

Quarterly Activities Report for the Period Ending 31 December 2023

HIGHLIGHTS

Tumblegum South Gold Project Scoping Study Completed

- The Scoping Study presented a range of outcomes for open-pit mining and third-party toll treatment of the Tumblegum South gold deposit ("**Tumblegum South**" or "**the Project**") which is located approximately 40km south of Meekatharra in the Murchison district of Western Australia.
- The positive results of this Scoping Study provide a basis to refine material inputs and enhance project economics for the Tumblegum South gold resource.

West Bryah Copper Gold Project

- Comprehensive data review underway incorporating additional tenements.

Corporate

- Placement; \$600,000 private placement completed.
- \$583k cash at bank as at 31 December 2023.

Corporate

A placement of ordinary shares to new and existing sophisticated investors was completed, raising \$600,000 at 4 cents per share.¹ Shares were issued following shareholder approval obtained at the general meeting of shareholders, held on 18 October 2023.

Participants in the placement received one free attaching option for every one ordinary share subscribed for. The unlisted options are exercisable at 6 cents and expire on 31 October 2026.

Funds raised from the placement allow the Company to advance scoping and environmental studies at the Company's Tumblegum South gold Project, exploration activities at the West Bryah copper gold Project and provide additional working capital.

At the end of the quarter, the Company had \$583k cash at bank. Included in the Appendix 5B – Section 6 are amounts paid to the Directors of the Company during the December quarter totalling \$19,050 comprising director remuneration, including superannuation.

¹ See Star Minerals Limited (ASX: SMS) ASX Announcement dated 04 September 2023 titled: Placement Completed.

Star Minerals Limited (ASX: SMS, “the Company” or “Star Minerals”) is pleased to provide its Quarterly Activities Report for the period ended 31 December 2023.

The Company has two projects, a gold Mineral Resource at Tumblegum South, 40km south of Meekatharra and the West Bryah copper-gold exploration project, 120km northwest of Meekatharra.

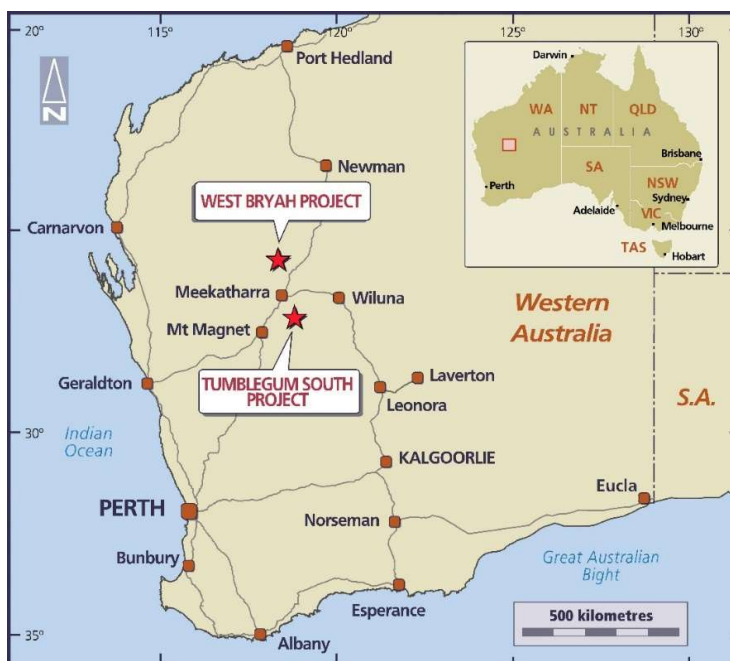


Figure 1: Star Minerals Limited Project Locations

Tumblegum South Gold Project – Scoping Study²

Various options utilising third-party processing plants operating under a toll treatment agreement were considered. There are currently two active processing plants within a radius of 50km to 150km from Tumblegum South. A range of outcomes were defined based on gold price, and processing cost including trucking costs.

