

ASX RELEASE 21 April 2022

**ASX: MGV** 

# Thick basement gold intersections at West Island, Cue JV

- Diamond drilling at the West Island prospect on the Musgrave -Evolution Cue Joint Venture (EVN earning 75%) continues to identify multiple new gold lodes. Significant recent results from West Island include:
  - o 2.4m @ 7.1g/t Au from 137.9m (22CUDD001), and
  - o 19m @ 4.43g/t Au from 282.0m (22CUDD001), including;
    - o 10.5m @ 6.25g/t Au from 287.0m
  - 2.9m @ 9.59g/t Au from 308.1m (22CUDD002), and
  - o 12.0m @ 4.89g/t Au from 322.0m (22CUDD002) including;
    - o 9.0m @ 6.37g/t Au from 322.0m
  - 6.55m @ 4.66g/t Au from 253.45m (21MODD035)
- Follow-up aircore drilling on Lake Austin has extended the mineralised footprint to more than 2.1km at West Island and has highlighted new basement targets. Significant intersections include:
  - 2m @ 119.6g/t Au from 174m (21MOAC148), 500m south of current West Island diamond drilling
  - 2m @ 18.06g/t Au from 74m (21MOAC206) in new target area 2.8km south of West Island
- Diamond drilling to test basement targets is continuing and a new phase of regional aircore drilling has commenced to define new basement target areas within the favourable host dolerite sill

Musgrave Minerals Ltd (ASX: **MGV**) ("Musgrave" or "the Company") is pleased to report further assay results (*Tables 1a and 2a*) from diamond and aircore drilling programs on the Cue Joint Venture with Evolution Mining Ltd ("Evolution") in Western Australia's Murchison district. Diamond drilling continues to intersect potential ore grade intersections over wide thicknesses in basement rocks at the West Island Prospect. Aircore drilling results continue to extend the large regolith gold mineralisation footprint at the West Island Prospect and identify new zones for follow-up basement drill testing.

The West Island zone is part of a broader regional 7km-long anomalous gold corridor within the joint venture (*Figure 1*). The mineralisation at West Island is hosted within a differentiated dolerite intrusive sill, similar to that hosting the high-grade Great Fingall and Golden Crown deposits 25km to the north of the Cue Project.

The Great Fingall and Golden Crown deposits host a combined 4.4Mt @ 14.1g/t Au for 2.0Moz gold (Total Indicated and Inferred Resources and past production) (see Westgold Resources Ltd (WGX) ASX announcement 10 June 2020, "Investor Presentation June 2020 – ASX Release", page 15).

Musgrave Managing Director Rob Waugh said: "The gold system at West Island on the Cue JV with Evolution is a discovery that highlights the upside potential of the Project. Diamond drilling continues to deliver strong basement results with drilling confirming potential for multiple highgrade basement gold lodes within the dolerite sill. To compliment these results aircore drilling continues to extend the West Island system and identify new basement targets under Lake Austin."

The intent of the drilling on the JV area is to delineate the scale of the gold system at West Island, test additional gold-in-regolith aircore anomalies and define new diamond drilling targets through aircore drilling.

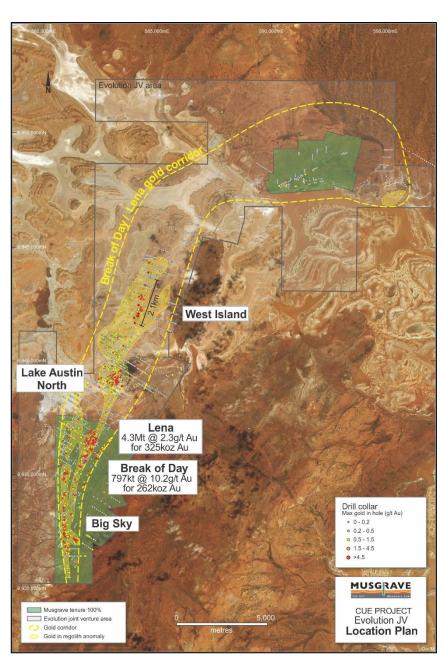


Figure 1: Location plan showing Musgrave's wholly owned projects (in green) and Evolution JV tenure with drill hole locations (maximum gold in hole is presented as a gradational colour scheme at the hole collar)

#### **Lake Austin Diamond Drilling Program Results**

Results of diamond drilling continue to identify multiple, new northwest trending lodes oblique to the favourable dolerite host unit at West Island. Drilling will progress through the June quarter 2022 to continue to delineate the potential scale of the mineralisation at West Island whilst also beginning to focus on other basement targets within the JV area.

Significant new diamond core intercepts include:

- o 2.4m @ 7.1g/t Au from 137.9m (22CUDD001), and
- o 19m @ 4.43g/t Au from 282.0m (22CUDD001) including:
  - o 10.5m @ 6.25g/t Au from 287.0m
- 2.9m @ 9.59g/t Au from 308.1m (22CUDD002), and
- 12.0m @ 4.89g/t Au from 322.0m (22CUDD002) including:
  - o 9.0m @ 6.37g/t Au from 322.0m
- o 6.55m @ 4.66g/t Au from 253.45m (21MODD035)
- 5.04m @ 2.58g/t Au from 265.46m (21MODD034)

Gold mineralisation is associated with a series of shear zones that obliquely crosscut a favourable dolerite host unit (*Figures 1 and 2*). At least eight individual shear zones have been identified along the potential 2.1 kilometre-long West Island trend.

