

#### ASX ANNOUNCEMENT 12 October 2022

# QUARTERLY ACTIVITY REPORT FOR THE PERIOD ENDING 30 SEPTEMBER 2022

# ASX: NXM Capital Structure

Shares on Issue 318 million Options 17 million Cash on Hand \$9.8 million (30/09/2022)

### **Corporate Directory**

Mr Paul Boyatzis Non-Executive Chairman

Mr Andy Tudor Managing Director

Dr Mark Elliott Non-Executive Director

Mr Bruce Maluish Non-Executive Director

Mr Phillip Macleod Company Secretary

### **Company GOLD Projects**

- Wallbrook Project
- Bethanga Copper-Gold Project - VIC
- Pinnacles Project
- Pinnacles JV Project (with Northern Star Resources Ltd)

# **SEPTEMBER QUARTER HIGHLIGHTS**

# **Wallbrook Gold Project**

- Assay Results from drilling at Crusader-Templar Prospect continued to return broad high-grade zones of gold mineralisation
- Final assay results from the 68,951m reverse circulation (RC) drill program and 9,784m diamond drill program completed in June now received across the 1.6km mineralised corridor
- > Mineral resource estimate modelling work commenced
- > Crusader-Templar RC drill results received include:

#### Shallow Oxide Mineralisation <100m incl:

- > 23m @ 3.03g/t Au (within 61m @ 1.60g/t Au from 28m);
- 20m @ 2.83g/t Au (within 55m @ 1.47g/t Au from 17m);
- 9m @ 7.30g/t Au (within 19m @ 3.81g/t Au from 43m);
- 6m @ 5.73g/t Au (within 62m @ 1.10g/t Au from 16m);
- 10m @ 3.81g/t Au (within 29m @ 1.48/t Au from 85m);
- 9m @ 5.02g/t Au (within 36m @ 1.65/t Au from 84m);
- > 5m @ 6.38g/t Au (within 9m @ 3.85g/t Au from 78m);
- 13m @ 2.46g/t Au and 5m @ 4.75g/t Au (within 19m @ 1.82g/t Au from 71m);
- 3m @ 7.57g/t Au and 5m @ 3.84g/t Au (within 76m @ 0.88g/t Au from 18m);
- > 5m @ 3.26g/t Au (within 12m @ 1.53g/t Au from 68m);
- > 5m @ 3.95g/t Au (within 10m @ 1.37g/t Au from 8m);
- 8m @ 2.49g/t Au (within 25m @ 1.12g/t Au from 47m);
- 6m @ 3.32g/t Au (within 30m @ 1.03g/t Au from 52m).

#### Transition Mineralisation ~100m:

- 20m @ 4.60g/t Au (within 33m @ 2.96g/t Au from 110m);
- 2m @ 10.66g/t Au (within 7m @ 3.28g/t Au from 173m);
- > 10m @ 3.84g/t Au (within 16m @ 2.48g/t Au from 120m);
- 4m @ 4.05g/t Au (within 20m @ 1.35g/t Au from 161m);
- > 7m @ 3.01g/t Au (within 15m @ 1.72g/t Au from 117m);
- 9m @ 2.37g/t Au (within 27m @ 1.12g/t Au from 143m);
- > 5m @ 4.65g/t Au (within 9m @ 2.88g/t Au from 123m);
- 3m @ 4.19g/t Au (within 7m @ 2.09g/t Au from 158m);
- 4m @ 4.45g/t Au (within 20m @ 1.36g/t Au from 173m).