- At gold prices from AUD\$2,250 to AUD\$3,000/oz, the Production Target for the Project ranges from approximately:
 - 116kt at 2.25g/t producing 7.6koz gold, to
 - 286kt at 2.00g/t producing 16.6koz gold.
- The Production Target generates an undiscounted accumulated cash surplus after payment of all working capital costs, but excluding pre-mining capital requirements, of approximately **\$7.2M to \$16.3M**.
- Mining is contemplated as a single campaign over approximately **18-months**.
- Pre-mining capital and start-up costs are estimated to be approximately **\$0.7M to \$1.5M**.
- Sensitivity of the Base Case scenario to gold price was assessed. Results suggest that **project economics are robust** for a broad range of gold prices.

² See Star Minerals Limited (ASX: SMS) ASX Announcement dated 08 December 2023 titled: Positive Scoping Study for Tumblegum South.

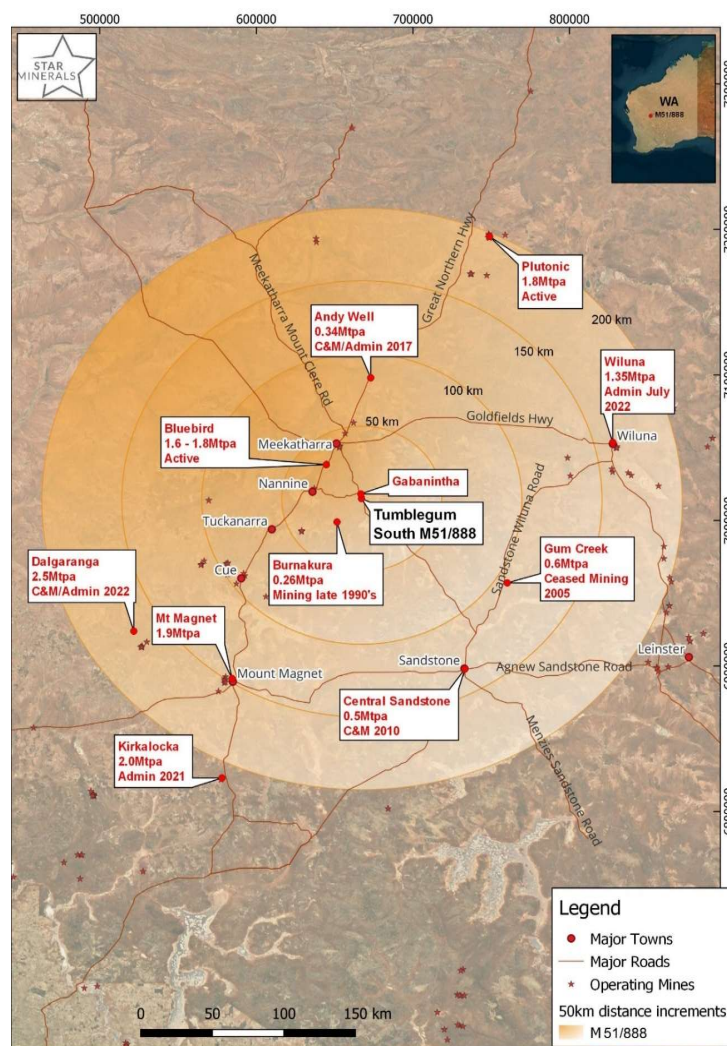


Figure 2: Location map and relevant infrastructure in the area

Key Study Outcomes and Assumptions

The study is based on the Tumblegum South mineral resource estimate described in Star's announcement to the ASX on 29 May 2023³. The resource model was prepared by Entech, an independent competent person in accordance with the JORC Code (2012) and includes estimates classified as Indicated and Inferred. Orelogy's study included generating an optimal pit geometry utilising Whittle optimisation software.

Based upon the resource estimate model, slope parameters and the cost structure applied, the Production Target at gold prices AUD\$2,250 to AUD\$3,000/oz, ranges from approximately:

- 116kt at 2.25g/t producing 7.6koz gold recovered and an undiscounted accumulated cash surplus of \$7.2M to
- 286kt at 2.00g/t producing 16.6koz gold recovered and an undiscounted accumulated cash surplus of \$16.3M.

