



## QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 MARCH 2024

- **Planned 2024 work program focussed on the acceleration of commercial gas flows through drilling of additional production wells at the Lucky Fox Pilot Well complex**
- **Well testing completed confirming the Lucky Fox Pilot Well complex successfully reduced reservoir pressure during the 6-month testing period**
- **Independent technical experts conclude excellent technical attributes exist for a world-class CSG project in the South Gobi Desert of Mongolia**
- **Additional funding secured with \$2.5 million Placement (before costs) and \$1.5 million SPP currently open to eligible shareholders**
- **All significant capital expenditure at Nariin Sukhait now completed with cost efficiencies being driven into the business**

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TMK Energy Limited (ASX:TMK) (“TMK” or the “Company”) is pleased to provide the following report for the quarter ending 31 March 2024 (“Quarter” or “Reporting Period”).

### **Commenting on the Quarter, Mr Brendan Stats, TMK Energy’s Chief Executive Officer said:**

*“The March 2024 quarter was another busy period for the Company, in which we completed the integration of 100% of the ownership of the Gurvantes XXXV Project within TMK, safely completed a series of testing activities at the Lucky Fox Pilot Well complex and secured additional finance for the proposed 2024 work program.*

*We were delighted with the findings of our independent technical experts, Cipher Consulting which concluded that the Pilot Well Program has all the technical attributes necessary for a world-class CSG project. This paves the way for the next phase of the Project, with an additional 2-3 production wells planned to be drilled in 2024 to accelerate the clear pathway to achieving commercially significant production rates.*

*The encouraging results of the testing program to date and the outcome of the independent technical review allowed the Company to secure a further \$2.5M in funding via a Placement, whilst providing existing eligible shareholders with the opportunity to participate in a Share Purchase Plan, which is scheduled to close on 6 May 2024.*

*We look forward to delivering a work program in 2024 that is 100% focussed on delivering commercially significant gas flow rates, introducing significant new capital from a strategic partner and commercialising what is the largest contingent gas resource discovered in Mongolia to date.”*



## EXECUTIVE SUMMARY

During the Quarter, the Company completed a series of testing activities on the Lucky Fox pilot production wells, following the initial six month extended production testing (EPT) period. The results of the well testing were extremely positive demonstrating a clear reduction in reservoir pressure has been achieved during the EPT period.

The Company engaged Cipher Consulting Pty Ltd (Cipher), a well-regarded coal seam gas (CSG) consultancy based in Brisbane, to undertake an independent technical review of the Gurvantes XXXV Project, specifically evaluating the results and performance to date of the Nariin Sukhait (Lucky Fox) Pilot Well Program. The technical review concluded that the Gurvantes XXXV project displays excellent technical attributes and that it has the potential to be a coalbed methane producing field of substantial scale and importance.

During the Quarter, the Company completed all major capital works at the Nariin Sukhait site, including winterisation of the production facilities, buildout of a semi-permanent camp as well as implementation of a range of processes and procedures that have enhanced our existing operational safety, environment management and standard operating procedures. This work has been critical in bringing the Company's HSE management systems and general operations in the South Gobi Desert to a level that is fit for purpose and consistent with international standards.

The Company is now focussed on the next phase of the project that builds on the learnings from the initial three Lucky Fox Pilot wells. This will involve drilling of 2-3 more production wells in 2024 which are intended to provide the additional dewatering capacity to reach the target critical desorption pressure (refer to section below) required to deliver commercial gas flow rates and allow the Company to delineate a development plan, add reserves/resources and commence pre-feasibility studies.

During the Quarter the Company was successful in raising a further \$2.5 million (before costs) in additional capital to assist with the funding of the proposed 2024 work program (the Placement). Eligible Shareholders have been given the opportunity to participate alongside new institutional and sophisticated investors who participated in the Placement via a Share Purchase Plan (SPP) which remains open until 6 May 2024. Please refer to the SPP Offer Booklet released to ASX on 21 March 2024 for more information.

During the Quarter, the Company began a process to introduce a strategic partner into the Project following the consolidation of 100% of the working interest back within TMK. There is a general acknowledgement that natural gas is an enabling transition fuel to a lower carbon economy for Mongolia which the Company sees as a catalyst to introducing further investment into the Project. The Company is in the process of formally engaging with parties that have already expressed interest and expects to initiate a more formal process in the coming months.



