

# BUILDING ON DORADO SUCCESS



## Managing Director's comments.

The Dorado development continues to achieve significant milestones towards being ready for Final Investment Decision (“**FID**”) later in the year.

During the quarter, the joint venture was awarded a Production License (“**PL**”) in respect of the Dorado field. The PL allows the joint venture to produce from the Dorado Licence Area and continue to explore for, and appraise, any additional petroleum within the area.

Importantly, the terms of the PL also allow for the production of petroleum from other areas, such as the recently discovered Pavo oil field, creating the potential for significant upside where other petroleum resources in the Bedout Sub-basin are produced using the Dorado facilities (see figure 1).

## Quarter Highlights

- **Grant of Dorado Production Licence as development progresses to being FID-ready in 2022.**
- **Estimated Pavo contingent resources of 43 million barrels (gross, 2C) within tie-back distance of Dorado facilities.**
- **Renewable diesel project awarded \$2 million Clean Energy Future Fund grant.**

The Pavo-1 discovery in the previous quarter represents another stellar exploration success for the highly prospective Bedout Sub-basin. Following an assessment of the Pavo resource, the Company estimates contingent resources of 43 million barrels (gross, 2C) (refer to ASX announcement on 2 May 2022).

With the Pavo discovery being within tie-back distance of the Dorado facilities, Pavo has the potential to maintain high flow rates through the Dorado facilities and thereby preserve the field's low operating cost per barrel for an extended period of time.

Developments like Dorado, and discoveries such as Pavo, are critical to ensuring energy demand in Asia continues to be met and will play an important role in the region's long-term energy security.

The Company also continues to make significant progress on its first renewable

diesel project which will be located in Narrogin, Western Australia.

During the quarter, the renewable diesel joint venture secured a long-term feedstock contract that will supply a significant portion of the project's baseline feedstock requirements for 10+ years.

The joint venture also secured a \$2m grant from the Clean Energy Future Fund, which acknowledges the clear benefits renewable diesel can bring to reducing carbon emissions and creating a carbon-neutral alternative fuel in Western Australia. The Company is excited about the project's potential to transform the approach to fuel production.

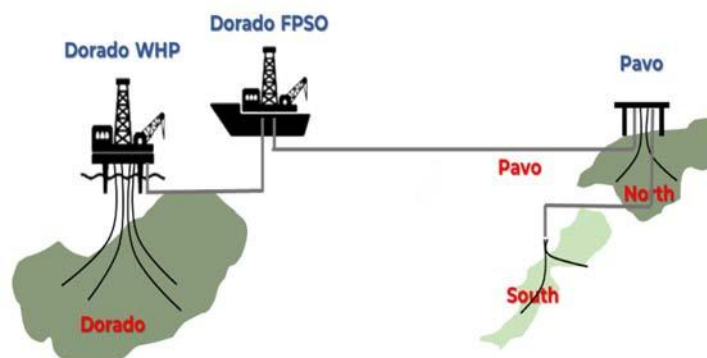
## Dorado Development WA-64-L

(Carnarvon 20%; Santos is the Operator)

During the quarter, the Dorado joint venture accepted the grant of a Production Licence for the Dorado field.

The National Offshore Petroleum Titles Administrator granted the joint venture a life-of-field PL in respect of the four blocks containing the Dorado field ("**Licence Area**"). These blocks were excised from the ongoing Exploration Permit WA-437-P.

The PL represents a key regulatory approval supporting the Dorado development being FID-ready in 2022. The PL enables the Joint Venture to produce petroleum from the Licence Area as well as continue to explore for, and appraise, any additional



**Figure 1: Illustration of potential Dorado FPSO tie-backs of Pavo North and Pavo South**

petroleum within this area.

The PL will also allow the production of petroleum from other areas via the Licence Area. This means proximate resources, like the recently discovered Pavo oil field, can be tied back and produced using the Dorado Floating, Production, Storage and Offloading ("**FPSO**") vessel.