³ See Star Minerals Limited (SMS) ASX announcement dated 29 May 2023 'Tumblegum South Mineral Resource Update'

Project sensitivities were examined for a range of gold prices demonstrating that Project economics are robust with positive outcomes returned for gold prices ranging from AUD\$1,750 to AUD\$3,250 per ounce.

A Base Case at AUD\$2,600 per ounce gold price was used to assess the components of Inferred and Indicated Mineral Resources. The Production Target at the Base Case is approximately:

- 192kt at 2.22g/t producing 12.3koz gold recovered and an undiscounted accumulated cash surplus of \$10.8M.

Approximately 70% of the total Production Target resulting from the Scoping Study is based on Indicated Mineral Resources, and approximately 30% is based on Inferred Mineral Resources. There is a low level of geological confidence in Inferred Mineral Resources and there is no certainty that further drilling will result in the determination of Measured or Indicated Mineral Resources or that the Production Target will be realised. Although some of the Inferred Mineral Resources occur at shallow depths, there is sufficient, easily mined and readily accessible Indicated Mineral Resources within the optimum shell to enable stockpiling of at least half of the Inferred Mineral Resources to be deferred to the latter processing (starting month 13) of the Project. This will mitigate the risk to the project as it can be grade controlled and resampled prior to processing.

No allowance was made for capital or start-up costs in the optimisation analysis stated above. The capital and start-up costs are comprised of the costs associated with, but not limited to mobilisation, site establishment, pre-mining earthworks, access and haulage road and demobilisation. These costs have been estimated for the purposes of the Scoping Study at approximately:

- \$1.1M and can be represented as a range from \$0.7M to \$1.5M to reflect the accuracy of cost parameters used in the study which is considered to be +/- 35%.

To estimate working capital requirements, an approach was taken to produce a mine schedule for the Base Case schedule at AUD\$2,600 per ounce gold price, which was evaluated using the same cost and revenue assumptions, with the maximum cash drawdown allocated as working capital.

The Base Case pit is estimated to have a mine life of less than 20 months with maximum cash drawdown occurring in month 6.

Based upon this approach the total working capital requirements were estimated to be approximately \$2.3M and can be represented by a range from \$1.5M to \$3.1M to reflect the limited accuracy of cost parameters used in the study.

To achieve the range of outcomes indicated in the Scoping Study, funding in the order of \$3.4M (\$2.2M to \$4.6M) will likely be required for capital, start-up costs and working capital requirements.

Table 1: 2023 Tumblegum South Mineral Resource at a 0.5 g/t Au cut-off by weathering status

Project Area	Resource Category	Weathering	Tonnes (kt)	Grade (g/t Au)	Gold ounces (koz)
Tumblegum South	Indicated	Transitional	25	2.99	2
		Fresh	312	2.48	25
		Subtotal	337	2.52	27
	Inferred	Transitional	40	1.76	2
		Fresh	239	2.03	16
		Subtotal	279	1.99	18
	Total		616	2.28	45

Tonnages are dry metric tonnes. Minor discrepancies may occur due to rounding.

This Mineral Resource estimate includes Inferred Mineral Resources, which are unable to have economic considerations applied to them, and there is no certainty that further sampling will enable them to be converted to Measured or Indicated Mineral Resources.

The existing mining lease ML51/888 is directly along strike from the Tumblegum Pit which was mined by Dominion during the 1987–1992 Gabanintha Gold Mine Joint Venture.

West Bryah Project

A desktop review and modern data capture of all historical information, plus digitisation of field mapping from a reconnaissance field trip to the West Bryah Project continued during the December quarter. The aim of current data collation and ground truthing is to evaluate areas that can be tested with auger sampling to generate targets for drill testing.

Outcomes from this work is anticipated to be released to the market in the upcoming quarter.

