

## Due Diligence and Valuation Report

Arrowhead code:	19-18-01
Coverage initiated:	08-Dec-2021
This document:	08-Dec-2021
Fair Value Bracket (per share):	AUD 0.38 to AUD 0.47
Share Price (Dec 08, 2021):	AUD 0.36

### Analyst

Aman Sabherwal  
[aman.sabherwal@arrowheadbid.com](mailto:aman.sabherwal@arrowheadbid.com)

### Market Data

52-Week Range:	AUD 0.25 – AUD 0.46
30-Day Average Daily Volume:	429,871
Market Cap (Dec 08, 2021):	AUD 179.9 million

### Financial Forecast (in AUD mn) (FY Ending –Jun)

AUD	'22P	'23P	'24P	'25P	'26P
NI (mn)	(0.7)	(0.8)	(1.3)	(1.3)	40.4
EPS (AUD)	(0.0)	(0.0)	(0.0)	(0.0)	0.08

### Company Overview

Musgrave Minerals Ltd (“Musgrave” or “the Company”) is an Australian early-stage mining Company with a primary focus on gold resources. The Company also holds limited interest in other base metals such as copper and silver.

Most of the Company’s projects are in Western Australia and all of them are currently in early exploration stage. The Company is currently focusing on conducting studies and development activities only on the projects located in Western Australia. The Company’s flagship project is the Cue project and has started pre-feasibility level studies at two (Break of Day and Lena) deposits of this project. In addition to commencing pre-feasibility studies (“PFS”) and defining a low-cost operation to commence production, the Company plans to continue to grow the resource base and accelerate exploration at its Cue project.

### Key Highlights

1. The Break of Day deposit includes five high grade lodes including Starlight and White Light. The mineralization remains open at several parts of the deposit, having near-surface nature with a very high grade of resources. The deposit has an estimated resource of 797kt @ 10.2g/t Au for 262Koz.
2. The Lena deposit is the largest deposit within the Cue project with an estimated mineral resource of 4.3Mt @ 2.3g/t Au for 325Koz gold. The deposit consists of several gold lodes, with some having significant high-grade depth potential.



Company:	Musgrave Minerals Ltd.
Ticker:	ASX: MGV
Headquarters:	West Perth, Western Australia
Chairman:	Graham Ascough
Managing Director:	Robert Waugh
Website:	<a href="http://www.musgraveminerals.com.au">www.musgraveminerals.com.au</a>

3. The Company recently identified three new gold prospects at the Cue project – White Heat, Big Sky, and Target 14. The Company will also focus on exploration work at these prospects in the coming months with the aim of identifying new resources to grow the existing resource base at the Cue project.
4. Musgrave has a 20:80 strategic joint venture (“JV”) with Cyprium over the non-gold rights in the Northern Cue tenure. The Company also has a 25:75 JV with Evolution Mining on the Lake Austin area which allows the Company to share exploration costs with Evolution.

### Key Risks

We believe that Musgrave Minerals has a medium-high risk profile because all its assets are currently in the early exploration stage and none of them is expected to generate revenue for at least another three to four years. The success of these projects depends on discovering high-grade gold reserves and establishing the economic viability of production. The feasibility and revenue generating potential of these projects is uncertain as all of them are in the pre-PFS stage with PFS recently commenced on two of the main deposits. The Company requires significant capital expenditure (“CAPEX”) to bring these projects online and start production once PFS is complete.

### Valuation & Assumptions

Based on its due diligence and valuation estimates, Arrowhead believes that Musgrave Minerals’ fair share value lies in the AUD 0.38 to AUD 0.47 bracket, which has been calculated using a blended valuation method for gold deposits; with 50.0% weighting to a DCF method, 25.0% weighting to a Comparable Companies Valuation method (exploration stage) and 25.0% weighting to Comparable Companies Valuation method (production stage) and then adding the value of other exploration projects to the weighted average equity value of gold deposits. Our model suggests a fair value of AUD 0.42.

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## **Investment Thesis**

### ***High-grade gold discoveries identified at the flagship Cue project***

The Company has an estimated 659Koz of gold resource within the Cue project and has identified several deposits and prospects with high-grade gold. The regional exploration programs launched by the company to locate gold positions have been successful in identifying several new targets such as White Heat, Big Sky, and Target 14 with near-surface high-grade gold. Break of Day and Lena deposits are two of the most promising deposits for the Company as recent development studies at these deposits led to the discovery of new Starlight and White Light gold lodes at Break of Day deposit. The resources found are very high-grade and near the surface (only 2-4m of cover). A PFS has also been started at the Break of Day and Lena deposits to define a low-cost operation to commence production in the future.

### ***Strategic joint ventures to focus on priority gold targets and share exploration costs***

Musgrave Minerals has two active joint ventures that provide the company with strategic benefits. The first JV is with Cyprium on the northern Cue tenure. According to the terms of JV, the Company has retained 100% rights to all the gold dominant mineralization and 20% of the non-gold resources of the JV area. Cyprium has earned an interest of 80% over the non-gold rights and will be conducting a definitive feasibility study over the JV area. The Cyprium-Musgrave JV allows the Company to focus on the priority gold deposits and further develop them. The second JV is with Evolution Mining in the Lake Austin area where the Company will retain 25% interest in the JV and according to the terms of the deal, Evolution Mining has to fulfill a minimum exploration spending over five years to earn a 75% interest in the JV. The Evolution-Musgrave JV has allowed the Company to substantially cut down on exploration costs and focus on its 100% tenure.

### ***Well-capitalized to carry out its upcoming exploration and development activities***

The Company held AUD 20.9 million for FY 2021 in cash and cash equivalents on the backs of multiple fundraising it has conducted in FY 2021 and 2022. We think that the Company has enough cash reserves to carry out its planned exploration and development activities at the Cue project for short to medium term. Going forward, the Company's ability to raise additional capital and convince investors on its next future growth of gradually advancing to the production stage will be crucial for growth.

### ***Rising demand for gold and key base metals like copper used in electronics***

The demand for gold and copper has been rising consistently over the years and is expected to keep a steady upward trend in the long term due to its supply constraints and ever-increasing demand from the rapidly growing Electronics industry, which is the largest consumer of copper and one of the top consumers of gold. The rising commercial demand for gold from the Jewelry and Electronics industry is expected to keep the pressure on the demand side. The Gold prices also have a strong inverse correlation with the global economic stability. The current inflationary outlook given by major institutions and COVID-related economic uncertainties indicate that the gold prices could remain buoyant.

### ***Experienced Management team to be tested as projects advance to higher stages***

Musgrave's leadership team is knowledgeable and has decades of experience in the Mining industry, including extensive experience of managing in-production assets at leading organizations. The Company also engages actively with expert third parties, including industry experts, technical consultants, and engineers, for various aspects of exploration and planning. However, the Company's leadership does not have the experience of managing advanced exploration stage or in-production assets as a single team yet. Its real test will come when the Company's assets advance to higher stages of exploration and enter

production because this is when the leadership will have to come together to take tough decisions and face key execution challenges.

## Company Presentation

Musgrave Minerals Ltd (“Musgrave” or “the Company”) is an Australian early-stage mining Company with a focus on gold resources. The Company currently has one active project – the Cue project – which is in Western Australia and is in the initial exploration stage. The Cue project is Musgrave’s flagship project and houses several key deposits and prospects on which the Company is conducting exploration activities. The Company also holds a resource base of copper and silver through its JV with Cyprium Australia Pty Ltd. The Company plans to accelerate exploration and conduct PFS for its high-potential deposits. Musgrave Minerals is headquartered in West Perth, Australia, and was listed on the Australian Securities Exchange (“ASX”) on 29 April 2011, under the ticker MGV.

**Property portfolio:** Musgrave’s property portfolio includes 9 deposits and 4 prospects, which are part of the Cue project. The Company also holds the Musgrave project in South Australia which is currently inactive and is considering divesting it. The Break of Day and Lena deposits of the Cue project have identified substantial indicated gold resources and are likely to be the first deposits to progress to further stages of feasibility studies and development. The Hollandaire deposit holds copper and silver resources which are part of the JV with Cyprium. The Lake Austin area falls under the earn-in and JV exploration agreement with Evolution Mining and significant drilling programs have been planned under this JV for gold exploration.

Cue Project	
Deposits	Break of Day Deposit, Lena Deposit, Leviticus Deposit, Numbers Deposit, Hollandaire - (Gold, Silver, Copper), Rapier South, Jasper Queen, Gilt Edge
Prospects	White Heat Prospect, Big Sky prospect, Target 14 Prospect, Mainland prospect, Lake Austin Prospect – Evolution JV

<b>Status of Deposits and Prospects</b>		
<b>Cue Project</b>		
<b>Name</b>	<b>Working Interest</b>	<b>Status</b>
<b>Location - Moyagee</b>		
<b>Break of Day deposit</b>	100% with Musgrave	PFS in progress
<b>Lena deposit</b>	100% with Musgrave	PFS in progress
<b>Lake Austin JV – Evolution Mining</b>	25 – 75 % Split between Musgrave and Evolution mining	Follow-up diamond drilling and aircore drilling program in progress
<b>White Heat prospect</b>	100% with Musgrave	Drilling program being conducted
<b>Big Sky prospect</b>	100% with Musgrave	Exploration activities in progress and RC drilling commenced
<b>Target 14 prospect</b>	100% with Musgrave	RC drilling in progress
<b>Mainland prospect</b>	100% with Musgrave	Follow up drilling program scheduled for early 2022
<b>Leviticus deposit</b>	100% with Musgrave	Inactive and no plans finalized for the area
<b>Numbers deposit</b>	100% with Musgrave	RC drilling program ongoing and preliminary metallurgical test work is planned in 2022
<b>Location - Eleya</b>		
<b>Hollandaire deposit</b>	100% gold rights with Musgrave	Exploration and drilling program going on
<b>Hollandaire JV – Cyprium Australia</b>	20%-80% split between Musgrave and Cyprium	Exploration and drilling program going on
<b>Rapier South deposit</b>	100% with Musgrave	Inactive and no plans finalized for the area
<b>Location - Tuckabianna</b>		
<b>Jasper Queen deposit</b>	100% with Musgrave	Inactive and no plans finalized for the area
<b>Gilt Edge deposit</b>	100% with Musgrave	Inactive and no plans finalized for the area

<b>Musgrave Project</b>		
<b>Name</b>	<b>Working interest</b>	<b>Status</b>
<b>Musgrave Project</b>	100% with Musgrave	Inactive and no plans finalized for the area

### **Evolution Mining Joint Venture**

The Company has an active JV with Evolution Mining (“Evolution”) in the Lake Austin area. The JV was executed in 2019 and Evolution has met its minimum commitment for the first two years. According to the terms of the JV, Evolution will earn a 75% interest in the JV if it spends a minimum of AUD 18 million on exploration within five years. Musgrave will retain 100% ownership of the JV if Evolution does not meet this requirement. Musgrave is managing exploration work on the JV area for the initial period with Evolution Mining’s technical inputs.