Four of these structures have been prioritised for follow-up drilling to test their strike potential. Results will help with understanding the potential scale of the mineral system as well as adjacent targets that may be important for hosting high grade laminated veins.

The intersections are associated with extensive gold in regolith mineralisation which aircore drilling has shown to extend for at least 2.1km of strike length at West Island. The West Island zone is part of a broader regional 7km long anomalous gold corridor within the joint venture tenements (*Figure 1*). The diamond drilling to date at West Island has only tested a small area of basement and the mineralisation remains open along strike and at depth on at least four individual lodes. Diamond drilling at West Island is continuing.

All new diamond drill assay results above 1g/t are presented in Table 1a with hole collars in Table 1b.

#### **Lake Austin Aircore Drilling Program Results**

Final results for the third phase of regional aircore drilling have now been received for the Musgrave – Evolution Joint Venture. The results continue to delineate the favourable dolerite host sill with the intersection in 21MOAC148 extending the strike of aircore gold anomalism at West Island to 2.1km. Significant new high-grade results (*Figure 2*) from this phase of aircore drilling are summarised below:

- o 2m @ 119.6g/t Au from 174m (21MOAC148)
- o 2m @ 18.06g/t Au from 74m (21MOAC206)
- 2m @ 3.91g/t Au from 124m (21MOAC212)

The gold anomalism in 21MOAC206 is in a new area east of the Lake Austin North tonalite intrusive (*Figure 2*) and 2.8km south of West Island. All new aircore assay results above 2m @ 1000ppb Au are presented in Table 2a with drill hole collars in Table 2b. A new phase of regional aircore drilling to identify additional basement gold targets has commenced.

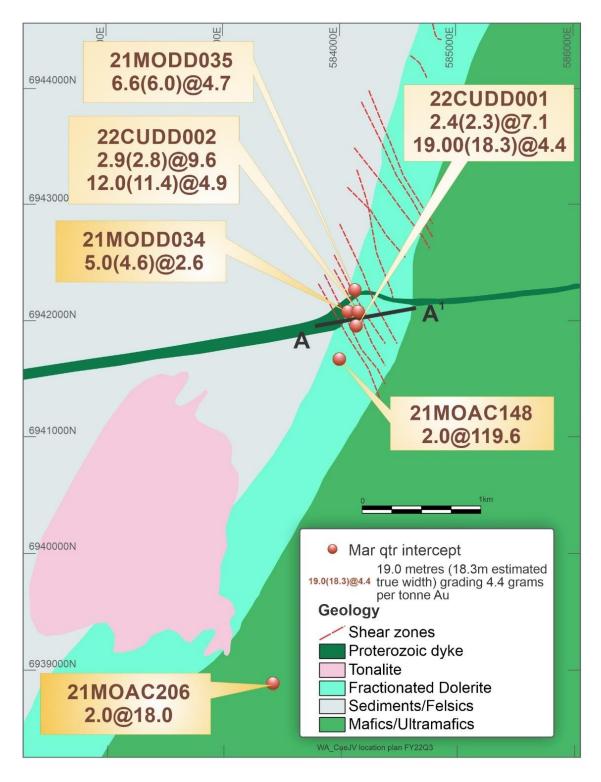


Figure 2: West Island location plan showing new diamond drill hole and significant aircore drill hole locations together with potential host shear zones within fractionated dolerite host

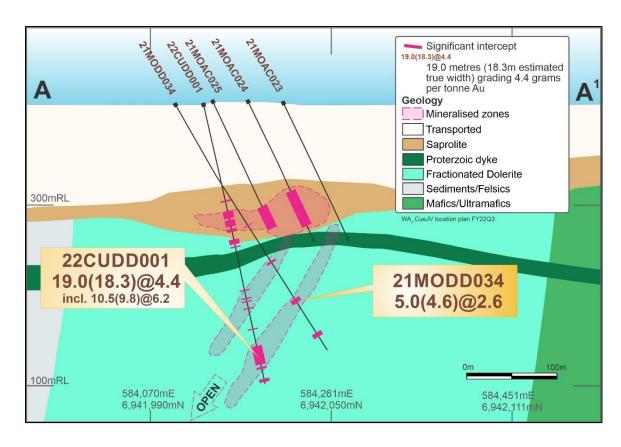


Figure 3: Cross section at West Island Prospect showing gold mineralisation in diamond drill holes 21MODD034 and 22CUDD001and regolith gold halo

### **Cue Joint Venture - Background**

In October 2019, Musgrave entered an Earn-In and Joint Venture Exploration Agreement with Evolution Mining Limited over a large area of Lake Austin and surrounds on the Cue Project in the Murchison District of Western Australia.

The Evolution JV lies to the north of and excludes all the current resources at Cue (including the Lena and Break of Day deposits), the new White Heat-Mosaic and Big Sky discoveries, and the Mainland option area.