Page 1 of 16



- Diamond drilling unlocks geology model
- ➤ Geology/mineralisation model "step-change" in resource modelling, informing future drill programs and regional ranking of key targets
- ➤ Gold mineralisation intersected in deep "feeder" structures and in the limbs and fold closures of shallow quartz porphyry units
- Significant results within the Structural Analysis Data:
  - DDH#15: 1.5m @ 8.30g/t Au (within 3.5m @ 3.96g/t Au from 218m);
  - DDH#92: 3m @ 4.18 g/t Au (within 5.8m @ 2.36g/t Au from 293.6m);
  - DDH#368: 3m @ 4.07g/t Au (within 8.4m @ 1.84g/t Au from 341.6m);
  - DDH#18: 1.4m @ 4.60g/t Au (within 4m @ 1.90g/t Au from 553m);
  - DDH#14: 2m @ 3.42g/t Au (from 207.5m);
  - DDH#14: 1.9m @ 3.80g/t Au (from 297.3m);
  - DDH#15: 2.9m @ 2.48g/t Au (within 5.5m @ 1.66g/t Au from 264.1m);
  - DDH#23: 3.6m @ 2.45g/t Au (from 284.4m).

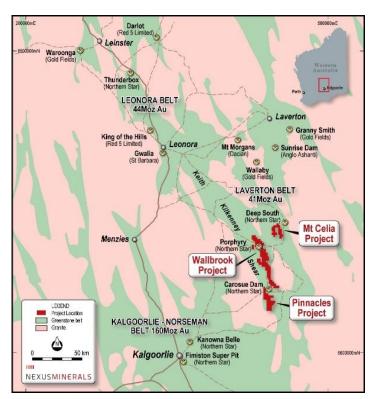
# **Regional Prospects**

- > Branches Prospect drilling intersects near surface high-grade gold mineralisation
- ➤ Gold hosted in the same structural setting and "right rocks" that host Nexus' Crusader-Templar Prospect mineralisation 3km along strike to the south
- > Branches Prospect now defined over 650m in strike and open in all directions
- > Assay results from 26 holes for 3,750m received
- > Significant Branches drilling results from the quarter include:
  - 4m @ 7.23g/t Au (within 10m @ 3.33g/t Au from 115m);
  - 4m @ 7.47g/t Au (within 8m @ 3.96g/t Au from 73m);
  - 8m @ 3.65g/t Au (within 27m @ 1.16g/t Au from 26m);
  - > 3m @ 4.21g/t Au (within 27m @ 1.19g/t Au from 27m);
  - > 3m @ 3.90g/t Au (within 8m @ 1.51g/t Au from 124m);
  - > 5m @ 3.45g/t Au (within 16m @ 1.23g/t Au from 38m).
- > Regional gravity survey completed processing underway
- Multiple mineralised corridors and prospects being assessed for drill targeting

### **Corporate**

- ➤ Placement of approximately 27.8 million shares at A\$0.18 per share to raise \$5 million (before costs)
- ➤ Placement proceeds to advance drilling activities at the Crusader-Templar prospect and other regional exploration activities at the wider Wallbrook Gold Project.
- > Positive support received from new and existing shareholders reflecting confidence in the Company's ongoing exploration activities

The exploration results are available to be viewed on the Company website www.nexus-minerals.com. The Company confirms it is not aware of any new information that materially affects the information included in the original announcement. The Company confirms that the form and context in which the Competent Person's findings are present have not been materially modified from the original announcements of: 26/7/2022, 8/8/2022, 16/8/2022, 24/8/2022, 9/9/2022 and 20/9/2022.



**Figure 1: Nexus Minerals Eastern Goldfields Projects** 

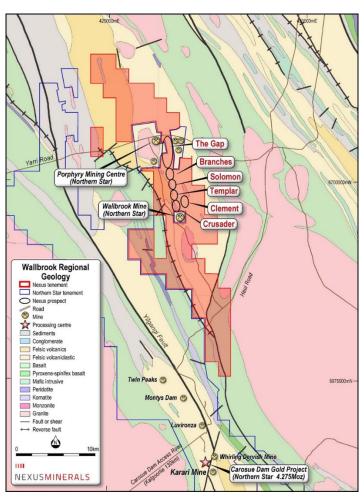


Figure 2: Nexus Eastern Goldfields Wallbrook Project Tenure and Prospects



During the quarter ended 30 September 2022, **Nexus Minerals Limited (ASX: NXM)** (**Nexus** or **the Company**) undertook interpretation of the assay results received from drill programs completed at the Crusader-Templar Prospect, and three other regional prospects, within the broader Eastern Goldfields Wallbrook Gold Project ("Wallbrook"). The drilling was undertaken to follow up on the outstanding high-grade assay results received from previous drill campaigns. The Company also continued to advance the porphyry fertility assessment study of the Bethanga copper-gold project in Victoria.