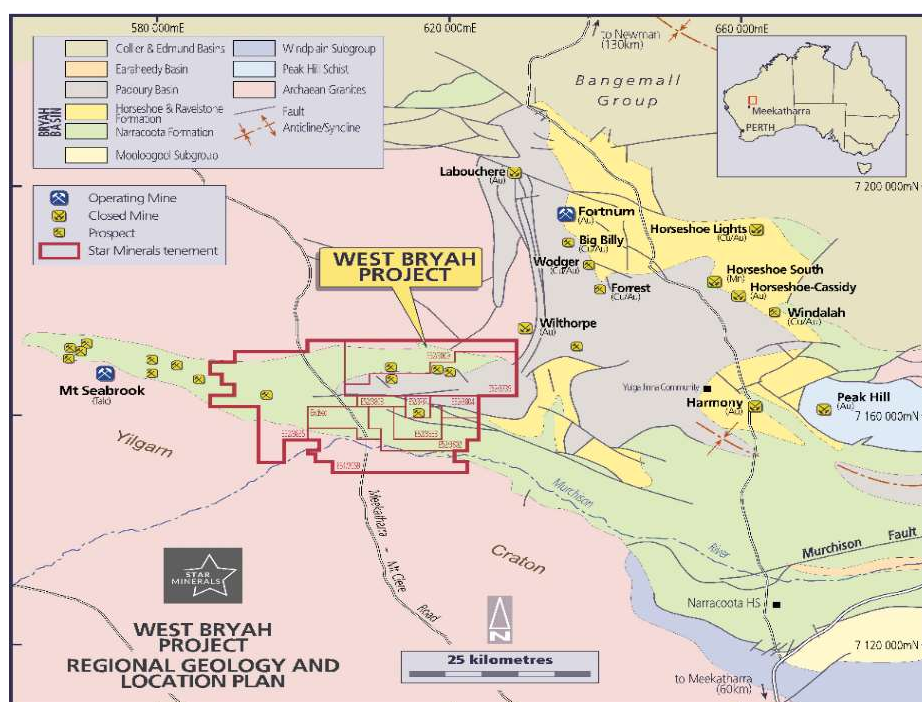


Figure 3 Tenement map West Bryah Project

Regional Setting

Including the recent tenement acquisitions, the West Bryah exploration licences cover an area of 664km² over 9 tenements. The tenements cover the large regional East-West trending Padbury Synform, which feature lithological units of the Robinson Range, Wilthorpe formation and Labouchere formation within the centre and the renowned Narracoota formation on the Northern and Southern limbs.

The West Bryah Project is located east of, and partially within the same geological sequence as the Livingstone Gold Project, currently operated by Metal Bank Limited (ASX:MBK). The MBK Homestead project shows an Indicated and Inferred Mineral Resource of **40,300 oz Au @ 1.42g/t gold**,⁴ while the nearby MBK Kingsley deposit hosts an Inferred Resource of **30,500oz Au @ 1.42 g/t**⁵ as an open resource with potential to carry through into the tenements currently owned by Star Minerals.

Other major areas of interest within the Company's tenements features the Yarlarweelor Gneiss Complex for potential pegmatite exploration and the Despair Granite which hosts the local Wilthorpe Mine (Au Mine).

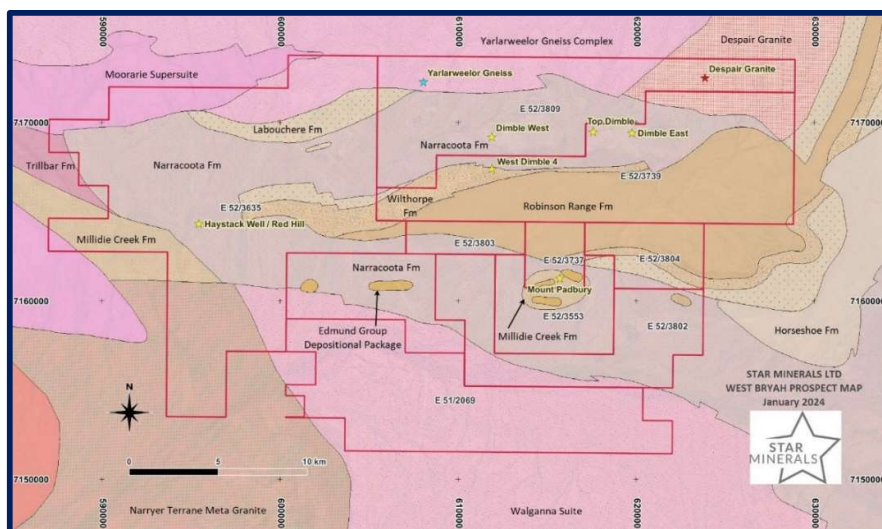


Figure 4: Map of Key Areas of Interest in the West Bryah region.