### **Cyprium Joint Venture**

The Company has a JV with Cyprium Australia Pty LTD (“Cyprium”) on the non-gold rights over the Northern tenements at the Cue project including the Hollandaire copper deposit. Cyprium holds an 80% interest on the non-gold rights of the JV and will conduct a definitive feasibility study on the JV area. Musgrave retains the remaining 20% interest over the non-gold rights of the JV area. However, Musgrave has retained 100% rights to any gold dominant mineralization identified in the JV area. The Company also holds 1.3 million ordinary shares in Cyprium Metals Ltd.

## Company Milestones

Financial Year	Event
<b>2010</b>	<ul style="list-style-type: none"> <li>Musgrave Minerals was formed in Victoria, Australia, on 26 May 2010, with an agreement between Mithril, Independence Group, and Goldsearch.</li> </ul>
<b>2011</b>	<ul style="list-style-type: none"> <li>Raised AUD 20 million through an IPO and got listed on the ASX under the ticker MGV.</li> </ul>
<b>2016</b>	<ul style="list-style-type: none"> <li>Raised AUD 750 thousand through a placement of shares with institutional, corporate, and sophisticated investors.</li> <li>Raised AUD 2 million through a share purchase and an additional AUD 0.5 million through a top-up placement with sophisticated and professional investors.</li> <li>Musgrave secured an Exploration Incentive Scheme ("EIS") drilling grant of up to AUD 150 thousand to drill test regional targets at Cue that aided several discoveries. The company has secured the EIS scheme grant every year since 2016.</li> </ul>
<b>2017</b>	<ul style="list-style-type: none"> <li>Raised AUD 3 million through a placement of shares with institutional, corporate, and sophisticated investors.</li> </ul>
<b>2018</b>	<ul style="list-style-type: none"> <li>Raised AUD 3.6 million through a share purchase.</li> <li>Raised AUD 3.3 million through a private placement of shares with Westgold.</li> <li>Acquired 100% of mining rights in the Cue project, including all gold and copper mineral resources, for a cash consideration of AUD 1.5 million.</li> </ul>
<b>2019</b>	<ul style="list-style-type: none"> <li>Raised AUD 5.5 million through a placement of shares with institutional, corporate, and sophisticated investors.</li> </ul>
<b>2020</b>	<ul style="list-style-type: none"> <li>Raised AUD 6 million through a placement of shares with institutional, corporate, and sophisticated investors.</li> <li>Entered an earn-in and JV exploration agreement with Evolution mining over a select area of Lake Austin and surrounds on the Cue Project.</li> <li>Entered a JV with Cyprium Australia on the non-gold rights over the northern Cue tenure including the Hollandaire copper deposit.</li> </ul>
<b>2021</b>	<ul style="list-style-type: none"> <li>Raised AUD 16 million through a placement of shares with institutional, corporate, and sophisticated investors.</li> <li>Raised 3.5 million through a share purchase and an additional 1.6 million through the exercise of options.</li> </ul>



## **Corporate Strategy**

### **Focus on deposits which are in the advanced stage of exploration, and which are identified as near-surface resource deposits**

The Company plans to prioritize the development of deposits that are in the advanced stages of exploration and are identified as near-surface deposits so that they can be quickly brought into production after completing the DFS and can generate cash flows for the exploration and development of other assets.

### **Strategic JVs for enhanced focus on priority sites and cost sharing**

The Company has two active partnerships which deliver strategic advantage to the Company. The first JV with Cyprium Australia on the non-gold rights allows the Company to farm-out base metals at Hollandaire and retain 100% rights to all the gold dominant mineralization. This has led the Company to focus on its priority gold targets and further develop its gold deposits. The Company retains 20% on all the non-gold rights, thus retaining the potential to gain significantly from any non-gold discovery. The second JV with Evolution Mining is an earn-in and JV exploration agreement over a select area of Lake Austin. The Company retains 25% interest over the JV area while Evolution Mining stands to earn 75% by funding AUD 18 million on exploration over a five-year term. This JV allows the Company to share the exploration costs of the project with Evolution Mining and benefit from Evolution Mining's exploration experience.

### **Partner with experienced third-party contractors to conduct exploration and development**

Musgrave has partnered with third-party contractors to conduct exploration and development work at the Company's deposits and prospects. Leveraging these contractors' experience and expertise is likely to help the Company improve operating cost, as well as optimize its capital utilization.

### **Musgrave acquired 100% rights of the Cue project at a nominal price**

Musgrave acquired resource deposits at an attractive price by taking advantage of the depressed gold prices. The Company exercised its pre-emptive right to acquire Silver Lake's remaining 20% interest in the Cue project. The transaction was completed for AUD 1.5 million consideration in cash in 2017. As a result, Musgrave now holds 100% of the core tenure in the Cue project.

## News

### [Musgrave reports new potential high-grade lodes at the Cue project](#)

*December 1, 2021*

Musgrave has identified four new potential lodes after successful RC drilling of 'Starlight' – type targets near the Break of Day deposit. The first potential zone has two mineralized positions which are approximately 380m south of Break of Day and the other potential zone is 250m north of Break of Day with two separate mineralized lodes. Follow-up RC drilling will commence next week on both the target areas.

### [Musgrave hits high-grade gold potential at Big Sky prospect](#)

*October 27, 2021*

The infill RC drilling results show bonanza style grade which is supported by a repeat assay and coarse visible gold. In addition to this, new RC drillholes continue to identify strong gold mineralization in previously untested areas.

### [Musgrave reports thick aircore intercepts at West Island prospect](#)

*October 12, 2021*

Musgrave has shared assay results from the current aircore and diamond drilling programs on the Cue JV over Lake Austin. Since October 2019, two phases of regional aircore drilling have been completed on Lake Austin and another one is currently in progress. Progress has also been made in the diamond drilling program. Seven drilling holes have been completed and assays have been received for the first two diamond holes.

### [Musgrave discovers Bonanza gold grades at the White Heat prospect](#)

*August 16, 2021*

Musgrave Minerals has reported high grade gold assay results from diamond drilling at the White Heat prospect. These bonanza grade reserves support previous drilling at the high-grade White Heat deposit. The White Heat lode has a similar orientation and geographical features to the high-grade Starlight Lode but currently is not being included in a mineral resource estimate.

### [Musgrave commenced PFS at Break of Day and Lena deposits](#)

*July 14, 2021*

Musgrave Minerals has started making plans to embark on a PFS over its flagship Break of Day and Lena deposits. The Company has bolstered its cash position in the final weeks of 2020 via an AUD 18 million capital raising, which the Company is deploying towards the ongoing exploration at Cue as well as PFS-level activities at Break of Day and Lena.

### [Musgrave discovers high-grade gold at West Island target](#)

*June 30, 2021*

Results of diamond drilling at West Island target on Lake Austin were reported by the Company. Musgrave has identified a new high-grade basement gold zone over a strike of 400m. Following these results from

early diamond drilling, Evolution Mining has committed AUD 5 million towards exploration drilling on the JV ground over the next 12 months.

### [Musgrave discovers three new prospects](#)

*August 31, 2020*

Musgrave implemented a regional exploration program at the Cue project in 2020 and discovered three new prospects: White Heat, Big Sky and Target 14. These targets will be a focus of the Company's exploration efforts in the coming months with the aim of identifying new resources to grow the existing resource base at Break of Day and Lena.

### [Musgrave reports more standout high-grade gold results from Starlight](#)

*July 06, 2020*

Musgrave Minerals has reported a drill hit of 85m grading 11.6 gram per tonne gold from near surface at the Starlight lode of its Cue gold project in Western Australia's Murchison region.

### [Musgrave hits more high-grade gold in Murchison at 'White Light'](#)

*June 29, 2020*

Musgrave Minerals has made a new gold lode discovery, 75m south of its emerging Starlight find in Western Australia, with high-grade gold mineralization again a feature.

### [Musgrave Minerals uncovers bonanza intercept at Starlight gold discovery](#)

*June 03, 2020*

Musgrave Minerals has unearthed a bonanza-grade intersection of gold while drilling at the new Starlight discovery in the Company's flagship Cue project in Western Australia. The assay results for the first holes in a new reverse circulation (RC) drilling campaign revealed a 12m intercept grading at 112.9 grams per tonne of gold from 36m, including 6m at 143g/t gold from 42m.

### [The Lena resource has increased to 325,000 ounces, making it the largest deposit](#)

*February 17, 2020*

Drilling in Western Australia's Murchison region has delivered an exploration dividend for Musgrave Resources, with the Lena resource now estimated at 325,000 ounces, an increase of 112%, making it the largest deposit within the Cue project.

### [Musgrave receives AUD 5.5 million investment from undisclosed corporate and other investors](#)

*December 13, 2018*

Musgrave Minerals has been strongly supported by a "corporate" and other investors who have invested AUD 5.5 million in the Company on the back of its promising gold exploration success at Lake Austin North in the Murchison region of Western Australia.

## [Musgrave Minerals unearths thick gold intersection at Lake Austin North](#)

*October 29, 2018*

Musgrave Minerals has unearthed a thick intersection of gold mineralization while drilling at the Lake Austin North prospect within its flagship Cue project in Western Australia's Murchison region. Drilling at the prospect's A-Zone returned 94m at 2.4 grams per tonne gold from 156m to the end of the hole. The thick intersections included higher-grade intervals of 52m at 4.1g/t gold, 12m at 8.8g/t gold, and 6m at 6.3g/t gold.

## [Westgold buys stake in Musgrave](#)

*May 28, 2018*

Murchison gold miner Westgold Resources has invested AUD 3.36 million in Musgrave Minerals in exchange for a 15% stake in the Company.

## [Musgrave discovered a high-grade gold deposit at Louise](#)

*November 29, 2017*

Drilling at Musgrave Minerals' Cue project has delivered a second high-grade gold discovery in 18 months at Louise, just 750m from Break of Day, indicating the possibility of a much larger mineralized body.