### **WALLBROOK GOLD PROJECT**

# **Crusader-Templar Prospect**

Reverse circulation (RC) drilling at Crusader-Templar prospect has been focussed on increasing the drill density in priority areas from  $>80 \times 80 \text{m}$  to a detailed 20m x 20m pattern drilling of the oxide component of the mineralisation down to ~100m. This targeted shallow RC drilling has been designed to achieve the detail required for inclusion in a mineral resource estimate and pit design optimisation studies, to be undertaken on any potential shallow oxide resource. Previous metallurgical test work on this oxide material returned positive results with gold recoveries of 98% being achieved.

The assay results received during the quarter demonstrate tenor and widths of gold mineralisaton which are consistent with results seen in previous RC drilling at Crusader-Templar.

The Crusader-Templar drilling has successfully shown the mineralisation to be continuous along the full extent of the 1.6km mineralised corridor tested to date, with multiple sub-vertical sheeted mineralised porphyry units being intersected effectively. The vertical continuity of mineralisation associated with these sub-vertical porphyry units allows for effective drill targeting of the mineralised zones, as demonstrated by RC and diamond drill testing of mineralised porphyry units from near surface to depths of >600m.

The operational focus for Nexus is now to analyse and interpret the geological data and assay results received during the quarter. This work, in conjunction with Snowden Optiro mineral consultants (**Snowden**), will be used as the basis for any future Mineral Resource Estimate (**MRE**).

Nexus has continued to engage with Snowdon to assist in the Company's exploration efforts. They will assist Nexus geologists in the review and analysis of the geological data and assay results. The aim being to generate a high-quality model based upon the geological, lithological, structural, alteration and assay data.

# 

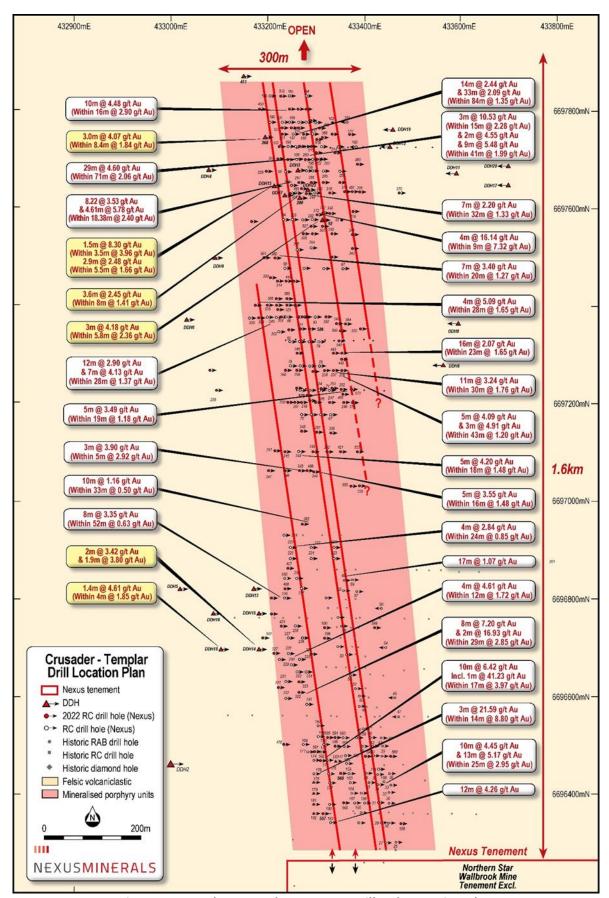


Figure 3: Crusader - Templar Prospect Drill Hole Location Plan (Yellow highlighted boxes new results 9/9/22 / White boxes Nexus drill results)



