**ASX:RXL** 



# Investor Presentation

**RIU - Explorers Conference** 

15 - 17 February 2022

**Alex Passmore | Managing Director** 

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#### **Competent Person Statements**

#### **Exploration Results**

The information in this report that relates to previous Exploration Results, was either prepared and first disclosed under the JORC Code 2012 and has been properly and extensively cross-referenced in the text to the date of original announcement to ASX. In the case of the 2004 JORC Code Exploration Results and Mineral Resources, they have not been updated to comply with the JORC Code 2012.

#### Resource Statements

The information in this report that relates to gold Mineral Resources for the Youanmi Gold project was reported to the ASX on 20 January 2022 (JORC 2012). Rox confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 20 January 2022, and that all material assumptions and technical parameters underpinning the estimates in the announcement of 20 January 2022 continue to apply and have not materially changed.

The information in this report that relates to gold Mineral Resources for the Mt Fisher project was reported to the ASX on 11 July 2018 (JORC 2012). Rox confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 11 July 2018, and that all material assumptions and technical parameters underpinning the estimates in the announcement of 11 July 2018 continue to apply and have not materially changed.



# **Investment Highlights**



- Quality high grade resource reported at flagship project, Youanmi (3.0Moz at 3.78 g/t Au)
  - Including high grade underground component of 2.2Moz at 6.9g/t Au
  - Resource remains open along strike and down dip with further growth likely
  - 39% of resource currently in indicated category (Jan 2022)
  - Resource / Reserve definition drilling inferred -> indicated (ongoing)
- Albion process preferred method for sulphide ore bodies at Youanmi (92.2% average gold extraction for underground)<sup>(2)</sup>
- Feasibility studies continuing into restart of Youanmi
- Mt Fisher Mt Eureka Project, renewed focus on exploration with VMS prospectivity identified
- Attractive entry price (\$30 per attributable resource ounce)

#### Notes:

# Strategy



"Applying modern exploration and mining technologies to historic assets and data to grow existing resources and return to production."



Exploration - Youanmi Near Mine

Exploration - Youanmi Regional

Exploration - Mt Fisher/Mt Eureka

Existing data studies

**Build Rox capacity** 

### 2021 - 2022

Commence studies and progress options for restart

Investigate early cash flow opportunities

Ongoing exploration

### 2022 - +

**Progress studies** 

Final Investment Decision

Funding

Execution

Ongoing exploration

## **Corporate Information**



#### **About Rox Resources**

Rox Resources Limited (ASX:RXL) is a West Australian focused gold exploration and development Company. It is the 70% owner and operator of the historic Youanmi Gold Project near Mt Magnet, approximately 480 kilometres northeast of Perth, and wholly owns the Mt Fisher Gold Project approximately 140 kilometres southwest of Wiluna.

Capital Structure	
ASX Code	RXL
Shares on Issue	158.9M
Share Price (as at 14 Feb 2022)	A\$0.44
Unlisted Options	19.6M
Market Capitalisation	\$70.0M
Cash (as at 31 Dec 2021)	\$5.6M
Debt	Nil



# **Experienced Team**



### **Board**



Stephen Dennis
Non - Executive Chairman



Alex Passmore Managing Director



John Mair Non - Executive Director

Management



Chris Hunt
Chief Financial Officer



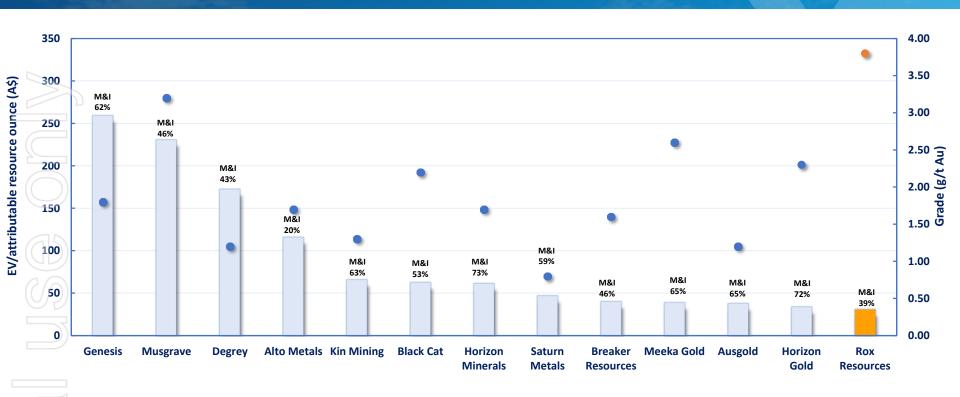
Matthew Antill General Manager -Operations