## Listing Information

Musgrave Minerals Ltd, headquartered in Perth, Australia, is listed on the Australian Securities Exchange– (ASX: MGV)

## Contacts

<b>Head office</b>	Ground Floor, 5 Ord Street West Perth, WA 6005
<b>Telephone</b>	+61 (8) 9324 1061
<b>Email</b>	<a href="mailto:info@musgraveminerals.com.au">info@musgraveminerals.com.au</a>

## Top Shareholders as on 27 October 2021

<b>Equity Holder</b>	<b>% Shareholding</b>
HSBC Custody Nominees (Australia) Limited	13.0%
Westminex group	8.6%
Jetosea Pty Ltd	5.6%
Evolution Mining Ltd (EVN)	4.0%
Cititcorp Nominees Pty Limited	3.2%
Retail & Other Investors	66.6%
<b>Total</b>	<b>100.0%</b>

Source – Musgrave Minerals AGM Investor Presentation Nov 2021

Note: Total Outstanding Shares- 537 million

## Management and Governance

### **Graham Ascough**

*Non-Executive Chairman*

- Has 30 years of industry experience evaluating mineral projects and resources in Australia and overseas
- Plays leading role in setting the strategic direction for significant country-wide exploration programs and works directly with mining and exploration companies
- Is a member of the Australasian Institute of Mining and Metallurgy ("AusIMM") and a Professional Geoscientist of Ontario, Canada

### **Robert Waugh**

*Managing Director*

- Has over 30 years of experience in the resources sector including exploration and mining in a range of commodities including gold, nickel, copper, uranium, and platinum group metals ("PGMs")
- Member of the WMC Resources Ltd ("WMC") exploration team that discovered the Nebo-Babel nickel/copper/PGM deposit at West Musgrave in 2000
- Held senior exploration management roles in several companies including WMC and BHP Billiton Exploration Ltd.
- Holds a Bachelor of Science degree with majors in geology from the University of Western Australia and a Master of Science in Mineral Economics from Curtin University and the Western Australian School of Mines
- Holds fellowship of the AusIMM and is a member of the Australian Institute of Geoscientists

### **Patricia Farr**

*Company Secretary*

- Is a Chartered Secretary with over 20 years of experience in corporate governance, compliance, and administration in the mining industry
- Holds a Director and Company Secretary position at Jindalee Resources Limited
- Member of the Chartered Secretaries & Administrators and the Governance Institute of Australia

### **Jonathan Gough**

*Exploration Manager*

- Is a geologist with over 10 years of experience in exploration and mining across Western Australia
- Held technical and senior roles at Barrick gold, Northern Star Resources, and Kin Mining, spanning greenfield exploration and underground production
- Holds a BSc (Hons) and MSc (geochemistry) both from the University of Leeds

## Projects

Musgrave Minerals' Cue project is located 30km south of the township of Cue in the Murchison province of Western Australia. The Company also owns Musgrave project in South Australia, however no active exploration or development activity has been planned for this project.

### Cue Project

The Cue project is the flagship project of Musgrave and all the deposits under this project are in the early exploration stage. The Company has planned a significant exploration program across multiple prospects and targets with accelerated drilling so that it can continue to grow the resource base and progress development studies to define a clear path to a stand-alone operation that will deliver the first gold output for the Company.

During FY 2021, Musgrave completed more than 90,000m of drilling for exploration, resource growth, and development studies. This resulted in the Company discovering new Starlight and White Light gold lodes at Break of Day, leading to a resource update. The Company also discovered three other deposits to the south of Lena and Break of Day deposits.

The current estimated resource for the Cue 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. The new gold discoveries are both outside the existing resource areas. A brief overview of all the deposits is as follows:

**Break of Day:** The Break of Day deposit, one of the main deposits of Musgrave, includes Starlight and White light discoveries. The mineralization remains open in several parts of the deposit, having near-surface nature (2-4m of cover) with a very high grade of resources and proximity to infrastructure.

The Break of Day has an estimated mineral resource of 797kt @ 10.2g/t Au for 262Koz. After the discovery of Starlight and White light in 2020, there was a 58% increase in indicated resources to 175,900 ounces of gold and a 42% increase in gold grade to 10.2g/t Au.

**Lena:** The Lena deposit consists of several gold lodes, with some having significant high-grade depth potential. Drilling at Lena extends to a maximum depth of 400m below the surface, where the mineralization remains open down plunge. The deposit has an estimated mineral resource of 4.3Mt @ 2.3g/t Au for 325Koz gold. The mineralization has been interpreted and estimated to a depth of 430m and remains open over much of the 1.5km strike length of the deposit.

The Break of Day deposit has 85% of the gold in five main lodes in the top 200m from the surface. Metallurgical test work at the Break of Day and Lena deposits have resulted in excellent gold recoveries with a total of 96-99% recoverable gold from conventional gravity and Carbon-in-leach ("CIL") processing. A significant infill resource definition program is planned in FY 2022 at Lena and Break of Day to convert inferred resources to the higher confidence indicated category. The Company has also commenced Prefeasibility level studies on several key elements for any future development at Break of day and Lena.

The new discoveries, White Heat, Big Sky, and Target 14 led the Company to increase the search space from the initial designated area in the Cue project. Musgrave identified six high-grade gold regional targets and has commenced follow-up RC drilling. The Company has plans for RC, aircore and diamond drilling in Q2'22.

**White Heat prospect:** White Heat is 300m south of Break of Day, has a strike extent of approximately 70m, and is open down plunge. Musgrave plans to continue the drilling program at White Heat with the aim of defining a maiden resource in Q2'22. Initial drilling results have shown high-grade intercepts under 2-3m of hardpan cover:

- 4m @ 43.2g/t Au from 98m (RC)
- 11m @ 19.6g/t Au from 48m (RC)
- 3.4m @ 107.6g/t Au from 74.6m (Diamond)

**Big Sky prospect:** Musgrave discovered Big Sky prospect 2km southwest of Break of Day. The Company's focus on exploration drilling (aircore, RC, and diamond) and resource growth led to the discovery of extensive regolith gold mineralization over a 2.6km long stretch. The mineralization at Big Sky is part of a 7km-long gold corridor with near-surface mineralization identified over thick intervals below a thin veneer (1-10m) of transported hardpan cover. Musgrave has commenced the resource infill drilling at the prospect. RC drilling results until now comprise a combination of 6m composite and 1m individual assays. RC drilling results from the Big Sky prospect include:

- 28m @ 35.9g/t Au from 49m (21MORC277), incl. 1m @ 898g/t Au from 49m
- 73m @ 1.4g/t Au from 41m (21MORC101), incl. 5m @ 10.1g/t Au from 72m
- 60m @ 1.0g/t Au from 42m (21MORC196)
- Assays for >50 RC drill holes pending

**Leviticus deposit:** The Leviticus deposit, which is adjacent to the Big Sky Prospect, is currently inactive and the Company has not finalized any plans for this.

**Lake Austin – Evolution JV:** Lake Austin area is part of the Evolution Mining earn-in and exploration joint venture, which was executed in 2019. Under the JV, Evolution Mining committed to a minimum exploration spend of AUD 4 million over the first two years and it has already met its minimum commitment for the first two years. Evolution Mining can earn a 75% interest in the JV area by sole funding AUD 18 million within five years. Musgrave will retain 100% ownership of the JV area in case Evolution fails to meet its commitment for the next five years.

The Evolution JV excludes all the current resources at Cue (including the Lena and Break of Day deposits), the new White Heat and Big Sky discoveries, and the Mainland option area. A 26,000m aircore drilling program and a seven-drill hole 2,720m diamond drilling program were completed on Lake Austin to follow up the extensive, high tenor regolith gold anomalies at the West Island and Lake Austin North prospects. Four diamond holes that were drilled at West Island over a strike length of 400m have identified significant gold intercepts. Post 30 June 2021, Evolution Mining has committed AUD 5 million in exploration for FY 2022 including a phase 2, 17,000m follow-up aircore drill program, and a 7,000m follow-up diamond drilling program. Both programs have commenced and are progressing well.

Gold intercepts include:

West Island

- 3m @ 10.6g/t Au(21MODD006)
- 68m @ 1.5g/t Au (21MOAC024)

Lake Austin North

- 84m @ 1.7g/t Au(18MORC039) incl. 20m @ 6.1g/t Au
- 94m @ 2.2g/t Au(18MORC057) incl. 29m @ 5.1g/t Au
- 7,000m diamond drilling and >17,000m aircore drilling underway



**Hollandaire - Cyprium JV:** Musgrave entered a JV with Cyprium Australia Pty Ltd (“Cyprium”) on the non-gold rights over the northern Cue tenure including the Hollandaire copper deposit. Cyprium has earned an 80% interest in the non-gold rights over the area with Musgrave retaining 20%. Musgrave has retained 100% interest on the gold rights at Hollandaire as part of the JV with the farm-out of base metals, which has allowed Musgrave to focus on its priority gold targets, resulting in the discovery of the Starlight and White Light gold lodes at Break of Day. The Rapier South deposit adjoining the Hollandaire deposit is currently inactive, and the Company has not finalized any plans for this area.

**Target 14 prospect:** Target 14 is approximately 1 km west of Lena and 800m north of Big Sky and it is defined by anomalous gold in the regolith over a strike length of more than 3km. Target 14 is part of the new 7km-long gold corridor that includes Big Sky. RC drilling results comprise a combination of 6m composite and 1m individual assays. Drilling results from the Big Sky prospect include:

- 24m @ 3.0g/t Au from 40m (21MORC019), including: 9m @ 6.1g/t Au from 40m
- 14m @ 1.9g/t Au from 43m (21MORC105)
- 36m @ 2.9g/t Au from 12m (21MORC185), including: 24m @ 4.1g/t Au from 24m
- 12m @ 1.7g/t Au from 84m (21MORC189)
- 6m @ 2.2 g/t Au from 30m (21MORC191)
- 12m @ 1.6g/t Au from 48m (21MORC194)

**Numbers deposit:** The Numbers deposit is approximately 3.5 km south of Break of Day and has an inferred resource of 278,000t @ 2.46g/t Au for 22Koz of gold. An RC drill program is ongoing at the deposit which is focused on upgrading the resource estimate to the higher confidence indicated category. Preliminary metallurgical test work is planned before a resource update in Q2’22. The new mineralized RC intersections include:

- 18m @ 2.4g/t Au from 60m (21MORC057)
- 17m @ 2.3g/t Au from 78m (21MORC062)
- 6m @ 3.0g/t Au from 21m (21MORC063)
- 16m @ 3.0g/t Au from 52m (21MORC064)
- 7m @ 2.6g/t Au from 135m (21MORC068)
- 12m @ 2.0g/t Au from 86m (21MORC070)
- 10m @ 5.6g/t Au from 50m (21MORC071) including: 1m @ 46.4g/t Au from 55m
- 4m @ 3.9g/t Au from 92m (21MORC076)
- 12m @ 5.4g/t Au from 12m (21MORC077) including: 5m @ 11.1g/t Au from 14m

**Mainland project:** The Mainland project area covers the northern extension of the shear corridor that has Musgrave’s Break of Day / Starlight and Lena gold deposits and the Lake Austin North gold discovery. Multiple new gold targets have been generated in the Mainland project area and a follow-up drilling program is currently being scheduled for early 2022.

**Tuckabianna:** The Tuckabianna deposit area covers Jasper Queen and Glit Edge deposits. The Company has not finalized the plans for these deposits yet.

Following is the summary of Musgrave's current mineral resources by JORC classification.