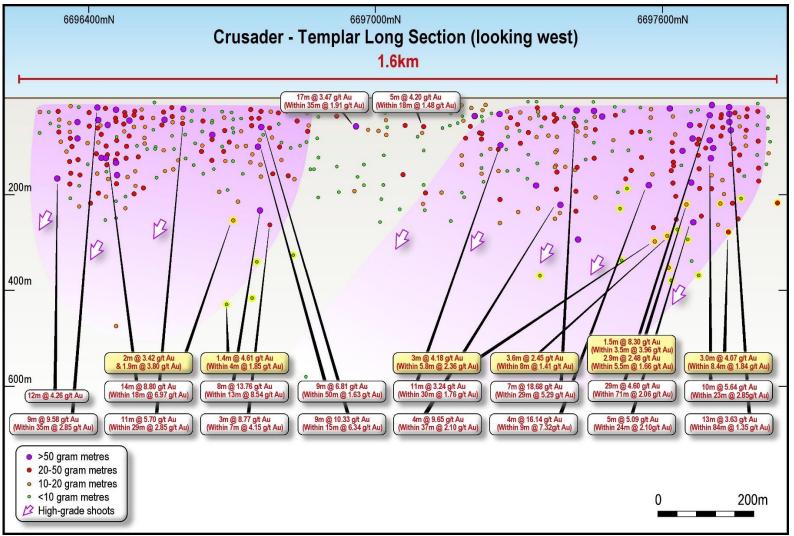


Figure 4: Crusader-Templar Prospect All Drill Holes Long Section Looking West 1.6km Strike Extent

All existing RC and diamond drill strings with results colour coded for downhole gold values.



#### **Updated Crusader-Templar Geology Model**

The geology across the Wallbrook Project consists of a thick sequence of intermediate (basaltic andesite-dacite) volcanic and associated volcaniclastic host rocks, intruded by a series of elongate feldspar-quartz porphyry dykes. These dykes are present as swarms, predominantly constrained to specific fertile stratigraphic horizons. Geochemical analysis of diamond core has categorised the dykes as moderately to highly fractionated, rhyolitic-felsic in composition, with a possible Sanukitoid geochemical signature.

The presence of Sanukitoids is particularly significant as they represent intrusive rocks derived from enriched magmas and hold an association with many large gold deposits globally. Their geochemical signature indicates an enriched mantle source, similar to lamprophyre intrusives, and confirm the presence of deep-seated structures with potential to introduce significant gold bearing fluids. The presence of Sanukitoids is another supporting factor reflecting the broader prospectivity of the Wallbrook Gold Project.

The host rock sequence has been compressed and folded to produce a series of tight folds with deep-seated structures. These deep-seated structures represent potential fluid conduits for gold bearing fluids, whilst the folded porphyry dyke swarm presents a rheological and chemically favourable horizon to precipitate gold. The updated geological model is supported by structural, lithological and gold distribution in drilling, and is further supported by the high-resolution geophysical programs (ground magnetics and gravity) completed on the project.

The updated geology model provides a step-change in the targeting ability heading into future drill campaigns, to further build on the scale of this large mineralised system. The folded architecture indicates compelling exploration targets exist along the 10km strike of corridor MC1 as well as laterally east (corridors MC2, MC3, MC4) and west of the currently defined system.

Diamond drilling has been integral in building the exploration geology model, shown in Figure 5, which has been built up from the geology, structure and assay results into the exploration geology model.