**Gregor Bennett Exploration Manager** 

# Comparable Gold Companies (1) ROX







# Youanmi Gold Project







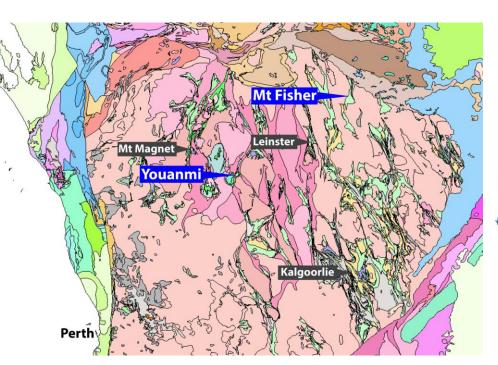




## **Overview**



- Rox holds a 70% interest in the Youanmi Gold Mine (OYG Joint Venture) and is Manager of the JV
- Previously produced 670,000 ounces at 5.4g/t Au; closure in 1997 when gold price was A\$400/oz – A\$450/oz
- Last parcel of ore mined underground at Youanmi (Nov 1997) was at 14.6g/t Au grade
- Existing decline in place to approx. 600 metres below ground
- Quality, high-grade resource (3.0Moz at 3.78 g/t) (1)





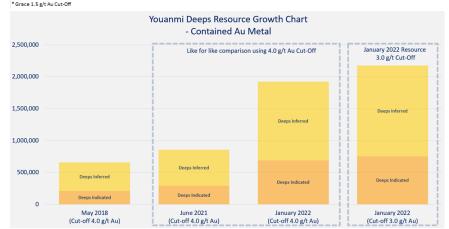
(1) Refer ASX announcement 20 January 2022

## **Mineral Resource - Jan 2022**



- Youanmi Total Mineral Resources increased by 1.34Moz
   Au (+81%) to 2.99 Moz of contained gold (Au)
- Deeps Resource growth (+156%) to 2.2Moz Au at 6.9 g/t Au with high grades preserved (6.9g/t Au resource average)
- Very high-grade material increased following seven months of intensive infill and extensional diamond drilling for around 35,000 metres, as well as defining new areas such as Link, Junction, and mineralisation-parallel hanging-wall lodes
- \$7 per ounce discovery cost well below industry averages
- Increase in Au metal ounces per vertical metre for Youanmi Deeps over key potential mining depths
- Near Surface Resource to be updated in next resource calculation

			June 2021 Resource			Change in	January 2022 Resource		
			Tonnes	Au Grade	Au Metal	Au Metal	Tonnes	Au Grade	Au Meta
Area	Classification	on Cut-off	(dmt)	(g/t)	(oz)	(%)	(dmt)	(g/t)	(oz)
Near Surface	Indicated	0.5 g/t*	7,470,000	1.81	434.000	na	7.470.000	1.81	434.000
Deeps	Indicated	3.0 g/t	1,097,000	8.23	290,200	up 156%	3,060,000	7.55	744,000
SubTotal	Indicated	_	8,567,000	2.63	724,200	up 63%	10,530,000	3.48	1,178,000
Near Surface	Inferred	0.5 g/t*	7,240,000	1.57	366,000	na	7,240,000	1.57	366,000
Deeps	Inferred	3.0 g/t	2,279,000	7.73	566,200	up 156%	6,840,000	6.59	1,450,000
SubTotal	Inferred		9,519,000	3.05	932,200	up 95%	14,080,000	4.01	1,816,000
Near Surface	Ind + Inf	0.5 g/t*	14,710,000	1.69	800,000	na	14,710,000	1.69	800,000
Deeps	Ind + Inf	3.0 g/t	3,376,000	7.89	856,300	up 156%	9,900,000	6.89	2,194,000
Near Surface + Deeps	Ind + Inf		18,086,000	2.85	1,656,300	up 81%	24,610,000	3.78	2,994,000