The Dorado oil and condensate is planned to be produced through a well-head platform ("**WHP**") tied back to the FPSO capable of processing 100,000 barrels of oil and condensate per day, and injecting up to 215 MMscf/day of gas back into the reservoirs for later development.

Detailed design work (FEED) is nearing completion on the WHP, with the structure planned to sit in around 90m water depth and initially housing ten injection and production wells, with another six spare well-slots for future expansion.

FEED work is also close to finalisation on the FPSO, with the project team working on finalising the plans for construction of this significant vessel able to store almost one million barrels of crude oil and condensate.

The similarity between the sweet light product that will be produced at Dorado, to the recently discovered Pavo oil, means that both fluids are able to be processed with the same equipment already planned to be installed on the Dorado FPSO.

The Dorado and Pavo liquids are an extra light, sweet product with externally provided market analysis indicating sales are likely to achieve a premium to Brent.

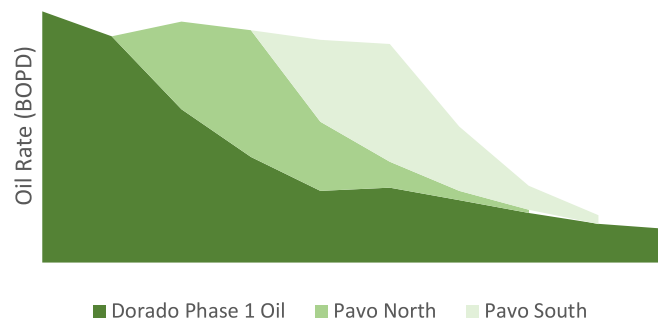
Final capital cost definition is being undertaken as part of the FEED process for both the WHP and FPSO. This is one of the last requirements ahead of the project being ready for FID.

In line with FID timing, the Company has commenced a formal process to fund its share of the Dorado development.

The Company, with assistance from its financial advisor, Azure Capital, has launched its Dorado financing processes. These include traditional reserve-based non-recourse senior debt facilities, alternative funding options (including junior debt, offtake prepayment and royalties), and divestment of a portion of the Company's share of the Dorado project and associated exploration acreage.

The Company is progressing all funding options to deliver the optimal balance of capital management while maximising value for shareholders.

### Dorado Project Phase 1 Oil - P50



**Figure 2: Illustration of the potential to optimise Dorado facilities' production capacity, and demonstrating the flexibility to incorporate future resources such as Pavo**

## Pavo Oil Discovery WA-438-P

(Carnarvon 30%; Santos is the Operator)

The Pavo-1 well was completed in the previous quarter, proving the existence of a substantial volume of light sweet oil in the Caley Member, exhibiting the same excellent reservoir characteristics that have been proven in the Dorado field.

During the quarter, the Company completed its analysis of the Pavo North contingent resource estimating 43 million barrels (gross) for the 2C confidence level (refer to ASX announcement on 2 May 2022).

The greater Pavo closure comprises a northern structure (Pavo North), from which the Pavo-1 well recovered hydrocarbons, and a southern structure (Pavo South).

The two structures are separated by a narrow syncline, with the depth of the syncline being shallower than an interpreted residual oil-water contact noted in the Pavo-1 well. This supports the position that Pavo south is likely filled with the same oil encountered in Pavo North.

The successful Pavo-1 oil discovery significantly increases the Company's oil resources for potential development through the Dorado facilities, located around 46 kilometres from Pavo, which is within industry standard ranges for tie-back distance and could be delivered to the Dorado facilities.