<b>Gold Mineral Resources as of 30 June 2021</b>									
<b>Deposit</b>	<b>Indicated Resources</b>			<b>Inferred Resources</b>			<b>Total Resources</b>		
	<b>Tonnes '000s</b>	<b>Au Grade g/t</b>	<b>Total oz Au '000s</b>	<b>Tonnes '000s</b>	<b>Au Grade g/t</b>	<b>Total oz Au '000s</b>	<b>Tonnes '000s</b>	<b>Au Grade g/t</b>	<b>Total oz Au '000s</b>
<b>Location- Moyagee</b>									
Break of Day	451	12.1	176	346	7.7	86	797	10.2	262
Lena	2,253	1.7	121	2,053	3.1	204	4,305	2.3	325
Leviticus	-	-	-	43	6.0	8	43	6.0	8
Numbers	-	-	-	278	2.5	22	278	2.5	22
<b>Total Moyagee</b>	<b>2,704</b>	<b>3.4</b>	<b>297</b>	<b>2,719</b>	<b>3.7</b>	<b>319</b>	<b>5,422</b>	<b>3.5</b>	<b>616</b>
<b>Location - Eelya</b>									
Hollandaire (100%)	2,179	0.3	21	605	0.4	8	2784	0.3	27
Hollandaire (MGV 20%)	436	0.3	4	121	0.4	2	557	0.3	5
Rapier South	-	-	-	171	2.1	12	171	2.1	12
<b>Total Eelya</b>	<b>436</b>	<b>0.3</b>	<b>4</b>	<b>292</b>	<b>1.4</b>	<b>13</b>	<b>728</b>	<b>0.6</b>	<b>17</b>
<b>Location - Tuckabianna</b>									
Jasper Queen	-	-	-	175	2.6	15	175	2.6	15
Gilt Edge	-	-	-	96	3.1	9	96	3.1	9
<b>Total Tuckabianna</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>271</b>	<b>2.8</b>	<b>24</b>	<b>271</b>	<b>2.8</b>	<b>24</b>
<b>Total Cue Project</b>	<b>3,140</b>	<b>3.0</b>	<b>301</b>	<b>3,282</b>	<b>3.4</b>	<b>358</b>	<b>6,422</b>	<b>3.2</b>	<b>659</b>

<b>Copper Mineral Resources as of 30 June 2021</b>									
<b>Deposit</b>	<b>Indicated Resources</b>			<b>Inferred Resources</b>			<b>Total Resources</b>		
	<b>Tonnes '000s</b>	<b>Grade %</b>	<b>Tonnes Cu '000s</b>	<b>Tonnes '000s</b>	<b>Grade %</b>	<b>Tonnes Cu '000s</b>	<b>Tonnes '000s</b>	<b>Grade %</b>	<b>Tonnes Cu '000s</b>
<b>Hollandaire</b>									
Copper	2,179	2.0	42.2	605	1.6	9.3	2,784	1.9	51.5

<b>Silver Mineral Resources as of 30 June 2021</b>									
<b>Deposit</b>	<b>Indicated Resources</b>			<b>Inferred Resources</b>			<b>Total Resources</b>		
	<b>Tonnes '000s</b>	<b>Grade g/t</b>	<b>Ounces Ag '000s</b>	<b>Tonnes '000s</b>	<b>Grade g/t</b>	<b>Ounces Ag '000s</b>	<b>Tonnes '000s</b>	<b>Grade g/t</b>	<b>Ounces Ag '000s</b>
<b>Hollandaire</b>									
Silver	2,179	6.4	450	605	6.4	124	2,784	6.4	574

**Cue Project – Scheduled work plan for Q4’21 and Q1’22**

<b>Cue Gold Project</b>	<b>Q4 2021</b>	<b>Q1 2022</b>
Resource drilling and assays at Big Sky and White Heat	✓	✓
RC drilling and assays – Target 14 & new regional targets	✓	✓
Aircore drilling and assays – new regional targets	✓	✓
Resource definition and conversion drilling – Break of Day and Lena	✓	✓
Evolution JV – Diamond & Aircore drilling follow-up of high priority targets	✓	✓
Prefeasibility level studies	✓	✓

**Musgrave Project**

Musgrave Project is an inactive project which consists of multiple tenement applications in the central Musgrave province of South Australia. No field activity has been completed by Musgrave on this project for the past five years.

## Industry Analysis

The global Mining industry had a revenue of USD 1,641.6 billion in 2020. The Asia Pacific region held the largest share of the industry’s revenue (71%), followed by North America (9%), and the Middle East<sup>i</sup>. The industry’s revenue is expected to reach USD 1,845.6 billion in 2021 (12.4% growth rate) and USD 2,427.9 billion in 2025 i.e. 8.1% Compounded Annual Growth Rate, (“CAGR”) between 2020 and 2025. A large share of this expected growth is attributable to a gradual resumption of mining activity and return of demand for mined resources after the Covid-induced lockdowns and general slowdown in economic activity.

Metals (including Metal Ore and Copper, Nickel, Lead, & Zinc) and Coal, Lignite, and Anthracite are the two largest segments of the Mining industry because of the diverse applications of these materials. The prices of most metals fell in 2020 because of the economic slowdown following the Covid-19 outbreak. However, by the end of 2020, prices of most major metals such as copper and iron, rebounded and reached multi-year highs, driven particularly by rapid growth in China’s demand.<sup>ii</sup>

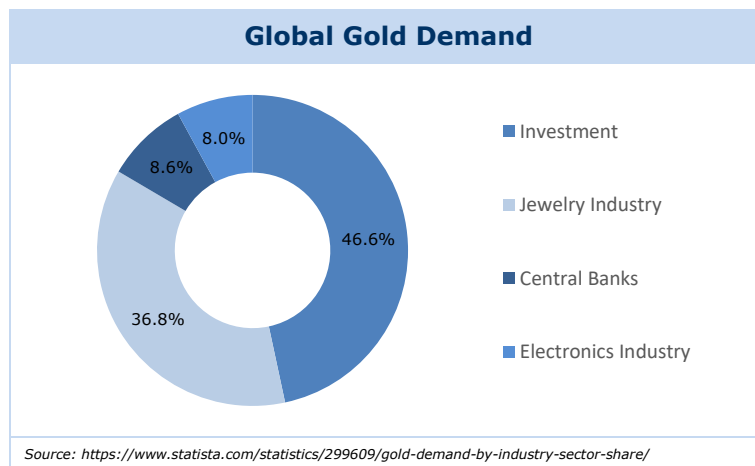
Metal prices continued to be high in early 2021 with lockdowns easing in most countries and economic activity beginning to normalize. According to the International Monetary Fund (“IMF”), world GDP is expected to grow at 6.0% in 2021 after an estimated 3.5% contraction in 2020. This return to growth is likely to support metal prices since they are positively correlated to economic growth.

## Gold

### Gold Demand

The demand for gold mostly comes from gold investors and the Jewelry industry. Demand for investment purposes accounted for 46.6% of the total global gold demand in 2020, followed by the Jewelry industry (36.8%), central banks (8.6%), and the Electronics industry (8.0%)<sup>iii</sup>.

There has been substantial growth in the demand for gold as an investment with the rising popularity of gold ETFs and investors looking for a safer asset class to hold during the economic slowdown that followed the Covid outbreak. The demand for gold from the Jewelry industry is expected to continue growing over the coming years, since gold is a critical input for the Jewelry industry and the Jewelry industry has been forecasted to grow at a CAGR of 5.1% between 2022 and 2027<sup>iv</sup>. The investment demand for gold is expected to remain stable over the coming years since investors have started switching from gold to equity and other high-return assets with the Covid situation easing and early signs of economic recovery emerging. Despite this, the overall demand for gold is expected to increase over the coming years, which is encouraging for gold miners.



## Gold Production

Approximately 3,200 metric tonnes of gold were produced globally in 2020, with China producing the highest quantity of 380 metric tonnes (11.8% of global production), followed by Australia (10%), Russia (9.3%), the US (5.9%), and Canada (5.3%).<sup>v</sup>

There was a noticeable gold production drop in many regions across the world in 2020 due to Covid-related mining suspensions, especially in North America, South America, and Africa. In Canada, gold production fell 22% to 1,160 Koz in Q2'20 compared to 1,482 Koz in Q2'19. This fall in global production coupled with import curbs in many countries produced a demand-supply mismatch and, consequently, a sharp rise in gold prices made gold one of the best performing major assets in 2020.

Fitch forecasts that global gold production will increase at an average annual growth rate of 2.5% between 2020 and 2029. Higher gold production in Russia is expected to lead to this increase, as Russia is likely to overtake China as the largest gold miner in the coming years. Gold production in China, on the other hand, is expected to remain stagnant until 2029, with an expected average annual growth rate of 0.2%. Australia's gold production is also expected to grow modestly over this period, supported by a strong project pipeline and competitive operating costs.<sup>vi</sup>

## Australian Gold Mining industry

Australia is the world's sixth-largest gold producer and home to 14 of the world's 20 largest gold mines. Australia also holds the world's largest gold reserve, accounting for about 20% of the total reserves at 10,000 tonnes as of January 2020. The total gold production of the country for the year 2020 was 327.8 tonnes. The commencement of 84 projects is expected to boost Australian production growth and the production is expected to grow at a CAGR of 3.0% for the forecasted period to reach 381.2 tonnes by 2024<sup>vii</sup>.

## Gold Prices

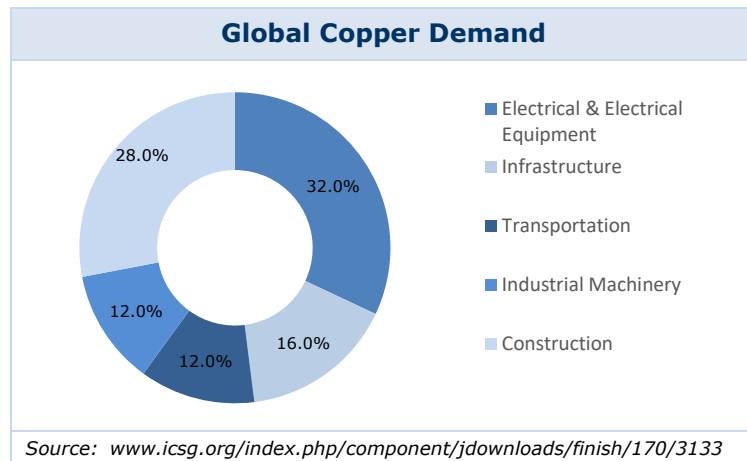
Gold prices remained relatively stable between 2016 and early 2019, However, the onset of the Covid-19 pandemic in late 2019 resulted in the gold prices moving upward sharply in a short period as investors started moving their money from other riskier investments such as equity to gold. Gold is considered as a haven for investments during economic crisis and this resulted in increased buying from investors and institutions. Gold prices hit an all-time high of about USD 2074.9 in August 2020 and is currently consolidating around USD 1700 per ounce. The gold prices are expected to trade in a range-bound trajectory and the key factor influencing the prices will be the continuation of the world economic recovery.



## Copper

### Copper Demand

The demand for copper mostly comes from the Construction, Electrical & Electronic Equipment, Infrastructure, Transportation, and Industrial Machinery sectors. 32.0% of the global demand for refined copper came from the Electrical & Electronic Equipment sector in 2019, followed by Construction (28.0%), Infrastructure (16.0%), Transportation (12%) and , Industrial sectors (12%)<sup>viii</sup>. According to Bank of America (“BoA”), global copper consumption is expected to increase from 23.3 million tonnes in 2020 to 24.7 million tonnes in 2021, at a 6.0% YoY growth rate.<sup>ix</sup> This growth is likely to be driven by growing copper demand from China, which is the world’s largest copper consumer, as well as from the EV manufacturers worldwide.