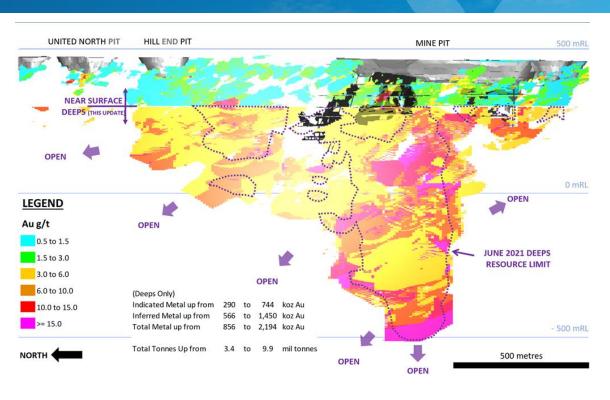


 Refer ASX Announcements dated 17 April 2019, 23 June 2021 and 20 January 2022 for comprehensive details of Youanmi mineral resources

## **Resource Observations**



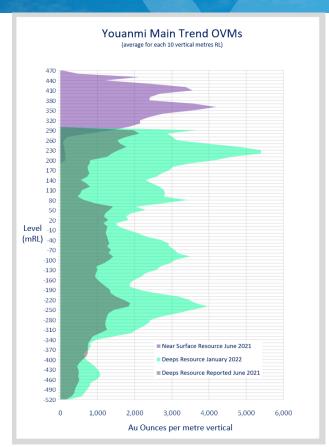
- Multiple mineralised lodes modelled, along 2.8 km of strike length at surface, comprising the Mine Lode and associated footwall and hanging wall lodes along the main trend corridor
- Maximum depth of the Mine Lode interpretation is to approximately -600mRL, 1,060m below the natural surface
- Opportunity for open pits to be mined concurrently with a high-grade underground operation
- Longer term larger scale open pit expansion opportunity
- Exploration is ongoing with Resource growth likely to continue



## Resource Observations (cont'd)



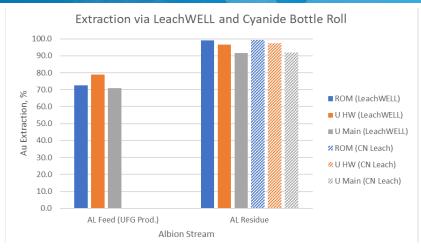
- A significant increase in ounces per vertical metre was achieved in the recent resource upgrade to an average of 2,900 ounces per vertical metre between surface and 750m below surface
- Resource growth to January 2022 being lateral in two aspects:
  - To the north including the Link area
    - New lodes discovered in the hanging-wall of the previously interpreted lodes
- Ounce per vertical metre metrics compare favourably to existing Western Australian gold operations and indicate robust conceptual economics



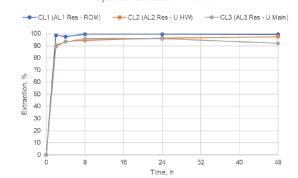
# Metallurgy



- There are two principal ore types at Youanmi:
  - Non-Sulphide readily extractible via CIL. Most of this material is in the near surface resource. Some material also within quartz rich lodes in the deeps.
- Sulphide fine gold associated with Pyrite (75%); and gold associated with Arsenopyrite (25%) which requires additional oxidation (8hrs, Albion leach, 92.2% extraction) (1). Deeps Resource.
- Albion Process achieves an average of 92.2% gold extraction (up to 94%) for Youanmi Deeps mineralisation (i.e. sulphide)
- Fast extraction kinetics on the Albion residues with solution assays indicating majority of gold had leached within 8 hours
- Albion Process the preferred treatment method for Youanmi Deeps ore and is likely to deliver the lowest capital and operating costs of the methods evaluated