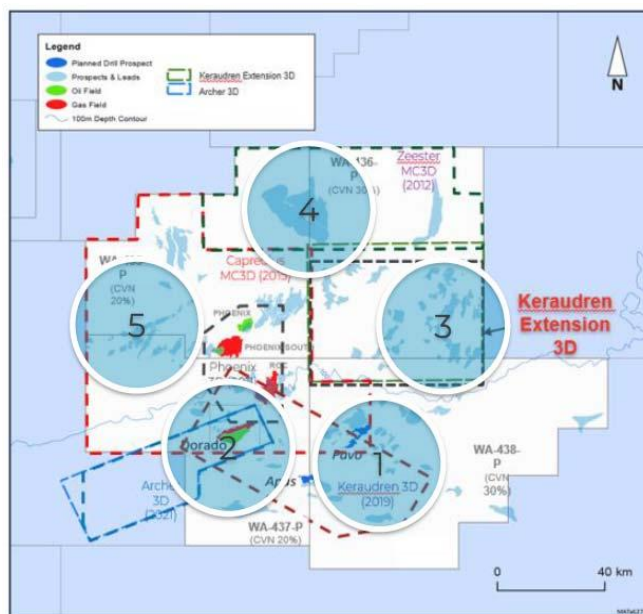
The tie-back capability is significant as fluid production rates from Dorado are expected to naturally decline after a plateau period of 1-2 years, at which time there will be spare capacity in the crude oil handling facilities, allowing for back-fill from new fields such as Pavo (see figure 2).

## Bedout Exploration WA-435,6,7&8-P

(Carnarvon 20%-30%; Santos is the Operator)

In the previous quarter, The Bedout Joint Venture completed the Keraudren Extension II ("KE2") 3D seismic acquisition project. KE2 covers approximately 650 km<sup>2</sup> and fills in the northern area of the greater Keraudren Extension Survey, which was initially acquired in mid-2021.

Now the final Phase II seismic acquisition has been completed, the Joint Venture has successfully obtained the full 3,260km<sup>2</sup> of the Keraudren Extension survey, and has



**Figure 3: Exploration potential of the Bedout Basin with extensive modern 3D data coverage**

increased the total area of the Bedout Exploration blocks covered by modern 3D seismic data to around 70% of the 22,000 km<sup>2</sup>. The Pavo-1 oil discovery has further de-risked numerous prospects within the Company's considerable Bedout Sub-basin acreage. Some of these prospects will be further illuminated by the KE2 survey.

The Company is continuing to assess its exploration prospects within the prolific Bedout Sub-basin acreage to identify future exploration drilling targets.

The most recent 3D datasets, the Archer 3D and Keraudren Extension 3D, are both available in early fast-track format post processing for high-grading of prospective resources, to complement the data available from re-processing of earlier Capreolus and Zeester 3D datasets.

The historically high success rates for discoveries in the modern 3D-era in this basin, including the most recent Pavo-1 well

in the eastern areas, bodes well for future exploration success.

The areas that are being highlighted for potential future exploration programs are (see areas denoted in Figure 3 above):

1 – Pavo South exploration / Pavo appraisal in WA-438-P

2 – Dorado near field exploration including appraisal of Baxter down-dip potential

3 – Pavo on-trend oil plays into area currently being evaluated with most recent Keraudren 3D

4- Northern step-out exploration of material “game-changer” oil-prone standalone prospects

5 – Western step-out of gas-prone prospects to enable further refinement of Phase 2 gas Dorado / Roc gas development

## Renewable Fuels

(Carnarvon 50%)

The Company continues to advance its first renewable diesel project as part of its FutureEnergy Australia JV (“**FEA**”) towards FID.

The project in Narrogin, named the “Narrogin FutureEnergy Park”, is expected to be the first in Australia to produce renewable diesel at commercial scale using sustainably sourced biomass feedstocks such as waste agricultural residues which would otherwise be burnt.

During the quarter, FEA secured a long-term feedstock contract that will supply a significant portion of the project’s baseline feedstock requirements for 10+ years. The



**Figure 4: 3D Model of proposed Narrogin biorefinery**

feedstock is located within 150 km of Narrogin, which will enable FEA to cost effectively transport biomass to the site.

There has been tremendous support to date from the Narrogin local council and community as demonstrated by the strong turnout at FEA’s first community evening event.

Preparation for critical approvals for the project, such as EPA and planning development application are ongoing, and submissions are track for next quarter.