The demand for copper from the EV sector has grown at the highest rate in recent years and is expected to continue growing strongly over the coming years as EVs become more mainstream. The next big growth driver for copper demand will be the Electrical & Electrical Equipment industry, which is currently the largest consumer of copper and is likely to continue holding this position as the demand for consumer electronics continue to rise. China’s copper demand is expected to increase from 12.9 million tonnes (i.e. 55.3% of the global demand) in 2020 to 13.6 million tonnes (i.e., 55.0% of the expected global demand) in 2021<sup>x</sup>. The country is the world’s largest copper importer despite being the world’s 3<sup>rd</sup> largest copper producer<sup>xi</sup>. China’s copper consumption is likely to continue increasing over the coming years as it

continues to account for a disproportionate share of the world's electronics manufacturing and works towards increasing its reliance on renewable energy to meet its peak emission targets before 2030.

## **Copper Production**

The global production of copper was 20 million tonnes in 2020. Chile (28.5%) contributed the highest share of this output, followed by Peru (11.0%) and China (8.5%).<sup>xii</sup> Canada produces less than 4% of the world's copper output exported USD 7 billion worth of copper in 2019.

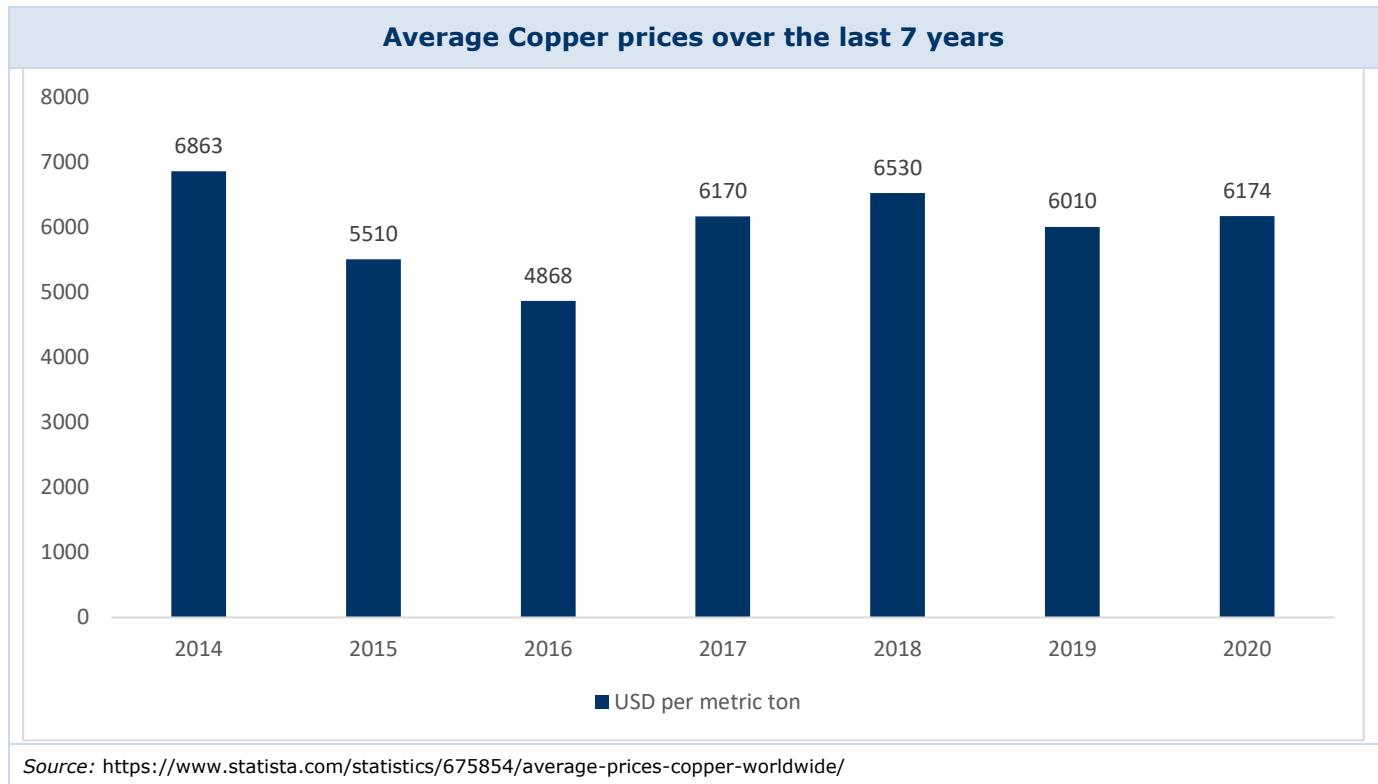
After significant Covid-19 disruption in 2020, copper mining operations are gradually normalizing across the world. Consequently, global copper production is expected to increase from 20 million tonnes in 2020 to 21.3 million tonnes in 2021, at an implied growth rate of 5.9%.<sup>xiii</sup> Additional output from projects in Panama, Russia, and the Democratic Republic of Congo have contributed to this increase in production. However, despite this increase, the demand-supply mismatch is expected to increase in the coming years due to increasing consumption. According to BoA, copper inventories are severely depleted and, measured in tonnes, are now at levels seen 15 years ago. Current copper stocks are enough to cover just over three weeks of demand and are likely to deplete further as the global economy begins to reopen and reflate.<sup>xiv</sup>

## **Australian Copper Mining Industry**

Australia is the world's sixth-largest copper producer with a production of 870,000 tonnes in the year 2021. Australia has copper resources spread out all over the country in the following mines - Olympic Dam Mine, Mount Isa Copper Mine, Cadia Mine, DeGrussa Copper-Gold Mine.

## **Copper Prices**

Average copper cash prices increased from USD 4868 per metric tonne during 2016, to USD 6174 per metric tonne during 2020. The price crossed USD 10,000 per metric tonne for the first time in ten years in May 2021 and peaked at USD 10,724.5 per tonne on May 10, 2021. This price rise has been fueled by expectations of massive growth in copper demand due to the Covid-related stimuli provided by various central banks as well as from a growing worldwide push for decarbonization and green technologies. The push towards green technologies supports high copper prices because large quantities of copper are used in the production of EVs, electrical grids, and renewable energy production and storage infrastructure. At the same time, global copper inventories are depleting, and production is unlikely to keep pace with demand going forward.<sup>xv</sup>



BoA copper deficits to increase in 2021 and 2022, resulting in copper prices reaching USD 13,000 per tonne in the coming years. Prices could moderate going forward with an expected significant increase in scrap usage at smelters and refiners. However, without an increase in the supply of secondary material, prices could cross USD 20,000 per tonne.



## **Risk Profile Analysis**

### **1. FINANCIAL RISK**

The Company's assets are currently in the exploration stage, and it is very unlikely that the Company would generate revenue from operations in the near future as the Company's flagship Cue project will take a few years before it becomes operational. Musgrave has AUD 20.9 million cash on its balance sheet and plans to use it for the exploration activities at the current projects and new prospects. The Company has a JV with Evolution Mining over Lake Austin area under which Evolution will spend AUD 18 million on exploration activities over a term of five years to earn a 75% interest in the JV, which will help reduce Musgrave's capital requirements. The Company currently does not have any significant debt and have no plans to tap to capital markets to raise more funds in the short term. However, the Company will need to raise funds and spend on CAPEX, once its projects move to development and production stage. The ability to convince debt and equity investors about the viability of the Company's future plans and the management's ability to execute these plans successfully will be critical to raise funds. Consequently, we believe Musgrave has a MEDIUM financial risk profile.

### **2. ECONOMIC RISK**

Historically, gold prices have underperformed during times of high economic growth because investors prefer assets with a higher risk-return profile, such as equity, for better returns during an economic uptrend. However, during periods of economic uncertainty, such as the immediate aftermath of the Covid outbreak, which was one of the biggest economic and health crises in recent times, gold prices generally rise. With signs of economic recovery now emerging and the global economic growth outlook turning positive, gold prices have come off their highs and can be expected to remain subdued in the short and medium term. These trends pose a risk for the Company since its future revenues and mining decisions are highly correlated with gold price movements. The Company remains shielded from an impending stagnation or downward trend in gold prices to some extent since it had purchased many of its properties at attractive prices when gold prices were low. However, we believe that Musgrave Minerals' overall economic risk profile is MID-HIGH.

### **3. OPERATIONAL RISK**

Musgrave has a high operational risk profile since all its projects are currently in the exploration stage. The success of these projects depends on discovering high-grade gold & copper reserves and establishing the economic viability of the production. The Company has been getting positive results from its active exploration sites located in the Cue project and a PFS is already planned on a few of its deposits to assess the viability of a mining operation. We believe that for these reasons, Musgrave Minerals has a HIGH operational risk profile.

### **4. KEY PERSONNEL RISK**

Musgrave Minerals' leadership team is knowledgeable and has industry veterans with decades of experience in the mining industry, including extensive experience in managing in-production assets. However, the Company is over-reliant on a few core management individuals. Hiring capable individuals and training them well could help the Company reduce its dependence on these few key personnel and maintain operational stability if any of them were to separate from the business. Additionally, we feel that despite their rich experience of managing in-production assets at other companies, the leadership team's ability of working together as one team might be tested once Musgrave's mining assets enter production. Consequently, we believe that the Company has MEDIUM key personnel risk.

## Financial Analysis

Musgrave Minerals has not generated any significant cash flows from operations apart from JV management fees because all its assets are currently in early exploration stage. It has been focusing on acquiring and exploring promising gold mining assets, with the expectation of generating cash flows once the feasibility studies are completed and the assets enter production. The Company expects its Break of day and Lena deposits from the Cue project to be among the first deposits to enter production. However, these deposits still have a long way to cover before they reach this stage. The Company has been incurring substantial operating expenses, which is typical of pre-production mining companies. The major costs for the Company have been exploration related.

**Revenue and Profitability:** Musgrave Minerals' revenue is primarily driven by JV management fees and interest revenue. The revenue for FY 2017 was approximately AUD 126 thousand and increased to AUD 337 thousand in FY 2021 mainly due to an increase in JV management fees.

Musgrave's operating expenses were at AUD 5.6 million in 2017 and decreased to AUD 3.2 million in 2021. This drop was mainly due to the absence of impairment expenses. However, the Company's employee benefit expenses increased sharply from AUD 507 thousand to AUD 2.6 million in 2021 at an 50.4% CAGR and it increased drastically in FY 2021 mainly due to non-recurring share-based payments. According to our projections, the employee benefit expenses could rise to AUD 3.6 million by FY 2028 as the Company transitions from a purely exploration-stage business to a business that also has in-production assets. This increase in employee benefit expenses will drive up the overall operating costs of the Company.

Musgraves made a net loss of AUD 5.2 million in FY 2017 which has now slightly improved to a net loss of AUD 2.9 million in FY 2021 due to the absence of impairment expenses which were very high in FY 2017. The Company had a net profit for FY 2020 due to a gain approximately of AUD 1.4 million from the change in the value of derivatives and the reduced employee benefit expenses due to the halt in exploration activities during the pandemic restrictions. It is expected for the Company to have a net loss in the coming years until the production of its assets does not start and achieve a level of operational efficiency. Assuming the Company will start production in FY 2026, it will have a net profit of AUD 40.4 million.