#### Cyanide Extraction Profiles





(1) Refer ASX announcement 23 December 2021

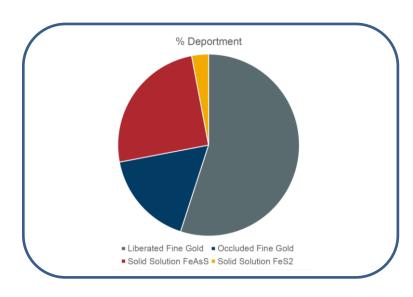
## **Gold Deportment & Past Observations**



- From RXL's recent work simplified metallurgy is as follows:
  - 800koz Au Near Surface Resource (surface to 160m depth) = free milling
  - 2.2Moz Au Deeps Resource = **sulphide associated**. Only **25%** of this material is Arsenopyrite and needs extra oxidation. **75% is "conventional" milling**.
  - With only partial Sulphur Oxidation (33%) gold leach extraction is 90-95%

#### **Historical Processing Observations**

- Feed 200,000 tpa ore @ 11-15 g/t Au
- Float Recoveries 85-90% @ 50-60 g/t Au in con
- BIOX Retention time 4 days @ 50°C and pH 1.5
- · Moderate thermophiles used which operate at 50°C
- Sulphur Oxidation Total of 33%, rate of 11 tonnes per day of Sulphur
- FeAsS 95%
- FeS 30%
- Gold leach extraction 90-95% from oxidized con
- NaCN leach consumption 7.5 kg/t of con
- Water Chlorides 500 ppm with resistance to 1000 ppm



## **Conceptual Flowsheet**

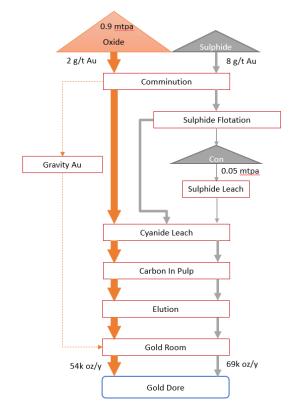


- Conceptual flowsheets are being studied and developed with further detail available in March/April 2022 following the next round of engineering work
- Flowsheet envisages a Crush -> Grind -> CIL for Oxide / Non-Sulphide and a parallel Float -> Oxidation step for sulphide material
- Indicatively a 3:1 ratio of Non-Sulphide to Sulphide ore (900ktpa / 300ktpa) albeit each process contributes ~50% of contained gold to overall production
- For Deeps / Sulphide Ore:

Albion process is proven and well understood with capital and operating cost benefits as well as recovery benefits ahead of POX

A sulphide float and intense leach potentially achieves a similar outcome according to recent work

Test work and engineering design trade-off studies continuing





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## Infrastructure



## The Youanmi Project includes a developed underground mine (dewatering required) and surface infrastructure including:

- Access roads (sealed roads 90km from mine gate)
- Airstrip
- Core shed and workshop
- Borefield
- Tailings disposal facility
- Mine offices
- Process water available from local aquifers
- Mine village well equipped for exploration crews.

## With a history of mining Youanmi is classified as a disturbed site and is on existing mining leases

- Environmental approvals for development a straightforward process
- Well understood mining considerations (wall stability, angles etc.)

### Midwest Pipeline & Road Infrastructure



- Spur line to Mount Magnet has a 4.1TJ/D capacity (APA Group)
- State road network established to/through Youanmi. Sealed road to 90 km from Youanmi Site
- Close to mining service towns
- Very good state roads accessing the site

### Youanmi Camp



## **Progress to Date**



- More than 50,000 metres drilled (RC and DD) in the past 18 months
- Substantial 81% increase in resource to 24.6M tonnes @ 3.78g/t Au for 3.0 million ounces (1)
- Low discovery cost of just \$7 per resource ounce, well below industry averages
- Experienced management team appointed
- Progressing studies into Youanmi production with mining design at feasibility level accuracy, process flow and metallurgical testwork pre-scoping, moving to scoping and feasibility level accuracy throughout 2022
- Metallurgical testwork shows 92.2% average gold extraction from underground (Deeps) ore with Near Surface Ore also +92% from simple CIL (2)
- Commenced Aircore program on regional tenure, first major program since Rox acquired 50%

#### Notes

### Youanmi Gold Project



View of Youanmi Main Pit looking northwest - RC and diamond drill rigs operating at Junction.