Future Activities Planned

- The Scoping Study provides justification the Tumblegum South Gold Project is commercially viable (based on assumptions provided), and accordingly, the Board of Star Minerals has approved progression of further work to progress environmental permitting and such regulatory permissions to advance a mining operation on this project.
- The Company can now take the next steps to monetising this asset and more accurately assess various strategies to achieve this, including sale, partial sale or joint venture of the Project.
- The Company will advance any negotiations with third parties wishing to evaluate the Project as potential ore feed for existing processing operations, as they arise and will update the market accordingly should any commercial agreement reached.
- Completion of digital data compilation for West Bryah Historical Work.

⁴ MBK ASX Release 21 February 2023 "Livingstone delivers updated shallow Mineral Resource at Homestead"

⁵ MBK ASX Release 18 January 2022 "Kingsley Deposit Maiden Mineral Resource Estimate and updated Exploration Target"

Reporting Confirmation

The information in this report that relates to current resource estimates/drill results has been extracted from the Company's following ASX announcements:

- 29 May 2023 Tumblegum South Gold Mineral Resource Update
- 8 December 2023 Positive Scoping Study for Tumblegum South (See Cautionary Statement below)

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. 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 market announcement.

Cautionary Statement – Positive Scoping Study for Tumblegum South

The Scoping Study referred to in the announcement dated 8 December 2023 has been undertaken to determine the viability of open pit mining and third-party toll treatment of the Tumblegum South gold deposit. It is a preliminary technical and economic study of the potential viability of the Project. It is based on low level technical and economic assessments that are not sufficient to support estimation of ore reserves. Further evaluation work and appropriate studies are required before Star will be able to estimate any ore reserves or to provide any assurance of an economic development case.

The Scoping Study is based on the material assumptions outlined in the announcement dated 8 December 2023. These include the availability of funding. While Star considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the range of outcomes indicated in this Scoping Study, funding in the order of \$2.0 million to \$4.2 million will likely be required. Investors should note that there is no certainty that Star will be able to raise that amount of funding when needed. It is also possible working capital may only be available on terms that may be dilutive to or otherwise affect the value of Star's shares. It is also possible that Star could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the Project. If it does, this could materially reduce Star's proportionate ownership of the Project.

Potential funding options may also include third parties through a processing agreement, however at this stage the Company has not yet secured a processing contract and accordingly cannot make an assurance that it will have a processing contract available and, on the assumptions, made. The Company will update the market accordingly if any processing contracts are entered into.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

Disclosure Requirements (Guidance Note 23 Disclosures)

Details of mining exploration activities:

The A\$131k of exploration and evaluation expenditure was largely attributable to costs related to the Tumblegum South Scoping Study.

Details of mining production and development activities:

No production and development activities were undertaken during the quarter.

Tenements

According to Listing Rule 5.3.3, the Company provides the following information in relation to its mining tenements.

Table 1 Tenements held during the quarter and their area.

Project	Tenement	Registered Holder	Beneficial Interest	Location	Status
Tumblegum South Project	M51/888	White Star Minerals Pty Ltd	100%	Western Australia	
	L51/112	White Star Minerals Pty Ltd	100%	Western Australia	
West Bryah Project	E51/2069	Star Minerals Limited	100%	Western Australia	
	E52/3553	Pet FC Pty Ltd	100%	Western Australia	Pending*
	E52/3635	MW Minerals Pty Ltd	100%	Western Australia	
	E52/3737	Pinny Pty Ltd	100%	Western Australia	Pending*
	E52/3739	Bryah Resources Ltd	100%	Western Australia	Pending*
	E52/3802	ELBAJA Trust (Jalein)	100%	Western Australia	Pending*
	E52/3803	Pinny Pty Ltd	100%	Western Australia	Pending*
	E52/3804	Pinny Pty Ltd	100%	Western Australia	Pending*
	E52/3809	ELBAJA Trust (Jalein)	100%	Western Australia	Pending*

**denotes tenement transfer is in progress.*

For further information, please contact:

Ian Stuart,

+61 8 9226 1860

This announcement has been produced in accordance with the Company's published continuous disclosure policy and has been approved by the Board.