During the quarter the Company announced a vision to build its renewable biofuels production to at least 500 million litres per year by 2030. Renewable biofuels production includes sustainable aviation fuel, renewable diesel, and potentially renewable marine bunker fuels.



## Apus-1 WA-437-P

(Carnarvon 20%; Santos is the Operator)

The Apus-1 well was completed at the beginning of the quarter.

Excellent quality reservoirs in the Caley and Milne Members were intersected as prognosed, and while hydrocarbons were observed in the well, a commercial hydrocarbon pool was not discovered.

The early interpretation of the drilling results indicates there is evidence of hydrocarbons migrating to the Apus location; however, they may not have migrated in sufficient quantity for a commercial hydrocarbon pool to form, or sufficient hydrocarbons were not able to be retained within the closure that was drilled.

While no movable hydrocarbons were encountered in the primary target Caley and Milne Members of the Archer Formation, there were indications of hydrocarbons in the Hove Formation seal and deeper Dumont Member of the Archer Formation. These shows bode well for charge risk mitigation in other prospects in new play-types in the greater Bedout Sub-basin.

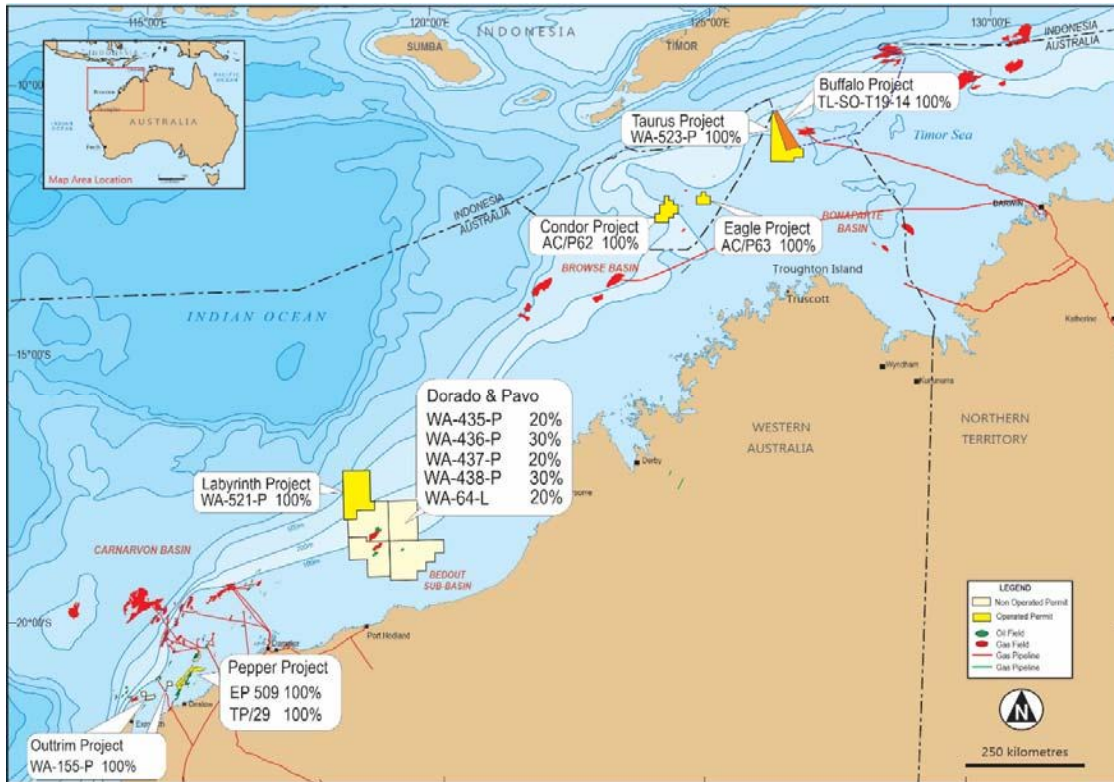
## 2022 Annual General Meeting

The 2022 Annual General Meeting is planned to be held on Friday 18 November 2022. The closing date for receipt of nominations from persons wishing to be considered for election as director is 31 August 2022.