Evolution can earn a 75% interest in the JV Area by sole funding A\$18M on exploration over a five-year term. Evolution has currently spent approximately A\$11M on the joint venture with a further A\$2M planned for Q4, FY22. Evolution is now the operator of the JV and is managing the ongoing drilling programs.

## **Musgrave – Evolution Cue Joint Venture - Ongoing Exploration**

- Diamond drilling to test the basement beneath regolith gold mineralisation on Lake Austin is continuing.
- A further phase of regional aircore drilling to identify additional basement targets for drill testing has commenced. This drilling is focussed on identifying extensions to the favourable dolerite host unit at West Island.

Authorised for release by the Board of Musgrave Minerals Limited.

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#### **About Musgrave Minerals**

Musgrave Minerals Limited is an active Australian gold and base metals explorer. The Cue Project in the Murchison region of Western Australia is an advanced gold project. Musgrave has had significant exploration success at Cue with the ongoing focus on increasing the gold resources through discovery and extensional drilling to underpin studies that will demonstrate a viable path to near-term development. Musgrave also holds a large exploration tenement package in the Ni-Cu-Co prospective Musgrave Province in South Australia.

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#### **Additional JORC Information**

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

- 10 March 2022, "Half yearly report and accounts"
- 17 February 2022, "Company Presentation RIU Explorers Conference" 28 January 2022, "Quarterly Activities and Cashflow Report" 27 January 2022, "High-grade gold intersected at West Island (Cue JV)"

- 15 October 2021, "Annual report to Shareholders"

  12 October 2021, "Thick aircore intercepts enhance West Island Prospect"
- 30 June 2021, "High-grade gold at West Island target EVN JV, Cue"
- 4 February 2021, "Appointment of Non-executive Director"
- 27 January 2021, "New basement gold targets defined on Evolution JV" 18 January 2021, "Results of SPP Offer"
- 12 January 2021, "Share Purchase Plan closes early"

- 18 December 2020, "Share Purchase Plan Offer Document"

  14 December 2020, "\$18M raising to fund resource growth and commence PFS"

  3 December 2020, "\$200, "\$100 drilling intersects high-grade gold and defines large gold zones under Lake Austin, Evolution JV"
- 5 June 2020, "Scout drilling defines large gold targets at Cue, Evolution JV"
- 17 February 2020, "Lena Resource Update"
- 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"

#### 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 forwardlooking statements.

Table 1a: Summary of new diamond drill hole assay intersections from Cue JV

Drill Hole ID	Drill Type	Prospect	Sample Type	ЕОН	From (m)	Interval (m)	ETW (m)	Au (g/t)	Comment
			Geological		163.00	1.00		1.41	Gold mineralisation in regolith
			and		167.70	0.80		1.41	Gold mineralisation in regolith
			and		170.50	0.50		1.43	Gold mineralisation in fresh rock
			and		200.00	0.80		1.61	Gold mineralisation in fresh rock
21MODD034	Diamond	West Island	and	336.85	202.00	1.00		2.22	Gold mineralisation in fresh rock
			and		213.00	1.00		1.24	Gold mineralisation in fresh rock
			and		243.00	2.00		1.10	Gold mineralisation in fresh rock
			and		265.46	5.04	4.60	2.58	Gold mineralisation in fresh rock
			and		315.00	2.50	2.30	2.47	Gold mineralisation in fresh rock
			Geological		115.00	2.00		2.25	Gold mineralisation in fresh rock
			and		139.00	1.63		2.10	Gold mineralisation in fresh rock
			and		149.50	0.50		1.51	Gold mineralisation in fresh rock
			and		168.40	0.85		3.37	Gold mineralisation in fresh rock
			and		192.60	0.80		4.42	Gold mineralisation in fresh rock
			and		198.30	1.70	1.60	4.73	Gold mineralisation in fresh rock
			and		218.80	0.36		4.88	Gold mineralisation in fresh
			and		224.75	0.30		1.58	rock Gold mineralisation in fresh
			and		253.45	6.55	6.00	4.66	rock Gold mineralisation in fresh
21MODD035	Diamond	nd West Island	and	396.6	261.30	1.86	1.70	4.24	rock Gold mineralisation in fresh
2			and		267.00	2.00		1.24	rock Gold mineralisation in fresh
			and		272.00	0.60		1.56	rock Gold mineralisation in fresh
			and		287.00	2.00		3.38	rock Gold mineralisation in fresh
			and		309.00	0.45		1.63	rock Gold mineralisation in fresh
			and	-	315.00	2.00		1.41	rock Gold mineralisation in fresh
			and		321.00	0.40		2.57	rock Gold mineralisation in fresh
			and		347.33	0.40		13.38	rock Gold mineralisation in fresh
			and		366.60	0.40		1.33	rock Gold mineralisation in fresh
					381.00	1.00		1.57	rock Gold mineralisation in fresh
			and			2.70		1.25	rock Gold mineralisation in fresh
			Geological		133.00				rock Gold mineralisation in fresh
			and		137.00	1.00		4.23	rock Gold mineralisation in fresh
			and		196.30	2.70		2.17	rock Gold mineralisation in fresh
			and .		212.80	0.80		4.16	rock Gold mineralisation in fresh
21MODD036	Diamond	West Island	and .	402.6	222.00	1.00		2.49	rock Gold mineralisation in fresh
			and		272.85	0.45		1.01	rock Gold mineralisation in fresh
			and		302.00	1.00		1.35	rock Gold mineralisation in fresh
			and		332.50	1.00		2.65	rock  Gold mineralisation in fresh
			and		334.80	1.90		9.89	rock
			Geological		79.50	3.90		1.77	Gold mineralisation in regolith
			and		138.70	0.70		1.04	Gold mineralisation in fresh rock
			and		147.00	4.30		2.82	Gold mineralisation in fresh rock
			and		163.00	0.60		9.04	Gold mineralisation in fresh rock
21MODD037	Diamond	West Island	and	400	176.00	3.00		2.11	Gold mineralisation in fresh rock
			and		181.00	4.00		3.71	Gold mineralisation in fresh rock
			and		188.00	0.50		38.59	Gold mineralisation in fresh rock
			and		196.00	2.50		2.70	Gold mineralisation in fresh rock
			and		206.00	1.00	-	2.07	Gold mineralisation in fresh rock