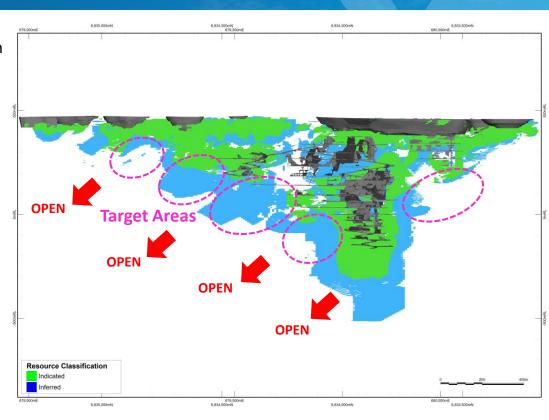
<sup>(1)</sup> Refer ASX Announcements dated 17 April 2019, 23 June 2021, and 20 January 2022 See Appendix 1 for full resource details

# **Resource Development Drilling**



- The Company continues to invest in drilling to support resource growth and resource conversion, in parallel with feasibility studies
- Drilling programs in 2022 will include resource conversion in addition to extensional drilling in key target areas with near term production potential
  - Resource remains open down dip and along strike





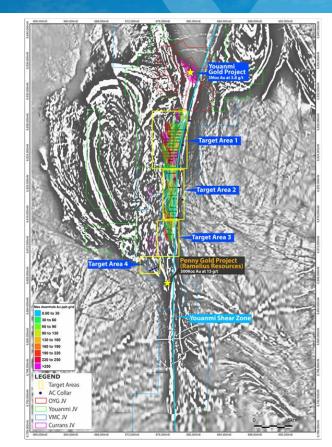
# Regional Targets - Upside



- 426 holes, 22,455 metre Aircore drilling program completed on Youanmi Regional JV tenements
- Aircore drilling campaign intersected regolith gold anomalies within NW trending structures over approximately 4km of strike
- High-priority target areas identified for follow up drilling
- 4m @ 2.37 g/t Au from 68m within a broader zone of 16m @ 0.91g/t Au from 56m intersected in RXAC718 close to the Youanmi Shear Zone and within a 1.5km long strong anomaly
- > 50km strike of Youanmi Shear Zone largely untested by historic drilling

### Next Steps:

- Follow up drilling (Aircore and RC) planned along strike and down dip of newly identified mineralization;
- Infill drilling planned between lines of anomalism; and
- Regional target generation ongoing on 50km of strike of the Youanmi Shear Zone



## **Next Steps**



- Additional drilling results from November and December 2021 will be incorporated into the next Mineral Resource
   Estimate update expected in the June 2022 quarter
- Following the recent substantial upgrade to the Youanmi Mineral Resource Estimate the Company expects concept level project economics to be very robust and is hence continuing to rapidly pursue its investigation of development pathways for the Youanmi Gold Project
- Studies into optimal production scenarios are well advanced these include:
  - Metallurgical test work, processing plant design, underground mine design and open pit optimisations, dewatering and geotechnical studies, waste rock characterisation, and environmental baseline testing
- Focused on growing the resource base and progressing feasibility studies with the aim of restarting production at the Youanmi gold mine
- In parallel undertaking extensive regional and near-mine drilling in parallel with these studies resource growth is expected to continue