### Financial Analysis of selected items within Appendix 5B

Appendix 5B reference	ASX description reference	Carnarvon commentary
1.2 (a)	<b>Exploration and evaluation costs expensed</b>	These costs pertain to work undertaken on projects that are not applicable to an owned permit interest. Typically, these costs relate to regional geological assessments undertaken by Carnarvon's technical team which includes annual exploration software and license costs.
1.2 (e)	<b>Administration and corporate costs</b>	This item includes costs for and associated with operating the Company's office, ASX listing fees, insurances, software licences, making corporate presentations and travel.
1.4	<b>Interest received</b>	Carnarvon holds a significant portion of its cash in term deposits which generate interest income during the year. Interest is recorded in the Appendix 5B when received, namely when deposits mature. Accordingly, the amount varies each quarter based on the interest rate, the amount on term deposit and the timing of the maturity of the term deposits.
2.1 (d)	<b>Exploration and evaluation costs capitalised</b>	During the quarter, Carnarvon incurred a net outflow of A\$6.5 million on exploration and evaluation activities which primarily related to drilling the Pavo-1 and Apus-1 exploration wells, Dorado FEED workflows and seismic acquisition over the Bedout permits.
2.1 (e)	<b>Investments</b>	This item relates to funds contributed by Carnarvon towards the Buffalo incorporated joint venture. These funds were utilised towards drilling the Buffalo-10 well, ongoing geological studies, and general and administrative expenditure for the Timor-Leste entity.
2.5	<b>Other</b>	This item relates to Carnarvon's investment into the renewable diesel FutureEnergy Australia joint venture.
3.1	<b>Proceeds from issue of equity securities</b>	Includes funds (net of fees) from the recent Placement to institutional investors.
6.1	<b>Payments to related parties and their associates</b>	These costs pertain to payments to Directors, most particularly remuneration for the Managing Director and fees for the Company's Non-Executive Directors.
8.0	<b>Future operating activities</b>	For the upcoming quarter, the Company has forecasted A\$4.0-\$4.2 million in Dorado FEED expenditure and A\$1.9-\$2.1 million in corporate costs.

## Project Map



## Project Table

Project	Permit(s)	Operator	Interest held	Interest Change Q/Q
Bedout	WA-64-L	Santos	20%	20%
Bedout	WA-435-P	Santos	20%	-
Bedout	WA-436-P	Santos	30%	-
Bedout	WA-437-P	Santos	20%	-
Bedout	WA-438-P	Santos	30%	-
Buffalo	TL-SO-T 19-14	Carnarvon Petroleum Timor	100%	50%
Taurus	WA-523-P	Carnarvon Energy	100%	-
Labyrinth	WA-521-P	Carnarvon Energy	100%	-
Condor	AC/P62	Carnarvon Energy	100%	-
Eagle	AC/P63	Carnarvon Energy	100%	-
Outtrim	WA-155-P	Carnarvon Energy	100%	-
Pepper	EP 509 & TP/29	Carnarvon Energy	100%	-



Acronym	Definition
<b>bopd</b>	barrels of oil per day
<b>bbls</b>	barrels of oil
<b>CVN</b>	Carnarvon Energy Limited
<b>JV</b>	Joint Venture
<b>km</b>	Kilometres
<b>km<sup>2</sup></b>	Square kilometres
<b>m</b>	Millions
<b>Qtr</b>	Quarter
<b>Q/Q</b>	Quarter on Quarter
<b>Tcf</b>	Trillion cubic feet (gas)
<b>2D</b>	Two dimension seismic data
<b>3D</b>	Three dimensional seismic data
<b>MC3D</b>	Multi-client 3D – seismic data acquired for multiple parties that require licensing
<b>USD</b>	United States of America dollar

### Cautionary Statement

There are numerous uncertainties inherent in estimating reserves and resources, and in projecting future production, development expenditures, operating expenses and cash flows. Oil and gas reserve engineering and resource assessment must be recognised as a subjective process of estimating subsurface accumulations of oil and gas that cannot be measured in an exact way.