**Capital Requirement:** Musgrave had total equity of AUD 32.6 million FY 2017 which increased to 72.7 million, at an implied CAGR of 30.6% for the period FY 2021. The increased total equity was the result of multiple professional & sophisticated placements, options, share issues, and share purchase plans exercised by the Company. Most of the additional capital was raised through professional & sophisticated share placements which amount to about AUD 40 million since 2017. We expect the Company to raise additional capital as its assets approach production stage

The Company had no major liabilities on its books as of June 30, 2021 and has never raised long-term debt in the past. The Company, however, did have current liabilities worth AUD 1.2 million in FY 2021, which was up from AUD 0.4 million in FY 2017. The Company's current liabilities primarily comprise trade payables and short-term provisions and it is well positioned to meet these liabilities, as indicated by a quick ratio of 17. We estimate that before starting production in FY 2026, the Company will raise debt in the future for meeting its capital expenditure requirements of approximately AUD 305.0 million for all its exploration and development activities at Break of Day and Lena deposits.

## Historical Income Statement

<i>(All figures are in AUD thousands)</i>	FY 2017	FY 2018	FY 2019	FY 2019	FY 2021
<b>Revenue</b>	<b>126</b>	<b>82</b>	<b>369</b>	<b>374</b>	<b>337</b>
<i>YoY Growth</i>		-35.07%	352.37%	1.24%	-9.73%
<b>Operating Costs</b>					
Employee Benefit Expense	507	371	676	411	2,594
<i>%age of Revenue</i>	403.8%	454.4%	183.2%	110.1%	769.3%
Depreciation Expense	15	13	26	118	133
<i>%age of Revenue</i>	11.6%	16.0%	7.0%	31.7%	39.4%
Impairment Expense	4,749	41	337	3	-
<i>%age of Revenue</i>	3780.4%	50.4%	91.2%	0.9%	0.0%
Finance Costs	-	-	-	30	23
<i>%age of Revenue</i>	0.0%	0.0%	0.0%	8.1%	6.7%
Other Expenses	327	390	336	206	469
<i>%age of Revenue</i>	260.6%	478.5%	91.0%	55.1%	139.0%
Change in Fair Value of Derivate Financial Instruments	4	(418)	324	(1,388)	-
<i>%age of Revenue</i>	3.2%	-512.4%	87.8%	-371.5%	0.0%
<b>Total Operating Costs</b>	<b>5,602</b>	<b>397</b>	<b>1,698</b>	<b>(619)</b>	<b>3,219</b>
<i>%age of Revenue</i>	4459.7%	486.9%	460.2%	-165.6%	954.4%
<b>Profit / (Loss) from continuing operations before income tax</b>	<b>(5,477)</b>	<b>(316)</b>	<b>(1,329)</b>	<b>992</b>	<b>(2,881)</b>
<i>%age of Revenue</i>	-4359.7%	-386.9%	-360.2%	265.6%	-854.4%
Income Tax Benefit	(236)	(126)	-	-	-
<b>Profit / (Loss) After Income Tax</b>	<b>(5,240)</b>	<b>(189)</b>	<b>(1,329)</b>	<b>992</b>	<b>(2,881)</b>
<i>%age of Revenue</i>	-4171.5%	-232.3%	-360.2%	265.6%	-854.4%

## Historical Balance Sheet

<i>(All figures are in AUD thousands)</i>	Jun 2017	Jun 2018	Jun 2019	Jun 2020	Jun 2021
<b>ASSETS</b>					
<b>Current Assets</b>					
Cash & Cash Equivalents	3,560	5,230	3,544	9,123	20,911
Trade and Other Receivables	436	115	134	274	322
Other Current Assets	10	15	21	10	13
Derivative Financial Instruments	37	455	131	-	-
<b>Total Current Assets</b>	<b>4,043</b>	<b>5,814</b>	<b>3,830</b>	<b>9,407</b>	<b>21,246</b>
<b>Non Current Assets</b>					
Financial Assets at Fair Value Through Other Comprehensive Income	140	610	506	1,946	1,577
Right of Use assets	-	-	-	267	103
Property, Plant and Equipment	49	45	75	56	374
Exploration and Evaluation	5,022	10,256	15,977	18,966	26,010
<b>Total Non Current Assets</b>	<b>5,211</b>	<b>10,912</b>	<b>16,557</b>	<b>21,235</b>	<b>28,064</b>
<b>TOTAL ASSETS</b>	<b>9,254</b>	<b>16,726</b>	<b>20,387</b>	<b>30,642</b>	<b>49,310</b>
<b>LIABILITIES AND EQUITY</b>					
<b>LIABILITIES</b>					
<b>Current Liabilities</b>					
Trade and Other Payables	389	531	178	1,117	971
Short-Term Provisions	79	109	117	136	203
Lease Liabilities	-	-	-	95	75
<b>Total Current Liabilities</b>	<b>468</b>	<b>640</b>	<b>295</b>	<b>1,347</b>	<b>1,249</b>
<b>Non Current Liabilities</b>					
Debt	-	-	-	-	-
Long-Term Provisions	10	-	-	-	-
Lease Liabilities	-	-	-	186	39
<b>Total Non Current Liabilities</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>186</b>	<b>39</b>
<b>TOTAL LIABILITIES</b>	<b>479</b>	<b>640</b>	<b>295</b>	<b>1,533</b>	<b>1,288</b>
<b>EQUITY</b>					
Contributed Equity	32,646	39,437	44,593	52,005	72,740
Reserves	320	971	1,129	1,571	2,581
Accumulated Losses	(24,191)	(24,322)	(25,629)	(24,466)	(27,299)
<b>TOTAL EQUITY</b>	<b>8,776</b>	<b>16,086</b>	<b>20,092</b>	<b>29,109</b>	<b>48,022</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>9,254</b>	<b>16,726</b>	<b>20,387</b>	<b>30,642</b>	<b>49,310</b>

## Income Statement Summary – Our Estimated Projections

<i>(All figures are in AUD thousands)</i>	FY 2022P	FY 2023P	FY 2024P	FY 2025P	FY 2026P
<b>Revenue</b>	527	509	500	485	190,801
<i>YoY Growth</i>	56.3%	-3.5%	-1.8%	-3.0%	39271.2%
<b>Total Expenses</b>	1,289	1,287	1,834	1,869	136,140
<i>%age of Revenue</i>	244.5%	253.0%	367.1%	385.6%	71.4%
<b>EBIT / Operating Income (Loss)</b>	(762)	(778)	(1,334)	(1,384)	54,660
<i>%age of Revenue</i>	-144.5%	-153.0%	-267.1%	-285.6%	28.6%
<b>Net Income / (Loss)</b>	(762)	(778)	(1,334)	(1,384)	40,449
<i>%age of Revenue</i>	-144.5%	-153.0%	-267.1%	-285.6%	21.2%
<b>EPS</b>	(0.00)	(0.00)	(0.00)	(0.00)	0.08
<i>YoY Growth</i>					3022.1%

<i>(All figures are in AUD thousands)</i>	FY 2027P	FY 2028P	FY 2029P	FY 2030P	FY 2031P
<b>Revenue</b>	185,852	181,785	177,806	173,920	170,130
<i>YoY Growth</i>	-2.6%	-2.2%	-2.2%	-2.2%	-2.2%
<b>Total Expenses</b>	131,155	126,329	120,496	114,266	107,638
<i>%age of Revenue</i>	70.6%	69.5%	67.8%	65.7%	63.3%
<b>EBIT / Operating Income (Loss)</b>	54,697	55,456	57,310	59,655	62,492
<i>%age of Revenue</i>	29.4%	30.5%	32.2%	34.3%	36.7%
<b>Net Income / (Loss)</b>	40,476	41,038	42,409	44,144	46,244
<i>%age of Revenue</i>	21.8%	22.6%	23.9%	25.4%	27.2%
<b>EPS</b>	0.08	0.08	0.08	0.08	0.09
<i>YoY Growth</i>	0.1%	1.4%	3.3%	4.1%	4.8%

## Balance Sheet – Our Estimated Projections (1/2)

<i>(All figures are in AUD thousands)</i>	Jun 2022	Jun 2023	Jun 2024	Jun 2025	Jun 2026
<b>ASSETS</b>					
<b>Current Assets</b>					
Cash & Cash Equivalents	19,382	18,623	17,388	15,985	3,885
Trade and Other Receivables	191	184	181	175	69,002
Other Current Assets	30	29	29	28	10,978
Derivative Financial Instruments	-	-	-	-	-
<b>Total Current Assets</b>	<b>19,603</b>	<b>18,836</b>	<b>17,597</b>	<b>16,188</b>	<b>83,865</b>
<b>Non Current Assets</b>					
Financial Assets at Fair Value Through Other Comprehensive Income	1,577	1,577	1,577	1,577	1,577
Right of Use assets	103	103	103	103	103
Property, Plant and Equipment	360	349	318	347	380
Exploration and Evaluation	26,010	26,010	178,510	331,010	275,841
<b>Total Non Current Assets</b>	<b>28,051</b>	<b>28,039</b>	<b>180,508</b>	<b>333,037</b>	<b>277,902</b>
<b>TOTAL ASSETS</b>	<b>47,654</b>	<b>46,875</b>	<b>198,105</b>	<b>349,225</b>	<b>361,766</b>
<b>LIABILITIES AND EQUITY</b>					
<b>LIABILITIES</b>					
<b>Current Liabilities</b>					
Trade and Other Payables	134	134	191	195	14,174
Short-Term Provisions	203	203	203	203	203
Lease Liabilities	18	18	25	26	1,865
<b>Total Current Liabilities</b>	<b>354</b>	<b>354</b>	<b>419</b>	<b>423</b>	<b>16,241</b>
<b>Non Current Liabilities</b>					
Debt	-	-	152,500	305,000	261,274
Long-Term Provisions	-	-	-	-	-
Lease Liabilities	39	39	39	39	39
<b>Total Non Current Liabilities</b>	<b>39</b>	<b>39</b>	<b>152,539</b>	<b>305,039</b>	<b>261,313</b>
<b>TOTAL LIABILITIES</b>	<b>393</b>	<b>393</b>	<b>152,957</b>	<b>305,462</b>	<b>277,554</b>
<b>EQUITY</b>					
Contributed Equity	72,740	72,740	72,740	72,740	72,740
Reserves	2,581	2,581	2,581	2,581	2,581
Accumulated Losses	(28,061)	(28,839)	(30,174)	(31,558)	8,891
<b>TOTAL EQUITY</b>	<b>47,260</b>	<b>46,482</b>	<b>45,148</b>	<b>43,764</b>	<b>84,212</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>47,654</b>	<b>46,875</b>	<b>198,105</b>	<b>349,225</b>	<b>361,766</b>