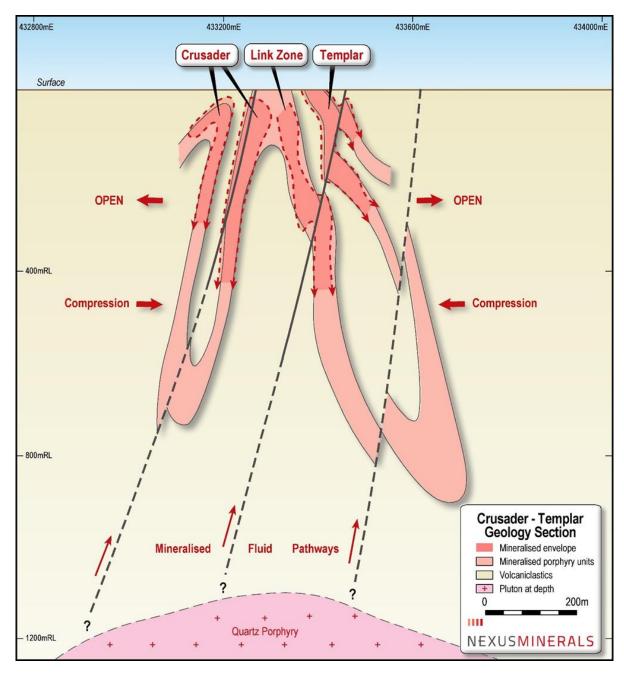


Figure 5: Crusader – Templar Prospect – Exploration Geology Model

# ...

# **Branches Prospect**

Initial follow-up regional drilling has concentrated on the Branches Prospect, that lies along strike from the Company's Crusader-Templar Prospect 3km to the south. The prospect sits on mineralised corridor 1 (MC1) that has been defined over 5km in length and some 300m wide. The mineralised corridor remains completely open and remains untested to the north, where Nexus tenure continues along strike for a further 5km to beyond The Gap Prospect. Three parallel potential gold mineralised corridors (MC2, MC3 and MC4) lie to the east of the Crusader to Branches prospects corridor (MC1) and remain to be tested.