# Mt Fisher - Mt Eureka Gold Project ROX









## Highlights

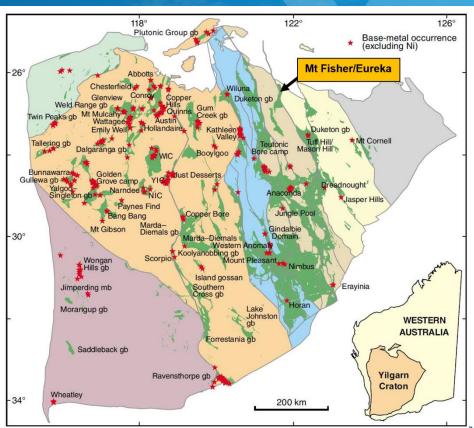


- 850km<sup>2</sup> ground position in one of the least explored greenstone belts in the prolific Yilgarn Craton
- Targeting orogenic gold mineralisation and strata-bound VMS style mineralisation
- VMS prospectivity identified through extensive project review
- Immediate work programs Aircore drilling, RC drilling and high resolution airborne magnetic survey completed with assays pending
- Mt Fisher Project includes a Gold Mineral Resource of 1.0Mt @ 2.7 g/t Au for 89,000 ounces of gold (1)
- Strong potential to add gold resources

# Project Location - Yilgarn Craton



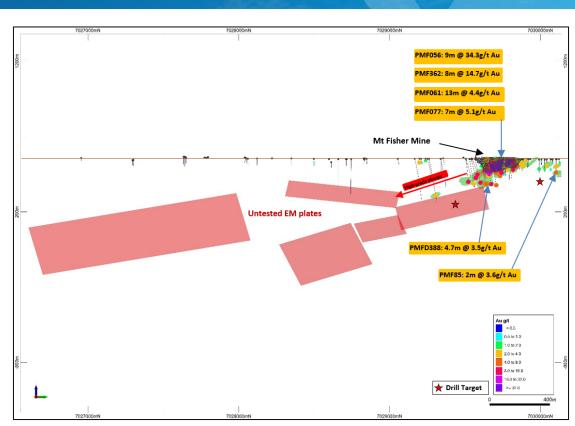
- Mt Fisher Mt Eureka Project is located in the Eastern Goldfields Superterrane of the Yilgarn Craton
- Yilgarn Craton is one of the World's great gold provinces
- The project's landholding is 850km² in one of the least explored greenstone belts in the prolific Yilgarn Craton



# **Work Programs**



- High resolution airborne magnetic survey completed
- Drilling programs completed (assays pending):
  - 160 holes, 7,300 metre Aircore drilling program completed at Mt Fisher Gold
     Project, all assays outstanding;
    - RC program circa 4,000 metres to commence; and



# **Investment Highlights**



- Quality high grade resource reported at flagship project, Youanmi (3.0Moz at 3.78 g/t Au)
  - Including high grade underground component of 2.2Moz at 6.9g/t Au
  - Resource remains open along strike and down dip with further growth likely
  - 39% of resource currently in indicated category (Jan 2022)
  - Resource / Reserve definition drilling inferred -> indicated (ongoing)
- Albion process preferred method for sulphide ore bodies at Youanmi (92.2% average gold extraction for underground)<sup>(2)</sup>
- Feasibility studies continuing into restart of Youanmi
- Mt Fisher Mt Eureka Project, renewed focus on exploration with VMS prospectivity identified
- Attractive entry price (\$30 per attributable resource ounce)

#### Notes:

### **Appendix 1 - Youanmi Mineral Resources**



#### Youanmi Resources Remaining January 2022 (ASX:RXL 20 January 2022)

Area	Classification	Cut-off (g/t)	Tonnes (dmt)	Au Grade (g/t)	Au Metal (oz)
Near Surface	Indicated	0.5*	7,470,000	1.81	434,000
Deeps	Indicated	3.0	3,060,000	7.55	744,000
Sub-total	Indicated		10,530,000	3.48	1,178,000
Near Surface	Inferred	0.5*	7,240,000	1.57	366,000
Deeps	Inferred	3.0	6,840,000	6.59	1,450,000
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Near Surface	Ind + Inf	0.5*	14,710,000	1.69	800,000
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Total	Ind + Inf		24,610,000	3.78	2,994,000

#### Notes

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The ASX release can be viewed at <a href="https://www.investi.com.au/api/announcements/rxl/4f775157-f73.pdf">https://www.investi.com.au/api/announcements/rxl/4f775157-f73.pdf</a>. Rox is of the view that as the resource estimate is JORC 2012 compliant, was prepared in the last 12 months, indicates the Modifying factors which remain relevant, and the estimate was prepared by well-known and industry respected Competent Persons for the Youanmi Near Surface Deposits and Youanmi Deeps Mineral Resource, the Mineral Resource estimate can be relied upon.