## Technical Review Conclusion and Pilot Well Status

The technical review undertaken by Cipher concluded that the Gurvantes XXXV Project displayed excellent technical attributes and that it has the potential to be a significant coalbed methane producing field. The review concluded that the Pilot Well Program is well designed, being effectively managed, and is making good progress in reducing the reservoir pressure.

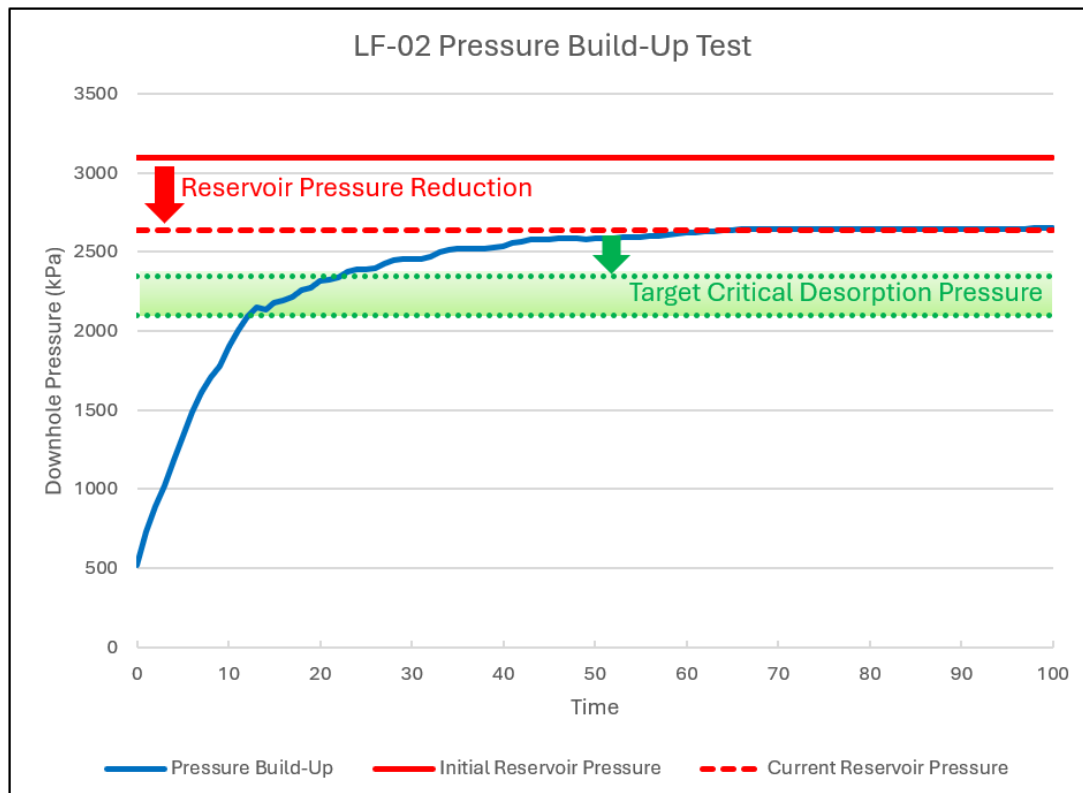
The review also concluded that the Gurvantes XXXV Project, like most successful pilot well programs worldwide, will likely require more time unless more wells are drilled to achieve the point of critical desorption pressure and hence, material gas production rates. Accordingly, TMK has concluded that the most expeditious approach towards commercialisation is to drill more wells.

The current Lucky Fox Pilot Well complex at Nariin Sukhait has three production wells which are completed over the upper coal seam which has a net coal thickness of 60 - 70metres. The original concept behind drilling only three pilot wells (rather than more) was to manage technical and capital risk at such an early stage in evaluating this frontier basin, and during a period when the Company's farm-in partner was paying 100% of the drilling cost of the pilot well program.

Several fundamental attributes are needed for a successful pilot well program (e.g. sustained and controlled water production rates). These attributes had not been confirmed prior to the drilling of the pilot wells. Accordingly, it was prudent to limit the initial pilot drilling program to three wells.

The key attributes, being good water rates, steady gas production and importantly that the reservoir pressure is being reduced, have all now been successfully achieved from the first three Lucky Fox pilot wells.