			and		215.00	3.00		1.74	Gold mineralisation in fresh
					219.30				rock Gold mineralisation in fresh
			and		219.30	1.70		3.15 1.10	rock Gold mineralisation in fresh
									rock Gold mineralisation in fresh
			Geological		185.00	1.60		1.11	rock Gold mineralisation in fresh
			and	-	194.00	0.30		1.51	rock Gold mineralisation in fresh
21MODD038	Diamond	West Island	and	336.6	225.50	0.50		1.34	rock  Gold mineralisation in fresh
			and		237.90	1.00		2.19	rock  Gold mineralisation in fresh
			and		290.00	0.35		2.56	rock
			Geological		175.00	0.50		1.06	Gold mineralisation in regolith
			and	=	224.00	1.50		5.49	Gold mineralisation in fresh
			and		249.00	1.00		1.52	Gold mineralisation in fresh rock
			and		251.70	0.70		2.22	Gold mineralisation in fresh rock
			and		258.40	0.60		1.73	Gold mineralisation in fresh rock
			and		260.00	2.46		3.54	Gold mineralisation in fresh rock
			and		264.00	2.00		7.85	Gold mineralisation in fresh rock
24MODD020	Diamond	West Island	and	402.7	279.37	0.63		1.99	Gold mineralisation in fresh rock
21MODD039	Diamond	West Island	and	402.7	290.30	1.90		3.59	Gold mineralisation in fresh rock
			and		300.00	1.00		1.56	Gold mineralisation in fresh rock
			and	1	306.50	1.00		5.27	Gold mineralisation in fresh rock
			and		326.50	0.50		4.22	Gold mineralisation in fresh
			and		336.00	1.00		1.47	Gold mineralisation in fresh
			and	-	370.00	2.00		2.62	Gold mineralisation in fresh
			and		376.00	3.00		2.15	rock Gold mineralisation in fresh
			and		386.00	2.00		1.60	rock Gold mineralisation in fresh
			Geological		147.40	0.70		2.02	rock Gold mineralisation in
		West Island	and	449	150.90	0.40		1.30	regolith Gold mineralisation in
			and		154.50	0.80		1.43	regolith  Gold mineralisation in fresh
			and		155.50	0.80		1.05	rock Gold mineralisation in fresl
			and		158.40	0.70			rock Gold mineralisation in fresl
21MODD040	Diamond							1.94	rock Gold mineralisation in fresh
			and .		159.40	1.00		2.64	rock Gold mineralisation in fresh
			and	-	274.50	1.00		1.24	rock Gold mineralisation in fresl
			and		351.30	2.10		1.41	rock  Gold mineralisation in fresh
			and		354.50	0.50		2.58	rock  Gold mineralisation in fresh
			and		436.10	2.00		1.85	rock  Gold mineralisation in
			Geological		111.50	1.50		2.82	regolith
			and		124.20	0.40		1.10	Gold mineralisation in regolith
			and		126.00	2.50		2.57	Gold mineralisation in regolith
			and		129.00	0.50		1.64	Gold mineralisation in regolith
			and		131.50	0.60		1.99	Gold mineralisation in regolith
			and		134.50	1.00		2.03	Gold mineralisation in regolith
			and		137.00	0.80		2.10	Gold mineralisation in regolith
			and	1	137.90	2.40	2.30	7.10	Gold mineralisation in regolith
22CUDD001	Diamond	West Island	and	323.5	145.60	0.90		8.91	Gold mineralisation in regolith
			and	1	157.00	1.00	0.95	7.11	Gold mineralisation in regolith
			and	•	165.00	1.00		1.20	Gold mineralisation in
			and	-	215.50	0.50		5.07	regolith Gold mineralisation in fresh
			and	1	225.00	0.50	0.40	38.00	rock Gold mineralisation in fresh
			and		228.00	1.00	55	1.21	rock Gold mineralisation in fresh
					236.32			7.42	rock Gold mineralisation in fresh
			and	1		1.03			rock Gold mineralisation in fresh
			and		255.00	1.00		1.05	rock

