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	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing and no known impediments exist.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Historical drilling, soil sampling and geophysical surveys have been undertaken in different areas on the tenements intermittently by multiple third parties over a period of more than 30 years. At Break of Day, Lena and Mainland historical exploration and drilling has been undertaken by a number of companies and at Break of Day and Lena most recently by Silver Lake Resources Ltd in 2009-13 and prior to that by Perilya Mines Ltd form 1991-2007. Musgrave Minerals has undertaken exploration since 2016.
Geology	*Deposit type, geological setting and style of mineralisation.*	Geology comprises typical Archaean Yilgarn greenstone belt lithologies and granitic intrusives. Two main styles of mineralisation are present, typical Yilgarn Archaean lode gold and volcanic massive sulphide (VMS) base metal and gold mineralisation within the Eelya Felsic Complex.
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* *easting and northing of the drill hole collar, elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole, down hole length and interception depth and hole length.*	All RC drill hole collars with assays received for the current regional drill program at Cue and reported in this announcement are in Tables 1a and 1b of this announcement. All relevant historical drill hole information has previously been reported by Musgrave, Perilya, Silver Lake Resources and various other companies over the years.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	Significant assay intervals are recorded above 1g/t Au with a minimum internal interval dilution of 2m @ 0.5g/t Au. No cut-off has been applied to any sampling.
	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.

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