The testing conducted over January and February of this Quarter has now confirmed that the reservoir pressure is being drawn down. However, it has been determined that three wells alone may not achieve the targeted critical desorption pressure required for commercial flow rates in a reasonable timeframe (refer **Figure 1**). TMK has determined that additional wells will be required to expedite gas desorption observed in the existing three wells.



**Figure 1: LF-02 Pressure Build-Up Test Results**

The recent testing has provided the relevant data required for the Company to confidently move forward with the drilling of additional wells in and around the Lucky Fox Pilot Well Complex to accelerate and prove the ability of the upper coal seams to produce commercial gas flows from the reservoir.

It should be noted that the vast majority of successful CSG pilot well projects around the world commence with a limited number of data gathering wells, similar to the approach TMK has taken to quantify the gas play at the Lucky Fox pilot well program. Thereafter, and once the key learnings have been understood and risks mitigated, additional wells are added to existing programs in a staged approach.

With the current three Lucky Fox wells now operating efficiently and producing good rates of water (and consistent levels of gas), drilling of an additional 2-3 wells within Lucky Fox Pilot Well complex is expected to be sufficient to deliver further reservoir depressurisation and therefore, higher gas flows as the desorption process accelerates.

The results from the independent review are consistent with the Company's understanding that the Project is currently delivering all of the key milestones on the path to commercialising the 1.2 trillion cubic feet (TCF) of Contingent (2C) Resources certified for the Nariin Sukhait area (refer ASX announcement dated 9th November 2022).

In accordance with ASX guidelines, the Company confirms that it is not aware of any new information or data that materially affects the current estimates of its Contingent (2C) Resources, nor have the assumptions and technical parameters underpinning those estimates materially changed.

### **Pilot Well Testing Program (Nariin Sukhait)**

As discussed above, a well-testing program was undertaken throughout January and February to gather further data on the performance of the wells since the start of the extended production test and the response of the reservoir in the Lucky Fox production wells. Pressure build-up tests were successfully undertaken in Lucky Fox 3 (LF-03) and Lucky Fox 2 (LF-02) wells.

Pressure build-up testing requires the wells to be 'shut-in' for several days to measure the reservoir response and the change in reservoir pressure over time. It determines how much the reservoir pressure has reduced since the Pilot Well Program testing commenced and shows how much further the reservoir pressure needs to be drawn down before critical desorption pressure is reached and increased gas flow achieved.

LF-03 was shut-in in January 2024 and LF-02 was shut-in in early February 2024. The results from the pressure build-up testing demonstrated that the reservoir pressure has reduced significantly (by approximately 500kPa) since the commencement of the extended production test. The response of the reservoir is highly encouraging as the gradual reduction in the reservoir pressure, rather than a rapid reduction, indicates that the reservoir has good permeability and good connectivity throughout a significant reservoir volume, and this typically predicts higher gas recovery per production well.