## Balance Sheet – Our Estimated Projections (2/2)

<i>(All figures are in AUD thousands)</i>	Jun 2027	Jun 2028	Jun 2029	Jun 2030	Jun 2031
<b>ASSETS</b>					
<b>Current Assets</b>					
Cash & Cash Equivalents	54,682	102,906	149,402	194,432	238,167
Trade and Other Receivables	67,212	65,742	64,302	62,897	61,526
Other Current Assets	10,693	10,459	10,230	10,006	9,788
Derivative Financial Instruments	-	-	-	-	-
<b>Total Current Assets</b>	<b>132,587</b>	<b>179,107</b>	<b>223,934</b>	<b>267,335</b>	<b>309,482</b>
<b>Non Current Assets</b>					
Financial Assets at Fair Value Through Other Comprehensive Income	1,577	1,577	1,577	1,577	1,577
Right of Use assets	103	103	103	103	103
Property, Plant and Equipment	365	353	338	313	283
Exploration and Evaluation	220,673	165,505	110,337	55,168	-
<b>Total Non Current Assets</b>	<b>222,719</b>	<b>167,538</b>	<b>112,355</b>	<b>57,162</b>	<b>1,964</b>
<b>TOTAL ASSETS</b>	<b>355,306</b>	<b>346,645</b>	<b>336,289</b>	<b>324,497</b>	<b>311,446</b>
<b>LIABILITIES AND EQUITY</b>					
<b>LIABILITIES</b>					
<b>Current Liabilities</b>					
Trade and Other Payables	13,654	13,152	12,545	11,896	11,206
Short-Term Provisions	203	203	203	203	203
Lease Liabilities	1,797	1,731	1,651	1,565	1,474
<b>Total Current Liabilities</b>	<b>15,654</b>	<b>15,085</b>	<b>14,398</b>	<b>13,664</b>	<b>12,883</b>
<b>Non Current Liabilities</b>					
Debt	214,925	165,795	113,717	58,515	(0)
Long-Term Provisions	-	-	-	-	-
Lease Liabilities	39	39	39	39	39
<b>Total Non Current Liabilities</b>	<b>214,964</b>	<b>165,834</b>	<b>113,756</b>	<b>58,554</b>	<b>39</b>
<b>TOTAL LIABILITIES</b>	<b>230,618</b>	<b>180,919</b>	<b>128,154</b>	<b>72,218</b>	<b>12,922</b>
<b>EQUITY</b>					
Contributed Equity	72,740	72,740	72,740	72,740	72,740
Reserves	2,581	2,581	2,581	2,581	2,581
Accumulated Losses	49,367	90,405	132,814	176,958	223,202
<b>TOTAL EQUITY</b>	<b>124,688</b>	<b>165,726</b>	<b>208,135</b>	<b>252,280</b>	<b>298,524</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>355,306</b>	<b>346,645</b>	<b>336,289</b>	<b>324,497</b>	<b>311,446</b>

## Valuation

Equity Value of Musgrave stands between **AUD 205.1 million and AUD 250.6 million**

Equity Value per share for MGV stands between **AUD 0.38 and AUD 0.47**

*(All figures in AUD thousands)*

Valuation Approach	Variance	Equity Value as on 08-Dec-2021	Price per Share (AUD)
Downside Case	-10%	205,058	0.382
Base Case	0%	227,842	0.424
Upper Case	10%	250,626	0.467s

### Important information on Arrowhead methodology

The principles of the valuation methodology employed by Arrowhead BID are variable to a certain extent, depending on the sub-sectors in which the research is conducted. But all Arrowhead valuation research possess an underlying set of common principles and a generally common quantitative process.

With Arrowhead commercial and technical due diligence, Arrowhead researches the fundamentals, assets and liabilities of a company, and builds estimates for revenue and expenditure over a coherently determined forecast period.

Elements of past performance such as price/earnings ratios, indicated as applicable, are mainly for reference. Still, elements of real-world past performance enter the valuation through their impact on the commercial and technical due diligence.

We have presented the Discounted Cash Flow ("DCF") estimate approach for Free Cash Flow to Equity ("FCFE") valuation of gold deposits. We have also presented Comparable Company Analysis ("CCA") for exploration stage gold companies and for production stage gold companies. We have calculated the value of copper and silver deposits using the CCA and added to it the weighted average equity value of gold deposits from DCF, CCA of exploration and production stage companies to calculate the equity value of Musgrave.

### Arrowhead BID Fair Market Value Bracket

The Arrowhead Fair Market Value is given as a bracket. This is based on quantitative key variable analyses such as key price analysis for revenue and cost drivers or analysis and discounts on revenue estimates for projects, especially relevant to projects estimated to provide revenue near the end of the chosen forecast period. Low and high estimates for key variables are produced as a valuation tool.

In principle, an investor comfortable with the high brackets of our key variable analysis will align with the high bracket in the Arrowhead Fair Value Bracket, and, likewise, in terms of low estimates. The investor will also note the company intangibles to analyze the strengths and weaknesses, and other essential company information. These intangibles serve as supplementary decision factors for adding or subtracting a premium in investor's own analysis.

The bracket should be taken as a tool by Arrowhead BID for the reader of this report and the reader should not solely rely on this information to make his decision on any particular security. The reader must also understand that while on the one hand global capital markets contain inefficiencies, especially in terms of



information, on the other, corporations and their commercial and technical positions evolve rapidly. This present edition of the Arrowhead valuation is for a short to medium-term alignment analysis (one to twelve months).

### Estimation of Equity Value

Value of Musgrave Minerals' equity has been arrived at using a blend of Discounted Cash Flow ("DCF") and comparable analysis valuation methodology.

Musgrave's major focus is on gold deposits, although it also holds copper and silver deposits. We have categorized the Company's gold resources into resources at its flagship deposits (Break of Day and Lena) and resources at other deposits. We have further categorized these resources based on the stage (exploration or production) at which the comparable companies are operating. So, to value the Company's gold assets, two sets of comparable companies were taken into consideration: Exploration stage companies and Production stage companies.

In the first step, we calculated the equity value of the Company based on CCA using its total indicated and inferred resource of 6,422 thousand tonnes. We only considered exploration stage companies with measured, indicated, and inferred gold resources for this analysis. We arrived at the total equity value of AUD 53.3 million based on CCA for gold deposits. We attributed this equity value to major gold deposits (AUD 42.4 million) and remaining gold deposits (AUD 10.9 million) in proportion of their resource, i.e. 79% at Break of Day and Lena and 21% to others.

*(All figures in AUD thousands)*

Listed Comparable Analysis – Exploration Stage Gold Assets	Equity Value as on 08-Dec-2021	Weights based on Resource
Equity Value Based on CCA for Gold Assets - Break of Day and Lena	42,431	79%
Equity Value Based on CCA for Gold Assets - Deposits other than Break of Day and Lena	10,966	21%
<b>Equity Value Based on CCA for Gold Assets - Exploration stage companies</b>	<b>53,397</b>	<b>100%</b>

In the second step, we calculated the equity value based on CCA of production stage companies with a focus on gold deposits. We only considered the Break of Day and Lena deposits for this analysis and arrived at a value of AUD 312.2 million. To this value, we added the equity value based on CCA for gold deposits other than Break of Day and Lena calculated in the first step (AUD 10.9 million). The equity value based on CCA of production stage companies with a focus on gold assets is AUD 323.2 million.

(All figures in AUD thousands)

<b>Listed Comparable Analysis – Production Stage Gold Assets</b>	<b>Equity Value as on 08-Dec-2021</b>
Equity Value Based on CCA of Production stage companies discounted to today's date	312,263
Equity Value Based on CCA for Gold Assets - Deposits other than Break of Day and Lena	10,966
<b>Equity Value Based on CCA for Gold Assets using Production stage companies</b>	<b>323,229</b>

In the third step, we calculated equity value (AUD 230.8 million) of Break of Day and Lena deposits using the DCF methodology and added to it the equity value based on CCA for gold deposits other than Break of Day and Lena calculated in the first step (AUD 10.9 million). The equity value of gold deposits based on this method is calculated as AUD 241.8 million.

(All figures in AUD thousands)

<b>DCF Valuation – Gold Assets</b>	<b>Equity Value as on 08-Dec-2021</b>
Equity Value Based on DCF - Break of Day and Lena	230,807
Equity Value Based on DCF for Gold Assets - Deposits other than Break of Day and Lena	10,966
<b>Equity Value Based on DCF – All Gold deposits</b>	<b>241,772</b>

In the fourth step, we calculated the weighted average of the Company's gold deposits using the equity values arrived at in the first three steps.

### **Equity Value - Gold Deposits Summary**

<b>Valuation Approach</b>	<b>Equity Value as on 08-Dec-2021</b>	<b>Price per share</b>	<b>Weights</b>
Based on Comparable Company Analysis for Gold Assets - Exploration Stage companies	53,397	0.099	25%
Based on Comparable Company Analysis for Gold Assets - Production Stage companies	323,229	0.602	25%
Based on DCF Method - All Gold Deposits	241,772	0.450	50%
<b>Weighted Average Equity Value - Gold Deposits</b>	<b>215,043</b>	<b>0.400</b>	<b>100%</b>

We have valued the Company's silver and copper deposits using the CCA method. A single comparable company was chosen for each of these metals to calculate the equity value of the company for copper and

silver deposits. The total equity value of Musgrave based on CCA for silver deposits is AUD 5.0 million and total equity value based on CCA for copper deposits is AUD 7.8 million.

In the last step, we calculated the total equity value of the Company by adding the equity values calculated above for all the three types of deposits – gold, copper, and silver. The total equity value of Musgrave according to our analysis is AUD 227.8 million and the price per share is AUD 0.42, as calculated below.

## Equity Value - All Deposits of Musgrave

*(All figures in AUD thousands)*

<b>Business Segment</b>	<b>Equity Value as on 08-Dec-2021</b>
Weighted Average Equity Value – Gold Deposits	215,043
Equity Value Based on CCA - Copper Deposits	7,780
Equity Value Based on CCA - Silver Deposits	5,020
<b>Equity Value - All deposits of Musgrave</b>	<b>227,842</b>
<b>Price per share</b>	<b>0.424</b>

## 1. Listed Company Analysis / Comparable Company Analysis (“CCA”)

Listed Comparable Analysis method operates under the assumption that similar companies will have similar valuation multiples such as EV/EBITDAX and EV/EBITDA. We have shortlisted companies similar in business with Musgrave Minerals based on parameters such as market size, region of operations, metal focus etc.

A list of available statistics for the companies was compiled, and the EV/EBITDA, EV/EBITDAX, EV / Measured, Indicated, & Inferred Resource (AUD thousand / tonne), and Price /Cashflow multiples were calculated for each of the comparable companies. Since most of the data was not normalized, we have left outliers in our calculations. The weighted average of the resulting multiples was calculated and used as benchmark for valuing Musgrave Minerals.