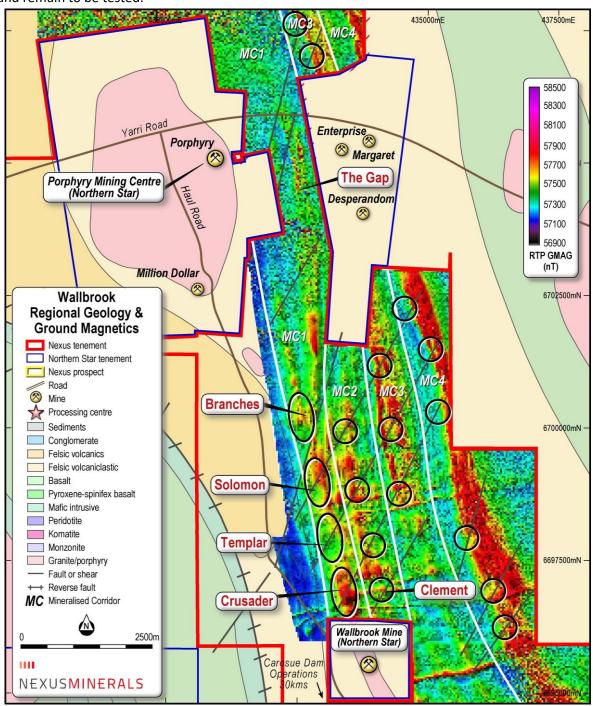


Figure 6: Wallbrook Regional Prospects – over Ground Magnetics and Geology

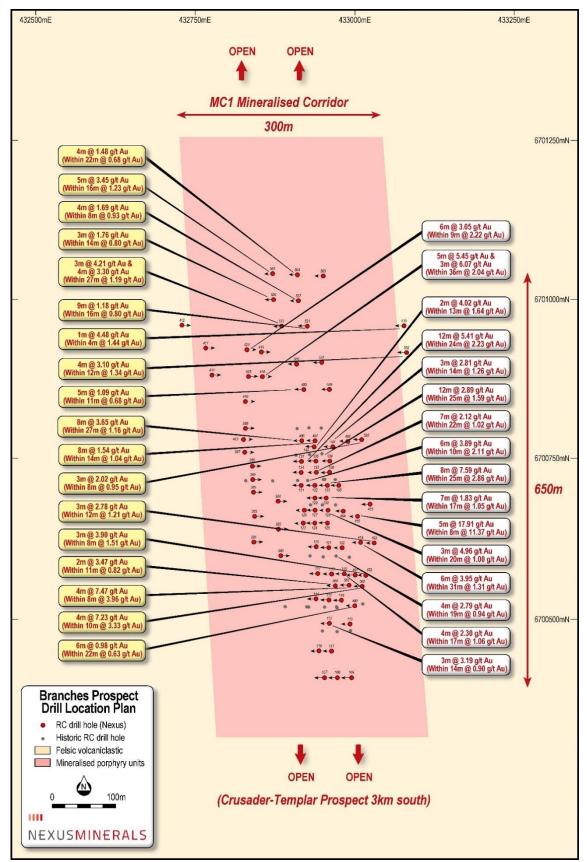


Figure 7: Branches Prospect Drill Hole Location Plan (Yellow highlighted boxes selected new results / White boxes Nexus drill results)

Below is a composite cross-section incorporating all drilling undertaken at Branches Prospect. It clearly demonstrates the continuity of mineralisation across the 650m strike drilled to date and the emerging multiple sub-vertical mineralised porphyry units (highlighted in red). A low angle structure (shown as a dashed black line on image below) is also evident in part of the prospect and elevated gold grades are returned at the intersection of this low angle structure with the steeply dipping porphyry units. It is interpreted that this could be a fold hinge hence the elevated grades.

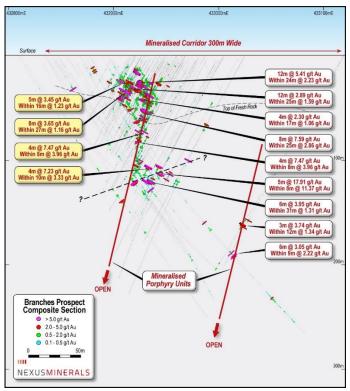
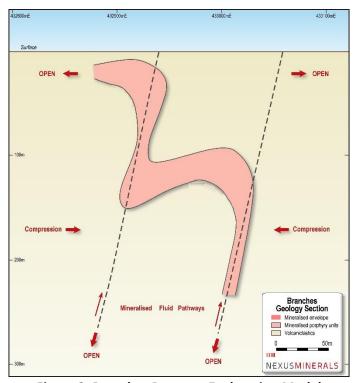


Figure 8: Branches Prospect Composite Cross Section (Incorporating all drill holes)



**Figure 9: Branches Prospect Exploration Model** 



### **BETHANGA PROJECT**

The Bethanga landholding covers 194km<sup>2</sup> across two granted exploration licenses located in Australia's premier Porphyry Copper Gold geological terrain in northeast Victoria.

During the quarter, Nexus advanced the porphyry fertility assessment, completing a soil sampling and rock chip geochemistry program (results pending). A detailed ground magnetic survey is planned to be undertaken in the December quarter.

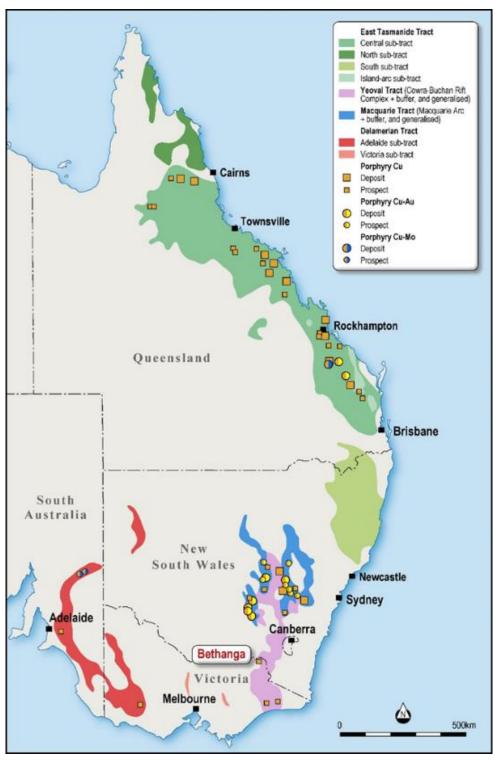


Figure 10: Nexus Minerals Bethanga Project Location



### **PINNACLES PROJECT**

No field work was undertaken during the quarter. Office based geological modelling.

# MT CELIA PROJECT

A ground magnetic survey was commenced in the September quarter.