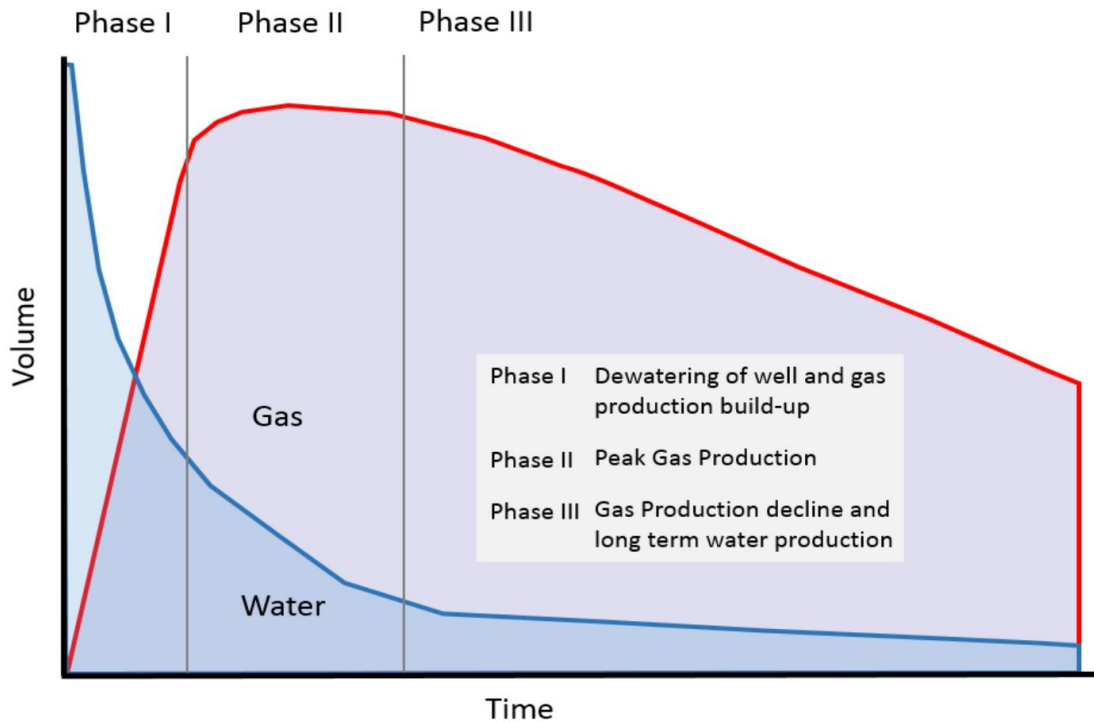
The reservoir pressure is currently above the critical desorption pressure (the pressure at which gas starts to desorb from the coal) for the bulk of the 60–70m thick upper coal seam in the production interval. It is estimated the reservoir pressure needs to be reduced in total by approximately 750kPa to 1,000kPa (depending on depth of coal seam) to reach critical desorption pressure (refer to **Figure 1** above).

Additional infill production wells within the Lucky Fox well complex are expected to accelerate the depressurising of the reservoir and is currently an option being analysed by the Company. It remains the expectation that if the pressure is reduced by a further 250kPa to 500kPa (bringing the total reduction in reservoir pressure to the 750kPa to 1,000kPa target), there will be a material uplift in gas production rates from the pilot production wells.

**Figure 2** below describes the typical production phases of CSG wells. The Lucky Fox Pilot well program status is considered to currently lie within the 'Phase 1 – Dewatering of well and gas



production build-up’, but successfully making progress toward Phase II – Peak Gas Production’ and meeting the required milestones.



**Figure 2: CSG Well Production Phases (reproduced from ‘15-02-Ref-Doc\_CSG-Water-Volume, APPEA Reference document – Coal seam gas and water volumes’)**

## Corporate

On 21 March 2024, the Company announced it had received firm commitments to raise approximately \$2.5 million (before costs) by way of a Placement, which was well supported by new and existing sophisticated and institutional investors, including senior management of TMK, both in Australia and Mongolia.

The Placement shares were issued on 28 March 2024 under the Company’s available placement capacity under ASX Listing 7.1 and 7.1A. The Company issued 633,135,500 new fully paid ordinary shares and placement participants will be issued one option for every share subscribed for, exercisable at \$0.008 with a three-year term expiring 30 April 2027. The new options will be issued by the Company pursuant to a prospectus to facilitate the quotation of the options, subject to meeting the ASX’s minimum listing requirements.

In conjunction with the Placement, the Company is also offering eligible existing shareholders the opportunity to participate in a Share Purchase Plan (SPP). The SPP is intended to raise an additional \$1.5 million, on the same terms as the Placement, and is currently scheduled to remain open for acceptance until 5.00pm (WST) on Monday 6 May 2024.

Subject to shareholder approval at the Company’s Annual General Meeting, now scheduled to be held at 10.00am, Thursday 30 May 2024, the SPP includes a one-for-one free-attaching option on the same terms as the Placement Options (SPP Options). The Notice of Meeting is expected to be despatched to Shareholders shortly.

### ASX Listing Rule 5.3.3 Tenement Summary

At 31 March 2024, the Company held the following interests in tenements and/or licenses:

Project	Percentage Interest	Number of Tenements
Gurvantes XXXV	100%	1

In addition, the Company holds a 20% interest in the Napoleon Deep Prospect via a 20% shareholding in Skye Napoleon Pty Ltd. There was no activity on this project during the Reporting Period.

### Related Party Payments

During the quarter ending 31 March 2024, the Company made payments of \$43,075 to related parties and their associates. These payments relate to the Directors' fees.