			and		260.00	1.00		1.03	Gold mineralisation in fresh rock
			and		270.00	1.00		1.55	Gold mineralisation in fresh rock
			and		275.40	0.60		1.02	Gold mineralisation in fresh rock
			and		282.00	19.00	18.30	4.43	Gold mineralisation in fresh rock
			including		287.00	10.50	9.80	6.25	Gold mineralisation in fresh rock
			and		304.00	1.00		1.26	Gold mineralisation in fresh rock
			and		315.00	1.00		1.00	Gold mineralisation in fresh rock
			and		320.00	1.00		2.17	Gold mineralisation in fresh rock
			Geological		131.00	0.60		1.07	Gold mineralisation in regolith
			and		196.00	2.00		1.97	Gold mineralisation in fresh rock
			and		216.00	2.00		3.13	Gold mineralisation in fresh rock
			and		230.00	1.00		3.87	Gold mineralisation in fresh rock
			and		234.70	1.30		1.76	Gold mineralisation in fresh rock
			and		250.00	0.30		1.51	Gold mineralisation in fresh rock
			and		254.00	8.00	7.70	1.33	Gold mineralisation in fresh rock
			and		285.24	0.30		4.52	Gold mineralisation in fresh rock
22CUDD002	Diamond	West Island	and	373	291.30	0.30		1.73	Gold mineralisation in fresh rock
			and		302.00	2.20		1.43	Gold mineralisation in fresh rock
			and		308.10	2.90	2.80	9.59	Gold mineralisation in fresh rock
			and		322.00	12.00	11.40	4.89	Gold mineralisation in fresh rock
			including		322.00	9.00	8.50	6.37	Gold mineralisation in fresh rock
			and		333.00	1.00		1.04	Gold mineralisation in fresh rock
			and		337.40	0.70		2.11	Gold mineralisation in fresh rock
			and		345.50	0.50		1.58	Gold mineralisation in fresh rock
			and		350.00	1.00		2.80	Gold mineralisation in fresh rock

Table 1b: Summary of diamond drill hole collars from current program with assay results in the table above

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (deg)	Dip (deg)	RL (m)	Total Depth (m)	Assays
21MODD034	Diamond	West Island	6942882	584070	105	-60	414	336.85	Assays results in table above
21MODD035	Diamond	West Island	6942265	584129	105	-60	414	396.6	Assays results in table above
21MODD036	Diamond	West Island	6942446	584161	105	-60	411	402.6	Assays results in table above
21MODD037	Diamond	West Island	6942555	584276	105	-60	411	400	Assays results in table above
21MODD038	Diamond	West Island	6943152	584357	105	-55	411	336.6	Assays results in table above
21MODD039	Diamond	West Island	6941885	583961	105	-60	411	402.7	Assays results in table above
21MODD040	Diamond	West Island	6941053	583595	105	-61	412	449	Assays results in table above
22CUDD001	Diamond	West Island	6941956	584142	30	-70	411	323.5	Assays results in table above
22CUDD002	Diamond	West Island	6942087	584162	40	-60	413	373	Assays results in table above

Table 2a: Summary of new significant aircore drill hole gold intersections

Drill Hole ID	Drill Type	Prospect	Sample Type	ЕОН	From (m)	Interval (m)	Au (g/t)	Comment
21MOAC142	AC	West Island	2m composite	131	98.00	2	1.48	Gold mineralisation in regolith
21MOAC148	AC	West Island	2m composite	190	174.00	2	119.60	Gold mineralisation in regolith
21MOAC204	AC	New prospect	2m composite	96	82.00	2	1.93	Gold mineralisation in regolith
21MOAC206	AC	Newspaper	2m composite	78	70.00	2	1.53	Gold mineralisation in regolith
21WOAC206	AC	New prospect	and	76	74.00	2	18.06	Gold mineralisation in regolith
21MOAC212	AC	West Island	2m composite	152	124.00	2	3.91	Gold mineralisation in regolith

# 2b: Summary of drill collars from aircore drill program with assay results in the table above

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (deg)	Dip (deg)	RL (m)	Total Depth (m)	Assays
21MOAC142	AC	West Island	6940920	583654	105	-60	411	131	Assays results in table above
21MOAC148	AC	West Island	6941666	583997	105	-60	412	190	Assays results in table above
21MOAC204	AC	Austin North	6938835	583517	120	-70	411	96	Assays results in table above
21MOAC206	AC	Austin North	6938888	583432	120	-70	412	78	Assays results in table above
21MOAC212	AC	West Island	6939933	583343	0	-90	410	152	Assays results in table above

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# JORC TABLE 1 Section 1 Sampling Techniques and Data