# September 2022 Quarter - Work Program

During the December 2022 quarter, the Company intends to undertake the following activities:

# **➤** Wallbrook Gold Project

- o Analysis and interpretation of drill results and geological data
- o Creation of mineralisation / alteration / structural / geological model
- Create 3D model to assist in drill planning
- o Commence RC drill program at Crusader-Templar
- o Ranking of regional targets on completion of interpretation of geophysical datasets
- Commence regional aircore drill program on priority targets

# > Bethanga Copper-Gold

- Complete detailed geological mapping
- o Commence ground magnetic survey

## > Mt Celia Gold Project

Complete ground magnetic survey

#### Corporate

A placement of approximately 27.8 million shares at A\$0.18 per share to raise \$5 million (before costs) was completed in the quarter. The placement proceeds are to be used to advance drilling activities at the Crusader-Templar prospect and other regional exploration activities at the wider Wallbrook Gold Project and Bethanga Copper-Gold Project. Positive support was received from new and existing shareholders reflecting confidence in the Company's ongoing exploration activities

At the end of the June 2022 quarter, the Company held \$9.8 million cash and equivalents.



### **ASX Additional Information**

### ASX listing rule 5.3.1 and 5.3.2

Exploration and evaluation expenditure during the quarter was \$2,119k. Details of exploration activity during the September 2022 quarter are set out in this report. There were no substantive mining production or development activities during the quarter.

### ASX listing rule 5.3.5 - Payments to related parties of the entity and their associates

Appendix 5B, Section 6.1 – description of payments:

Total Directors remuneration \$115k (Including applicable superannuation)

for the quarter

Payment to Geoex Pty Ltd on a \$2k Per KM vehicle usage payment on an arm's per KM basis for use of vehicle

length basis on normal commercial terms to a

company associated with Mr Tudor

Payments to Mining Gurus for \$230k Services provided on an arm's length basis on normal commercial terms by a company the provision of contract

geological personnel associated with Mr Tudor

# **SUMMARY OF NEXUS MINERALS LIMITED TENEMENTS**

AUSTRALIA	Interest at beginning of Quarter	Interest at end of Quarter				
Wallbrook (Gold)	<u> </u>					
E31/1160	100%	100%				
M31/157	100%	100%				
M31/188	100%	100%				
M31/190	100%	100%				
M31/191	100%	100%				
M31/231	100%	100%				
M31/251	100%	100%				
E31/1107	100%	100%				
E31/1108	100%	100%				
E31/1118	100%	100%				
Pinnacles (Gold)						
M28/243	90% Contributing JV	90% Contributing JV				
E28/2526	90%	90%				
E28/2487	100%	100%				
Mt Celia (Gold)						
E39/2025	100%	100%				
E39/2185 (Under Application)	0%	0%				
Bethanga (Copper-Gold)						
EL006517	100%	100%				
EL006920	100%	100%				

This announcement is authorised for release by Mr Andy Tudor, Managing Director, Nexus Minerals Limited.

# **NEXUSMINERALS**

### **About Nexus**

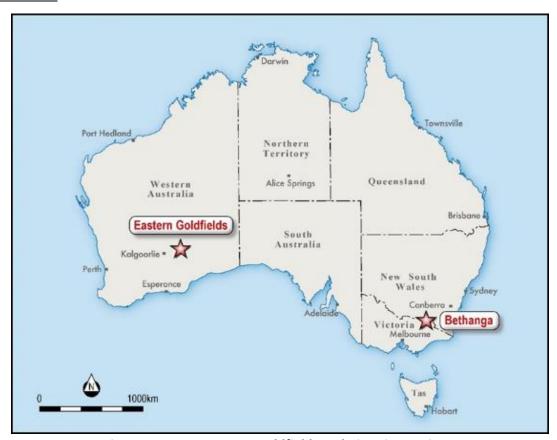


Figure 11: Nexus Eastern Goldfields and Victorian projects

Nexus is actively exploring for gold deposits on its highly prospective tenement package in the Eastern Goldfields of Western Australia. In addition to this, the company has recently expanded its existing project portfolio with the addition of the Bethanga Porphyry Copper-Gold project in Victoria.