### Authorised for release to ASX by the Board of Directors.

For further information please contact TMK Energy at:

WEB: [www.tmkenergy.com.au](http://www.tmkenergy.com.au)

EMAIL: [info@tmkenergy.com.au](mailto:info@tmkenergy.com.au)

### ABOUT TMK ENERGY LIMITED

TMK Energy Limited is an oil and gas exploration company listed on the Australian Stock Exchange (ASX:TMK). TMK holds a 100% interest in the Gurvantes XXXV Project in the South Gobi Desert of Mongolia which is highly prospective for coal seam gas (CSG).

The Gurvantes XXXV Project covers a very large area of approximately 8,400 km<sup>2</sup> in the South Gobi basin and boasts multiple thick, high quality, bituminous rank coal seams that extend along an east-west strike, spanning approximately 150 kms.

The initial exploration program undertaken in 2022 yielded a 1.2 trillion cubic feet (TCF) Contingent Resource (2C) of gas being certified within just a 60 km<sup>2</sup> area (Nariin Sukhait) of the overall Project area. Three pilot wells (Lucky Fox wells) were drilled within a subset of this area where the Company has been undertaking an extended production test, where gas is being produced to surface and continuously flared.

TMK is focussed on the responsible development of the Gurvantes XXXV Project and establishing itself as a key supplier of cleaner energy to support Mongolia's development and address the significant domestic issues around energy security, reliability, and independence. The Gurvantes Project XXXV is also strategically located less than 20 kms from the Chinese border and close to existing gas infrastructure in northern China, presenting a significant advantage to supplying the world's largest energy market.

#### TMK Energy Limited

ABN 66 127 735 442

ASX : TMK

#### Australian Registered Address

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#### For further information, please contact

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##### Dougal Ferguson

Chief Commercial Officer  
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#### Directors

<b>Gema Gerelsaikhan</b>	Non-Executive Director
<b>Brett Lawrence</b>	Non-Executive Director
<b>Tim Wise</b>	Non-Executive Director
<b>John Warburton</b>	Non-Executive Director



## Appendix 5B

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

Name of entity

TMK Energy Limited

ABN

66 127 735 442

Quarter ended ("current quarter")

31 March 2024

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
(c) production	(261)	(261)
(d) staff costs	(379)	(379)
(e) administration and corporate costs	(381)	(381)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	13	13
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,008)</b>	<b>(1,008)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities	(53)	(53)
(b) tenements	-	-
(c) property, plant and equipment	-	-
(d) exploration & evaluation	(387)	(387)
(e) investments	-	-
(f) other non-current assets	-	-

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date \$A'000</b>
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)	-	-
<b>2.6 Net cash from / (used in) investing activities</b>	<b>(440)</b>	<b>(440)</b>

<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	2,532	2,532
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	(169)	(169)
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)	-	-
<b>3.10 Net cash from / (used in) financing activities</b>	<b>2,363</b>	<b>2,363</b>

<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1 Cash and cash equivalents at beginning of period	2,215	2,215
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(1,008)	(1,008)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(440)	(440)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	2,363	2,363
4.5 Effect of movement in exchange rates on cash held	-	-
<b>4.6 Cash and cash equivalents at end of period</b>	<b>3,130</b>	<b>3,130</b>



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

5. <b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1 Bank balances	3,130	2,215
5.2 Call deposits	-	-
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>3,130</b>	<b>2,215</b>

6. <b>Payments to related parties of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1 Aggregate amount of payments to related parties and their associates included in item 1	43
6.2 Aggregate amount of payments to related parties and their associates included in item 2	-
<i>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.</i>	

7. <b>Financing facilities</b> <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>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
<b>7.4 Total financing facilities</b>	-	-
<b>7.5 Unused financing facilities available at quarter end</b>		-
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.		

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (item 1.9)	1,008
8.2 Payments for exploration & evaluation classified as investing activities (item 2.1(d))	387
8.3 Total relevant outgoings (item 8.1 + item 8.2)	1,395
8.4 Cash and cash equivalents at quarter end (item 4.6)	3,130
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	3,130
8.7 <b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	2.24
<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?	
Answer: n/a	
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: n/a	
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: n/a	
<i>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.</i>	

### 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: 30 April 2024

Authorised by: Board of Directors

**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.