Criteria	Explanation Section 1 Sampling 1et	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	The drill hole sampling in this release has been carried out on Lake Austin as part of the Cue Joint Venture with Evolution Mining Ltd.
	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.	Sampling of Au mineralisation at the Cue JV was undertaken using diamond core and aircore (AC) chips (surface).  All drill samples were logged prior to sampling. Diamond drill core was sampled to lithological, alteration and mineralisation related contacts.  AC sampling was conducted in 2m composite intervals downhole. Sampling was carried out according to Evolution protocols and QAQC procedures. All drill-hole collars were surveyed for initial drilling and picked up after drilling using a handheld GPS.  The sampling and assaying methods are appropriate for the orogenic mineralised system and are representative for the mineralisation style. The sampling and assaying suitability was validated using Evolution's QAQC protocol and no instruments or tools requiring calibration were used as part of the sampling process.  Diamond drill-core sample intervals were based on geology to ensure a representative sample, with lengths ranging from 0.3m to 1.2m.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Surface diamond drilling was half core sampled.  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.
	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	One metre AC samples are laid out in rows of 20 on the ground and composite 2m samples were collected by scoop sampling the one metre piles to produce a 2-3kg composite sample which was sent to the Genalysis—Intertek laboratory in Maddington, Perth for analysis. Sample condition data is recorded (wet, damp or dry) in the database. Generally, recovery is 80-100% but occasionally down to 30% on rare occasions when ground water pressure is very high.
	coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	All diamond core and AC chip samples were dried, crushed and pulverised (total preparation) to produce a 50g charge for fire assay of Au. A suite of additional multi elements are determined using fouracid digest with ICP/MS and/or an ICP/AES finish for some selected intervals for pathfinder and lithostratigraphic use. These intervals are selected at the geologist's discretion.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Diamond holes from surface were wireline PQ (85mm diameter), HQ (63.5mm diameter) and some NQ (45.1mm diameter) holes.  All diamond core from surface core was orientated using the Reflex ACT III bottom of hole orientation tool.  The diamond drilling program reported here was undertaken by West Core Drilling Pty Ltd utilising a LF90D drill rig.  The aircore drilling program was undertaken Ausdrill Ltd with a 3-inch drill pipe and blade (76mm) or hammer (76mm) using a custom built Lake Crawler drill rig and a KL150 track mounted aircore rig.

Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.	All diamond core was orientated and measured during processing and the recovery of individual core runs recorded. The core was reconstructed into continuous runs on a cradle for orientation marking. Hole depths were checked against driller's core blocks. Inconsistencies between the logging and the driller's depth measurement blocks are investigated.  Diamond core samples are considered dry. The sample recovery and condition is recorded every metre. Generally, recovery is 98-100% but in weathered material occasionally down to 30% on rare occasions when ground is very broken. AC drill samples are dry until ground water is intersected. The sample size and condition (wet, damp, dry) is recorded every metre. Generally, recovery is 80-100% but occasionally down to 30% on rare occasions when ground water pressure is very high.  The cyclone and sample buckets are routinely cleaned to reduce the likelihood of cross sample contamination.  Drillers use industry appropriate methods to maximise sample recovery and minimise downhole contamination.  Pre 2009 drilling results noted in this report are historical and not reported in detail. As such these details are unknown.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/qain of fine/coarse material.	No significant sample loss or bias has been noted.
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.	Diamond core has been geologically logged to the level of detail required for a Mineral Resource estimation. RQD measurements and geotechnical logging were taken from diamond core and recorded.  All logging is both qualitative and quantitative in nature recording features such as structural data, sample recovery, lithology, mineralogy, alteration, mineralisation types, vein density/type, oxidation state, weathering, colour etc. All holes are photographed wet. Structural measurements are taken from core using a Kenometer instrument.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All diamond and AC holes were logged in entirety from collar to end of hole. Drill logs are loaded directly into the acQuire database by the geologist.  Drill core is cut on site by an automated Almonte core saw and half core is analysed.
	The total length and percentage of the relevant intersections logged.	All drill holes are logged in full on completion.
Sub-sampling techniques and	If core, whether cut or sawn and whether quarter, half or all core taken.	Diamond core was drilled from surface and was half core sampled and the remaining half was retained.
sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.  For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Aircore samples were collected as 2m composites for all drill holes in the current program using a scoop methodology.  Sample preparation of diamond and AC samples was undertaken by external laboratories according to the sample preparation and assaying protocol established to maximise the representation of orogenic style gold mineralisation. The laboratories performance was monitored as part of Evolution's QAQC procedure.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Laboratory inspections are routinely undertaken to monitor the laboratories compliance sampling and sample preparation protocol. The sample and size (1.5kg to 4kg) relative to the particle size (>90% passing 75um) of the material sampled is a commonly utilised practice for effective sample representation for orogenic gold deposits.
	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.	Quality control procedures adopted to maximise sample representation for all sub-sampling stages include the collection of duplicates (~1 in30) and the insertion of certified reference material (CRM) as assay standards (1 in 50) and the insertion of blank samples at appropriate intervals for early-stage exploration programs. High, medium and low grade gold CRM are used. Blank material is routinely submitted for assay and is inserted into each mineralised zone where possible. The quality control performance was monitored as part of Evolution's QAQC procedure.