<sup>\*</sup> Grace 1.5 g/t cutoff

## **Appendix 2 - Mt Fisher Gold Mineral Resources**



#### Mt Fisher Gold (ASX:RXL 11 July 2018)

Deposit	Category	Tonnes	Grade (g/t Au)	Gold (oz)
	Measured	25,521	8.02	6,577
Mayou Doof	Indicated	4,930	5.95	943
Moray Reef	Inferred	1,242	3.87	155
	Total	31,693	7.53	7,675
	Measured	125,605	3.61	14,569
Mt Fisher	Indicated	59,533	3.63	6,948
ivit Fisher	Inferred	40,934	3.41	4,494
	Total	226,073	3.58	26,011
	Measured	23,712	2.59	1,974
Damsel	Indicated	151,464	2.27	11,060
Dailisei	Inferred	591,820	2.23	42,339
	Total	766,697	2.25	55,373
	Measured	174,838	4.11	23,121
TOTAL	Indicated	215,928	2.73	18,951
TOTAL	Inferred	633,997	2.31	46,987
	Total	1,024,762	2.70	89,059

0.8 g/tAu block cut-off grade.
Values may not sum due to rounding.

## **Appendix 3 - Comparable Gold Companies**



Companies selected are considered comparable to Rox Resources as they are in exploration and/or study phase

ASX code	Company name	Project Ownership (%)	Resource (Mt)	Grade (g/t Au)	Attributable Contained Au (Koz)	Attributable M&I Au (Koz)	M&I Au/ Contained Au (%)	Source
GMD	Genesis Minerals Limited	100	27.3	1.8	1,608	994	62	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 28 January 2022)
MGV	Musgrave Minerals Limited	100	6.4	3.2	659	301	46	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 28 January 2022) : Company Presentation - South West Connect ASX Showcase (announced on the ASX 27 October 2021)
DEG	De Grey Mining Limited	100	229.8	1.2	8,969	3,830	43	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 28 January 2022)
AME	Alto Metals Limited	100	6.2	1.7	331	65	20	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 28 January 2022)
KIN	Kin Mining NL	100	31.1	1.3	1,275	800	63	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 24 January 2022)
BC8	Black Cat Syndicate Limited	100	18.3	2.2	1,272	671	53	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 31 January 2022)
HRZ	Horizon Minerals Limited	100	20.7	1.7	1,149	837	73	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 20 January 2022)
STN	Saturn Metals Limited	100	35.9	0.8	944	556	59	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 31 January 2022)
BRB	Breaker Resources NL	100	31.9	1.6	1,684	778	46	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 28 January 2022)
MEK	Meeka Gold Limited	100	13.1	2.6	1,115	725	65	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 28 January 2022)
AUC	Ausgold Limited	100	46.1	1.2	1,837	1,190	65	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 28 January 2022)
HRN	Horizon Gold Limited	100	18.6	2.3	1,361	986	72	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 31 January 2022)
RXL	Rox Resources Limited	70	24.6	3.8	2,096	1,178	39	Quarterly Activities and Appendix 5B Cash Flow Report (announced on the ASX 28 January 2022)

Other inputs	Input date	Source
Cash and cash equivalents balances	31 December 2021	Appendix 5B Cash Flow Report – Quarter Ended 31 December 2021
Market capitalisation	14 February 2022	Australian Stock Exchange

Notes

Attributable figures have been calculated by multiplying the total input with the project ownership percentage.

M&I: Measured and Indicated

Attributable M&I Au (Koz) for HRN calculated as follows: (13,932 indicated kilotonnes \* 2.2 grams per tonne) / 31.1 grams.

### **ASX:RXL**