ABOUT STAR MINERALS LIMITED

Star Minerals is focused on development and exploration of its copper and gold projects. The Company will be using the data gathered to complete the required works to bring the Tumblegum South project up to the necessary level for a decision to mine to be made. In addition, it will use the latest exploration techniques as well as results of previous exploration work undertaken by Bryah Resources and other explorers to investigate the potential of both the Tumblegum South and West Bryah projects.

The Board's strategy is to advance the exploration and development of its deposits wherever possible, utilising established mining operations and infrastructure to achieve low risk early production outcomes.

In addition, the Company intends to continue to investigate ways to grow its business by:

- acquisition, application, or joint venturing into areas surrounding and adjacent to the Projects; and
- acquisition, application, or joint venturing into other, unrelated but economically attractive projects compatible with the Company's goals and capabilities if, and when opportunities of this type come available.

Competent Person Statement – Exploration Results

The information in this announcement that relates to Exploration Results is based on information compiled by Mr Tony Standish, who is a Member of the Australian Institute of Geoscientists. Mr Standish is a consultant to Star Minerals Limited and Bryah Resources Limited. Mr Standish has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 Standish consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Competent Person Statement – Mineral Resource Estimation

The information in this announcement that relates to Mineral Resources is based on and fairly represents information compiled by Ms Lisa Milham, (Consultant with Entech Pty Ltd). Ms Milham is a member of the Australian Institute of Geoscientists (AIG). Ms Milham has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Ms Milham consents to the inclusion in this announcement of the matters based on their information in the form and context in which it appears.

Competent Person Statement – Scoping Study for Tumblegum South

The information in this report that relates to the Open Pit Mining Scoping Study for Tumblegum South and to the Production Target derived from the Scoping Study is based on information compiled by Mr Jake Fitzsimons, a Competent Person who is a Member or Fellow of The Australian Institute of Mining and Metallurgy and a full time employee of Oreology Pty Ltd. Mr Fitzsimons has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves". Mr Fitzsimons consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.'

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Star Minerals Limited

Quarter ended ("current quarter")

ABN: 53 648 048 631

31 DECEMBER 2023

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(131)	(311)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(71)	(133)
	(e) administration and corporate costs	(162)	(257)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	-	-
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (GST Paid)	(27)	(18)
1.9	Net cash from / (used in) operating activities	(391)	(719)
2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	(52)	(67)
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation	-	-
	(e) investments	-	-
	(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(52)	(67)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	600	600
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(15)	(15)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	585	585

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	441	784
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(391)	(719)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(52)	(67)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	585	585

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.6	Effect of movement in exchange rates on cash held	-	-
	Cash and cash equivalents at end of period	583	583

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	583	441
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	583	441

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	19
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-
7.5 Unused financing facilities available at quarter end		-
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(391)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(391)
8.4 Cash and cash equivalents at quarter end (item 4.6)	583
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	583
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	1.5
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
<p>Answer:</p> <p>No. Scoping study for Tumblegum South has now been completed as per ASX Announcement dated 8 December 2023. Future exploration in the West Bryah will be significantly lower than the resource definition and scoping study work completed during previous quarters.</p>	

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer:

As stated above, no immediate step required as exploration expenditure has been reduced following completion of the Scoping Study at Tumblegum South, mentioned above. Further, the Company has a successful record of raising required funding, as necessary, to continue its exploration activities.

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer:

Yes. Direct costs and exploration expenditure can be adjusted, where necessary as in the majority these are discretionary.

Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: **25 January 2024**

Authorised by: **By the Board**

(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.