	Whether sample sizes are appropriate to the grain size of the material being sampled.	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.  Samples for diamond drill holes 21MODD034 to 21MODD040 were sent to the Genalysis – Intertek laboratory in Maddington, Perth and samples from diamond drill holes 22CUDD001 and 22CUDD002 were sent to the ALS laboratory in Malaga, Perth. Samples are pulverized to 85% passing -75um and two metre composite samples are analysed using a 50g fire assay with ICP-MS (inductively coupled plasma - mass spectrometry) finish gold analysis (0.005ppm detection limit). Individual one metre gold samples are analysed using a 50g fire assay with ICP-MS finish for gold.  The pulp and bulk residue are retained at the lab until further notice. Duplicate samples are inserted in visually mineralised zones. A comparison of the duplicate sample vs. the primary sample assay result was undertaken as part of Evolution's QAQC protocol. It is considered that all sub-sampling and lab preparations are consistent with other laboratories in Australia and are satisfactory for the intended purpose. The sample sizes are considered appropriate and in line with industry
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.	standards.  The sampling preparation and assaying protocol used for this program was developed to ensure the quality and suitability of the assaying and laboratory procedures relative to the mineralisation types.  Fire assay is designed to measure the total gold within a sample. Fire assay has been confirmed as a suitable technique for orogenic type mineralisation. It has been widely used in early stage exploration programs of this nature in the Cue region.  In aircore drilling all samples through the cover-basement contact and into the Archaean regolith are analysed as 2m composites. Analysis is by 50g fire assay with ICP-MS finish for gold. Multi-element analysis is undertaken on all end of hole samples.  On all samples, analysis is undertaken by Intertek-Genalysis and ALS (both registered laboratories), with 50g fire assay with ICP-MS finish undertaken for gold.  In diamond drilling samples are analysed through potential gold mineralised zones.
	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 or other remote sensing instruments were utilised for reporting or interpretation of gold mineralisation.
	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.	Internal certified laboratory QAQC is undertaken including check samples, blanks and internal standards.  Quality control samples were routinely inserted into the sampling sequence. The intent of the procedure for reviewing the performance of certified standard reference material is to examine for any erroneous results (a result outside of the expected statistically derived tolerance limits) and to validate if required; the acceptable levels of accuracy and precision for all stages of the sampling and analytical process. Typically, batches which fail quality control checks are re-analysed.  This methodology is considered appropriate for gold mineralisation at the exploration phase.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Independent internal or external verification of significant intercepts is not routinely completed. The quality control / quality assurance (QAQC) process ensures the intercepts are representative for the orogenic gold systems. Half core and sample pulps are retained for when further verification is required.  Data which is inconsistent with the known geology undergoes further verification to ensure its quality using multi-element data.
	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.	All sample and assay information is stored utilising the acQuire database software system. Data undergoes QAQC validation prior to being accepted and loaded into the database. Assay results are merged when received electronically from the laboratory. The geologist reviews the database checking for the correct merging of results and that all data has been received and entered. Any adjustments to this data are recorded permanently in the database. Digital records of assay files are stored electronically.
	Discuss any adjustment to assay data.	No adjustments or calibrations have been made to the final assay data reported by the laboratory.

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.	No Mineral Resource Estimates have been calculated utilising data in this release.  All surface drill holes for this program have been surveyed for easting, northing and reduced level using handheld GPS with accuracy to 4m.  After a period of time, these are also picked up using a contract surveyor and a DGPS.  Downhole surveys were conducted at 30 m intervals downhole using a
	Specification of the grid system used.	Reflex Ez-Gyro North Seeker. Recent survey data at surface is collected and stored in MGA 94 Zone
	Quality and adequacy of topographic control.	<ul> <li>50.</li> <li>Topographic control was generated from lidar and GPS. with GPS accuracy of &gt;±2 metre.</li> <li>Pre 2009 drill hole collars noted in this report are historical and not reported in detail. As such these details are unknown.</li> </ul>
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Variable drill hole spacings are used to adequately test targets and are determined from geochemical, geophysical and geological data together with historical drilling information.  Regional aircore drill hole traverse spacing is variable from 100m to 400m between lines and 50m to 100m along lines. Diamond drill holes are spaced at variable intervals based on geological interpretation.  The drilling in this program has been designed to collect geological information from covered and undrilled areas. The holes are located to test for mineralisation, geology and structures based on interpretation of geophysics and mapping as well as below previous anomalous drilling results.
	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 mineral resources or ore reserves have been estimated based on the exploration data and information generated on the tenements that are subject to the Musgrave – Evolution joint venture agreement.
	Whether sample compositing has been applied.	Aircore samples were collected as 2m composites for all drill holes in the current program, unless EOH occurred on an odd number depth, using a scoop methodology from one metre sample piles. One metre individual samples are submitted for analysis where anomalous composite assays above 100ppb gold exist using a scoop methodology from one metre sample piles.  Composite sampling is undertaken using a stainless-steel scoop (trowel) on one metre samples and combined in a calico bag for a combined weight of approximately 2-3kg.  No sample compositing was undertaken in diamond core sampling.
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. Most drill holes are designed at a dip of approximately -55 to -60 degrees.  The true width of drill intersections in fresh rock is not known at this time but gold dispersion mineralisation in the Archaean saprolite from aircore drilling is interpreted to be dominantly flat lying.
	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.	There is no apparent bias in any of the drilling orientations used.  The relationship between the drilling orientation and the orientation of key mineralised structures intersected in this early stage exploration is not considered to have introduced a sampling bias and is not considered to be material.
Sample security	The measures taken to ensure sample security.	Chain of custody is managed by internal staff. Drill samples are stored on site and transported by a licenced reputable transport company (Toll road haulage) to a registered laboratory in Perth (Genalysis-Intertek at Maddington and ALS at Malaga). When at the laboratory samples are stored in a locked yard before being processed and tracked through preparation and analysis (Lab-Trak and Webtrieve systems). The laboratories are contained within a secured/fenced compound. Access into the laboratory is restricted and movements of personnel and the samples are tracked under supervision of the laboratory staff.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	All Diamond and AC QAQC data is monitored, and assays are reviewed internally to ensure the robustness and integrity of sampling and analysis methods.  Field sampling techniques are set out in a field procedure which is reviewed at least annually.