Prospective resources are the estimated quantities of petroleum that may potentially be recovered by the application of a future development project and may relate to undiscovered accumulations. These prospective resource estimates have an associated risk of discovery and risk of development. Further exploration and appraisal is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

### Resources

All contingent and prospective resources presented in this report are prepared as at 30 June 2021, 16 December 2021 and 2 May 2022 (refer ASX releases dated 30 August 2021, 16 December 2021 and 2 May 2022). The estimates of contingent and prospective resources included in this report have been prepared in accordance with the definitions and guidelines set forth in the SPE-PRMS and have been prepared using probabilistic methods.

Carnarvon is not aware of any new information or data that materially affects the information included in this report and that all material assumptions and technical parameters underpinning the estimates in this report continue to apply and have not materially changed.

### Competent Person Statement Information

The resource estimates outlined in this report were compiled by Carnarvon's Chief Operating Officer, Mr Philip Huizenga, who is a full-time employee of the company.

Mr Huizenga has over 25 years' experience in petroleum exploration and engineering. Mr Huizenga holds a Bachelor's Degree in Engineering, a Master's Degree in Petroleum Engineering and is a member of the Society of Petroleum Engineers. Mr Huizenga is qualified in accordance with ASX Listing Rules and has consented to the form and context in which this statement appears.

### Forward Looking Statements

This report contains certain "forward-looking statements", which can generally be identified by the use of words such as "will", "may", "could", "likely", "ongoing", "anticipate", "estimate", "expect", "project", "intend", "plan", "believe", "target", "forecast", "goal", "objective", "aim", "seek" and other words and terms of similar meaning. Carnarvon cannot guarantee that any forward-looking statement will be realised. Achievement of anticipated results is subject to risks, uncertainties and inaccurate assumptions. Should known or unknown risks or uncertainties materialise, or should underlying assumptions prove inaccurate, actual results could vary materially from past results and those anticipated, estimated or projected. You should bear this in mind as you consider forward-looking statements, and you are cautioned not to put undue reliance on any forward-looking statement.

## Appendix 5B

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

Name of entity

CARNARVON ENERGY LIMITED

ABN

60 002 688 851

Quarter ended ("current quarter")

30 JUNE 2022

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
<b>1.</b>	<b>Cash flows from operating activities</b>		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(127)	(465)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(836)	(2,952)
	(e) administration and corporate costs	(977)	(3,507)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	29	306
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</b>	<b>Net cash from / (used in) operating activities</b>	<b>(1,911)</b>	<b>(6,618)</b>
<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	(18)
	(d) exploration & evaluation	(6,471)	(37,725)
	(e) investments	(4,098)	(10,558)
	(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 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)	(126)	(2,758)
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(10,695)</b>	<b>(51,059)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	67,132	67,132
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	1,397
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
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)	(47)	(217)
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>67,085</b>	<b>68,312</b>

4.	Net increase / (decrease) in cash and cash equivalents for the period	Current quarter \$A'000	Year to date (12 months) \$A'000
4.1	Cash and cash equivalents at beginning of period	54,249	98,435
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,911)	(6,618)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(10,695)	(51,059)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	67,085	68,312

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	3,697	3,355
4.6	<b>Cash and cash equivalents at end of period</b>	<b>112,425</b>	<b>112,425</b>

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	16,124	24,249
5.2	Call deposits	96,301	30,000
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>112,425</b>	<b>54,249</b>

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	245
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>		

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

<b>7. 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)	-	-
7.4 <b>Total financing facilities</b>	-	-
7.5 <b>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)	(1,911)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(10,695)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(12,606)
8.4 Cash and cash equivalents at quarter end (item 4.6)	112,425
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	112,425
8.7 <b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	<b>8.9</b>
<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

*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 July 2022

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.