In Western Australia, the consolidation of the highly prospective Wallbrook Gold Project (250km2) by the amalgamation of existing Nexus tenements with others acquired, will advance these gold exploration efforts.

Nexus Minerals' tenement package at the Wallbrook Gold Project commences immediately to the north of Northern Star's multi-million ounce Carosue Dam mining operations, and current operating Karari and Whirling Dervish underground gold mines. Nexus holds a significant land package of highly prospective geological terrane within a major regional structural corridor and is exploring for gold deposits.

Nexus is actively investing in new exploration techniques to refine the targeting approach for their current and future tenements.

- Ends -

**Enquiries** Mr Andy Tudor, Managing Director

Mr Paul Boyatzis, Non-Executive Chairman

Contact Phone: 08 9481 1749
Website <u>www.nexus-minerals.com</u>

ASX Code NXM



### Northern Star Ltd Carosue Dam Resource Table as at 29/8/2022

	Measured		Indicated		Inferred			Total Resources				
	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
NST ATTRIBUTABLE INCLUSIVE OF RESERVE	(000's)	(gpt)	(000's)	(000's)	(gpt)	(000's)	(000's)	(gpt)	(000's)	(000's)	(gpt)	(000's)
CAROSUE DAM GOLD PROJECT												
Surface	3,794	1.6	195	22,687	1.7	1,217	10,467	1.6	522	36,947	1.6	1,934
Underground	7,583	3.0	727	12,685	2.5	1,036	5,977	2.9	473	26,244	2.7	2,235
Stockpiles	2,526	1.8	58	-	7	-	-	5		2,526	1.8	58
Gold in Circuit	-	-	-	-				-		1.0		
Sub-Total Carosue Dam	13,903	2.2	980	35,371	2.0	2,253	16,444	2.1	995	65,718	2.1	4,227

### Northern Star Ltd Carosue Dam Reserve Table as at 29/8/2022

	Proved			Pr	obable		<b>Total Reserve</b>			
NST ATTRIBUTABLE RESERVE	Tonnes (000's)	Grade (gpt)	Ounces (000's)	Tonnes (000's)	Grade (gpt)	Ounces (000's)	Tonnes (000's)	Grade (gpt)	Ounces (000's)	
CAROSUE DAM PROJECT										
Surface	588	1.2	23	15,996	1.5	768	16,584	1.5	79	
Underground	4,019	3.0	392	6,124	2.7	527	10,143	2.8	919	
Stockpiles	2,526	1.8	58			-	2,526	1.8	51	
Gold in Circuit	- 41		7					*	67	
Sub-Total Carosue Dam	7,133	2.1	481	22,120	1.8	1,295	29,252	1.9	1,770	

The information in this release that relates to Exploration Results, Mineral Resources or Ore Reserves is based on, and fairly represents, information and supporting documentation, prepared, compiled or reviewed by Mr Andy Tudor, who is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Tudor is the Managing Director and full-time employee of Nexus Minerals Limited. Mr Tudor has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Tudor consents to the inclusion in the release of the matters based on his information in the form and context in which it appears. The results are available to be viewed on the Company website www.nexus-minerals.com. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.

The information in this release that relates to the Crusader Mineral Resource Estimate is based upon information compiled by Mr Adam James, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr James is a full-time employee and the Exploration Manager of Nexus Minerals Limited. Mr James has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr James consents to the inclusion in the release of matters based on his information in the form and context in which it appears.

No Ore Reserves have currently been defined on the Pinnacles or Wallbrook tenements. There has been insufficient exploration and technical studies to estimate an Ore Reserve and it is uncertain if further exploration and/or technical studies will result in the estimation of an Ore Reserve. The potential for the development of a mining operation and sale of ore from the Pinnacles or Wallbrook tenements has yet to be established.

FORWARD LOOKING AND CAUTIONARY STATEMENTS. Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this report are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. So, there can be no assurance that actual outcomes will not materially differ from these forward-looking statements.