The weights allocated to the comparable companies were based on the degree of their business match with the subject company. The resulting valuation is as follows:

### CCA for gold-based exploration stage companies:

*(All figures in AUD thousands)*

Relative Valuation based on:	Weight	Multiple as on 08-Dec-2021	Equity Value as on 08-Dec-2021	Implied Share Price (AUD)
EV/EBITDAX	0.0%	-	-	-
EV/EBITDA	0.0%	-	-	-
EV / Measured, Indicated, & Inferred Resource (AUD thousand / tonne)	100%	5.3	53,397	0.099
Price/Cashflow	0.0%	-	-	-
<b>Weighted Average Equity Value</b>	<b>100%</b>		<b>53,397</b>	<b>0.099</b>

Stock Exchange	Ticker	Company Name	Business Match %	EV/EBITDAX	EV/EBITDA	EV / Measured, Indicated, & Inferred Resource (AUD thousand / tonne)	Price / Cashflow
Australian Stock Exchange	CY5	Cygnus Gold Limited	75%	(4.6)	(2.2)	-	(173.1)
Australian Stock Exchange	RXL	Rox Resources Limited	70%	(11.7)	(4.8)	2.9	(7.6)
Australian Stock Exchange	NWM	Norwest Minerals Limited	65%	(26.7)	(8.9)	5.1	23.6
Australian Stock Exchange	GMD	Genesis Minerals Limited	85%	(248.7)	(32.9)	11.5	(38.7)
Australian Stock Exchange	CAI	Calidus Resources Limited	70%	(55.9)	(54.5)	5.2	(107.3)
TSX Venture Exchange	HIGH	Highgold Mining Inc.	80%	(41.2)	(40.8)	25.9	(69.1)
TSX Venture Exchange	LAB	Labrador Gold Corp.	70%	(46.1)	(46.1)	-	(158.2)
Australian Stock Exchange	BRB	Breaker Resources NI	80%	(68.2)	(5.9)	3.2	(6.5)
Australian Stock Exchange	BDCDB	Bardoc Gold Limited	55%	(31.3)	(8.2)	1.9	(12.5)
<b>Median</b>				-	-	<b>5.1</b>	<b>23.6</b>
<b>Mean without Outliers</b>				-	-	<b>5.0</b>	<b>23.6</b>
<b>Weighted Average without Outliers</b>				-	-	<b>5.3</b>	<b>23.6</b>
ASX	<b>MGV</b>	<b>Musgrave Minerals Ltd.</b>		<b>(59.8)</b>	<b>(59.8)</b>	<b>25.4</b>	<b>(63.0)</b>

## CCA for gold-based production stage companies:

(All figures in AUD thousands)

Relative Valuation based on:	Weight	Multiple as on 30-Jun-2027	Equity Value as on 30-Jun-2027	Implied Share Price (AUD)
EV/EBITDAX	25%	4.3	381,738	0.7
EV/EBITDA	25%	7.9	827,021	1.5
EV / Measured, Indicated, & Inferred Resource (AUD thousand / tonne)	25%	23.0	(43,094)	(0.1)
Price/Cashflow	25%	11.2	924,571	1.7
<b>Weighted Average Equity Value</b>	<b>100%</b>		<b>522,559</b>	<b>0.973</b>

The equity value calculated as on June 30, 2027, was discounted to arrive at the following values as on Dec 8, 2021.

<b>Weighted Average Equity Value as on</b>	<b>12/8/2021</b>	<b>312,263</b>
<b>Per Share Value (in AUD) on</b>	<b>12/8/2021</b>	<b>0.581</b>

Stock Exchange	Ticker	Company Name	Business Match %	EV/EBITDAX	EV/EBITDA	EV / Measured, Indicated, & Inferred Resource (AUD thousand / tonne)	Price / Cashflow
Australian Stock Exchange	PNR	Pantoro Limited	75%	31.1	31.4	18.7	13.4
Australian Stock Exchange	GCY	Gascoyne Resources Limited	70%	2.6	8.5	2.9	1.5
Australian Stock Exchange	GOR	Gold Road Resources Limited	65%	6.2	7.1	27.9	8.6
<b>Median</b>				<b>6.2</b>	<b>8.5</b>	<b>18.7</b>	<b>8.6</b>
<b>Mean without Outliers</b>				<b>4.4</b>	<b>7.8</b>	<b>23.3</b>	<b>11.0</b>
<b>Weighted Average without Outliers</b>				<b>4.3</b>	<b>7.9</b>	<b>23.0</b>	<b>11.2</b>

## CCA for silver-based exploration stage companies:

(All figures in AUD thousands)

Relative Valuation based on:	Weight	Multiple as on 08-Dec-2021	Equity Value as on 08-Dec-2021	Implied Share Price (AUD)
EV/EBITDAX	0.0%	40.0	-	-
EV/EBITDA	0.0%	40.0	-	-
EV / Measured, Indicated, & Inferred Resource (AUD thousand / tonne)	100.0%	1.8	5,020	0.009
Price/Cashflow	0.0%	-	-	-
<b>Weighted Average Equity Value</b>	<b>100%</b>		<b>5,020</b>	<b>0.009</b>

Stock Exchange	Ticker	Company Name	Business Match %	EV/EBITDAX	EV/EBITDA	EV / Measured, Indicated, & Inferred Resource (AUD thousand / tonne)	Price / Cashflow
Australian Stock Exchange	SVL	Silver Mines Limited	75%	40.0	40.0	1.8	(158.7)
<b>Median</b>				<b>40.0</b>	<b>40.0</b>	<b>1.8</b>	<b>0.0</b>
<b>Mean without Outliers</b>				<b>40.0</b>	<b>40.0</b>	<b>1.8</b>	<b>-</b>
<b>Weighted Average without Outliers</b>				<b>40.0</b>	<b>40.0</b>	<b>1.8</b>	<b>-</b>
ASX	<b>MGV</b>	<b>Musgrave Minerals Ltd.</b>		<b>(57.8)</b>	<b>(57.8)</b>	<b>56.6</b>	<b>(61.2)</b>

## CCA for copper-based exploration stage companies:

(All figures in AUD thousands)

Relative Valuation based on:	Weight	Multiple as on 08-Dec-2021	Equity Value as on 08-Dec-2021	Implied Share Price (AUD)
EV/EBITDAX	0.0%	4.1	-	-
EV/EBITDA	0.0%	4.1	-	-
EV / Measured, Indicated, & Inferred Resource (AUD thousand / tonne)	100.0%	2.79	7,780	0.014
Price/Cashflow	0.0%	-	-	-
<b>Weighted Average Equity Value</b>	<b>100%</b>		<b>7,780</b>	<b>0.014</b>

Stock Exchange	Ticker	Company Name	Business Match %	EV/EBITDAX	EV/EBITDA	EV / Measured, Indicated, & Inferred Resource (AUD thousand / tonne)	Price / Cashflow
Australian Stock Exchange	RCP	Redbank Copper Limited	70%	4.1	4.1	2.8	(19.8s)
<b>Median</b>				<b>4.1</b>	<b>4.1</b>	<b>2.8</b>	<b>0.0</b>
<b>Mean without Outliers</b>				<b>4.1</b>	<b>4.1</b>	<b>2.8</b>	<b>-</b>
<b>Weighted Average without Outliers</b>				<b>4.1</b>	<b>4.1</b>	<b>2.8</b>	<b>-</b>
ASX	<b>MGV</b>	<b>Musgrave Minerals Ltd.</b>		<b>(57.8)</b>	<b>(57.8)</b>	<b>56.6</b>	<b>(61.2)</b>



## 2. Discounted Cash Flow (“DCF”) Approach used for valuing Break of Day and Lena deposits

- **Valuation Methodology:** The Arrowhead fair valuation of Musgrave’s gold deposits (Break of Day and Lena) is based on the Discounted Cash Flow (“DCF”) analysis.
- **Time Horizon:** The time period chosen for valuation is 9 years (FY 2023 to FY 2031).

The following table calculates the cost of equity of Musgrave’s gold deposits, Break of Day and Lena. The expected return on the market is assumed for the broader market.

### Cost of Equity

Valuation	
Risk Free Rate (Rf)	2.0%
Beta	1.1
Expected Market Rate of Return	9.0%
<b>Cost of Equity</b>	<b>9.7%</b>

The following table summarizes the Free Cash Flow to Equity (“FCFE”) computation for Musgrave, which is subsequently discounted by the Cost of Equity (“COE”).

FCFE (All figures in AUD thousands)					
	2023	2024	2025	2026	2027
Net Income	(778)	(1,334)	(1,384)	40,449	40,476
Add: Depreciation	62	56	61	67	64
Add: Amortization Expense	-	-	-	55,168	55,168
Less: Increase in Non-Cash Working Capital	(7)	(68)	(10)	63,958	(1,487)
Less: CAPEX	50	152,525	152,590	100	50
Add: Increase in Debt	-	152,500	152,500	(43,726)	(46,349)
Add: Net Assets (Asset Liquidation)	-	-	-	-	-
<b>Free Cash Flow to Equity (FCFE)</b>	<b>(759)</b>	<b>(1,235)</b>	<b>(1,403)</b>	<b>(12,100)</b>	<b>50,797</b>
<b>Present Value of Free Cash Flow to Equity (FCFE)</b>	<b>(692)</b>	<b>(1,026)</b>	<b>(1,063)</b>	<b>(8,355)</b>	<b>31,974</b>

	2028	2029	2030	2031
Net Income	41,038	42,409	44,144	46,244
Add: Depreciation	62	60	55	50
Add: Amortization Expense	55,168	55,168	55,168	55,168
Less: Increase in Non-Cash Working Capital	(1,136)	(981)	(895)	(808)
Less: CAPEX	50	45	30	20
Add: Increase in Debt	(49,130)	(52,078)	(55,203)	(58,515)
Add: Net Assets (Asset Liquidation)	-	-	-	298,524
<b>Free Cash Flow to Equity (FCFE)</b>	<b>48,224</b>	<b>46,495</b>	<b>45,030</b>	<b>342,259</b>
<b>Present Value of Free Cash Flow to Equity (FCFE)</b>	<b>27,671</b>	<b>24,320</b>	<b>21,471</b>	<b>148,763</b>

Valuation	
<b>Equity Value as on 30-Jun-2022 (AUD thousands)</b>	<b>243,064</b>
<b>Equity Value as on 08-Dec-2021 (AUD thousands)</b>	<b>230,807</b>
Number of Shares Outstanding (in thousands)	537,173
<b>Value per Share (AUD)</b>	<b>0.430</b>

The equity value of the Company is sensitive to cost of equity. The following table captures the sensitivity of Musgrave's value to these assumptions.

*(All figures in AUD thousands)*

<b>Cost of Equity</b>	<b>Equity Value</b>
10%	225,417
11%	208,457
12%	192,931
13%	178,703
14%	165,653
15%	153,675
16%	142,670
17%	132,551
18%	123,238
19%	114,662s

## Analyst Certifications

I, Aman Sabherwal, certify that all of the views expressed in this research report accurately reflect my personal views about the subject security and the subject company, based on the collection and analysis of public information and public company disclosures.

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## Appendix

### Glossary

PFS	Pre-Feasibility Study
EIS	Exploration Incentive Scheme
CAPEX	Capital Expenditure
IMF	International Monetary Fund
JV	Joint Venture
CAGR	Compounded Annual Growth Rate
BoA	Bank Of America
ASX	Australian Stock Exchange
Aus IMM	Australasian Institute of Mining and Metallurgy
PGMs	Platinum Group Metals
DCF	Discounted Cash Flow
FCFF	Free Cash Flow to Firm
WACC	Weighted Average Cost of Capital
WMC	WMC Resources Ltd
CIL	Carbon-in-leach

## Notes and References

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