**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.  The security of the tenure held at the time of reporting	Musgrave Minerals has secured 100% of the Moyagee Project area (see MGV ASX announcement 2 August 2017: "Musgrave Secures 100% of Key Cue Tenure").  In October 2019 the Evolution Joint Venture commenced covering Lake Austin and some surrounding tenure. Evolution have a right to earn 75% in the project by spending \$18M on exploration within 5 years. Joint venture tenements include; E21/129, E21/200, E21/194, E21/177, E21/204, E21/207, E21/208, P21/757, E58/507, M21/107 and the northern portion of M21/106. Musgrave acted as the Earn-in Manager up to 31st December, 2021, with Evolution taking over as Earn-in Manager from 1st January, 2022.  The Break of Day, Lena, White Heat and Target 14 and Prospects are located on the southern portion of 100% MGV owned granted mining lease M21/106 and E58/335. The primary tenement holder is Musgrave Minerals Ltd. The Numbers and Big Sky Prospect are on E58/335 owned 100% by Musgrave Minerals Ltd. Lake Austin North is on M21/106 and E21/129.  The Mt Eelya Prospect is located on granted exploration licence E20/608 and the primary tenement holder is Musgrave Minerals Ltd. The Cue project tenements consist of 39 licences.  The tenements are subject to standard Native Title heritage agreements and state royalties. Third party royalties are present on some individual tenements.  All tenements are in good standing and no known impediments exist.
	along with any known impediments to obtaining a licence to operate in the area.	All teriements 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 and Lena historical exploration and drilling has been undertaken by a number of companies and most recently by Silver Lake Resources Ltd in 2010-11. Historical lake drilling from 1991-1999 was undertaken by Perilya Mines Ltd and from 2001-2006 by Mines and Resources Australia Pty Ltd. Prior to MGV, Silver Lake Resources Ltd also did historical drilling at Break of Day, Lena, Leviticus and Numbers between 2009 and 2011.
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 orogenic Yilgarn Archaean lode gold and volcanic massive sulphide (VMS) base metal and gold mineralisation within the Eelya Felsic Complex (northern tenure).
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level — elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.	Calculation: Cut off grade of 1 g/t Au with a minimum ore composite length of 0.3m. The maximum consecutive waste (below 1 g/t) cannot exceed 1m however there is no limit to included waste.  Significant intercepts are over 1 g/t Au average weighted grade and over 1 gram metre (length x weighted grade).  Sub-set intercepts stating 'Including' use a Cut off grade of 3 g/t Au.  Aircore:  Calculation: Cut off grade of 1 g/t Au with a minimum ore composite length of 1m. The maximum consecutive waste (below 0.1 g/t) cannot exceed 2m however there is no limit to included waste.  Significant intercepts are over 1 g/t Au average weighted grade and over 1 gram metre (length x weighted grade).
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.  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	All significant new drill hole assay data of a material nature are reported in this release. No cut-off has been applied to any sampling. All intervals have been length weighted.  All significant new drill hole assay data are reported in this release. No cut-off has been applied to any sampling.  All significant new drill hole assay data are reported in this release. No cut-off has been applied to any sampling.
	aggregations should be shown in detail.  The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are used.

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').	This drill program consists of early-stage exploration targets with only an early stage understanding of structural orientations hosting mineralised intervals. Estimated True Widths are supplied wherever possible.
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.	Drill hole location diagrams and representative sections of reported exploration results are provided either below or in the body of this report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high-grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Intersection lengths and grades are reported as down-hole, length weighted averages  Numbers of drill holes and metres are included in the body of the announcement.
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 new meaningful data is reported in this release. All material results from geochemical and geophysical surveys and drilling related to these prospects has been reported or disclosed previously. Other exploration data sets collected include multi-element data for bedrock samples, field mapping data, outcrop rock chip gold and ME data and geophysical surveys which included passive seismic, magnetic and gravity data.
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).  Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Further Exploration work on the Cue JV tenements, may include follow-up drilling depending on assessment of current drill results or testing of new targets with aircore or other methods.  Refer to figures in the body of this announcement.