

Quarterly Activities Summary - Period Ended 31 December 2023

HIGHLIGHTS

Cuba

Block 9 PSC (Melbana 30% participating interest and Operator)

- Twenty tanker loads of oil delivered to storage from early production testing from Unit 1B of Alameda-2. Production was run for a total of 10 days to acquire data on reservoir and logistics performance. The well was then shut in to monitor pressure build up to complete data acquisition for reservoir modelling and field development planning. Analysis of results indicate potential significant increase in recoverable volumes.
- Drilling of the Alameda-3 appraisal well commenced at 6:00 AM, 15 December 2023 (Cuba time).
- Primary objectives are the appraisal of the two deeper and geologically independent Alameda and Marti reservoirs discovered by Melbana's Alameda-1 exploration well in 2022. These two deeper reservoirs were independently estimated to contain a combined 179 million barrels of Prospective (recoverable) Resource (Unrisked Gross Best Estimate)¹.
- Secondary objective is to conduct a flow test of the oil in Amistad Unit-3.

Corporate

- \$20.1 million cash available at the end of the quarter.

¹ **Prospective Resources Cautionary Statement** - The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) related to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Future exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

SYDNEY, AUSTRALIA (23 January 2024)

Melbana Energy Limited (ASX: MAY) (**Melbana** or the **Company**) provides the following summary in relation to its activities during the quarter ended 31 December 2023.

CUBA

Block 9 PSC (Melbana 30%, Operator)

Alameda-3 appraisal well operations

The Company commenced the drilling of the Alameda-3 Appraisal Well at 6:00 AM, 15 December 2023 (Cuba time). The primary objectives of the well are the appraisal of the two lower geologically independent oil-bearing reservoirs intercepted by Alameda-1 – (Alameda and Marti).

Alameda-3 has been designed for the subsurface conditions encountered by Alameda-1 but is being drilled from the same pad and twins the trajectory of the successful original exploration well.

The well is planned to reach total depth of 3835mMD, ~40mTVD above a higher-pressure zone seen in Alameda-1 (see Figure 1). The Alameda-3 well is planned to take 95 days to reach total depth (see time estimate in Figure 2).

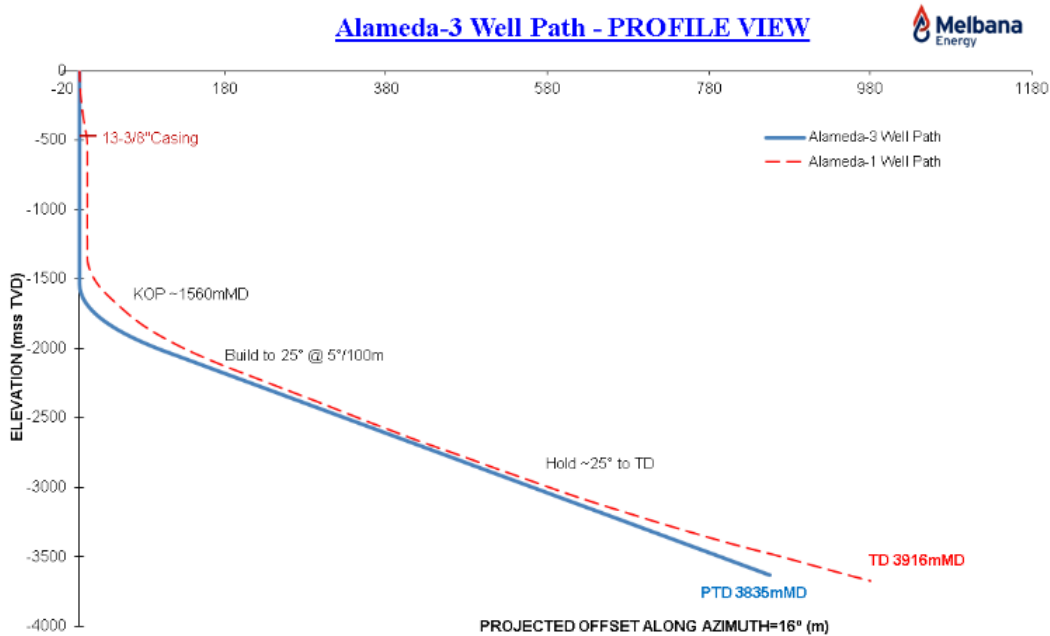


Figure 1 - Alameda-3 well path

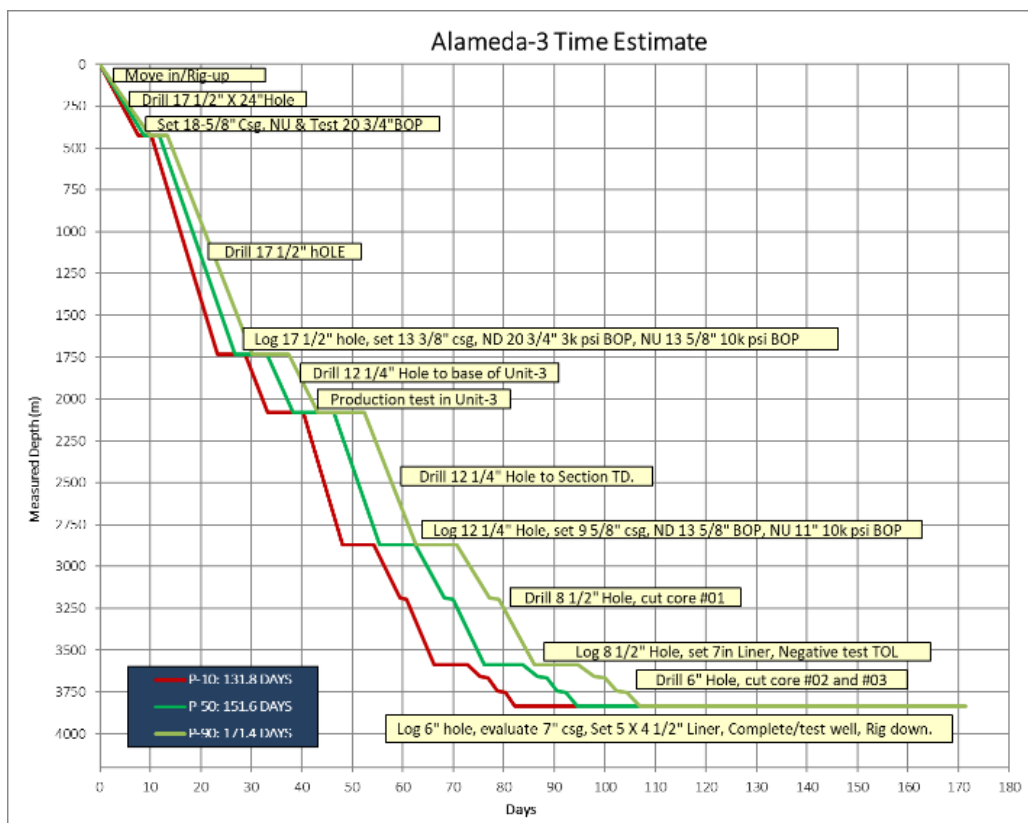


Figure 2 - Alameda-3 drilling time estimate.

The testing plan is to run an open hole drill stem test (DST) in the Amistad Unit-3 reservoir whilst drilling through the relevant part of the Upper Sheet (about thirty five days following the commencement of drilling), then a slotted liner DST in the deepest Marti reservoir before finally perforating up to three zones in the Alameda Reservoir zones for either separate or comingled flow tests, depending on well results. Whichever DST zone performs best will be completed for production (see Figure 3).

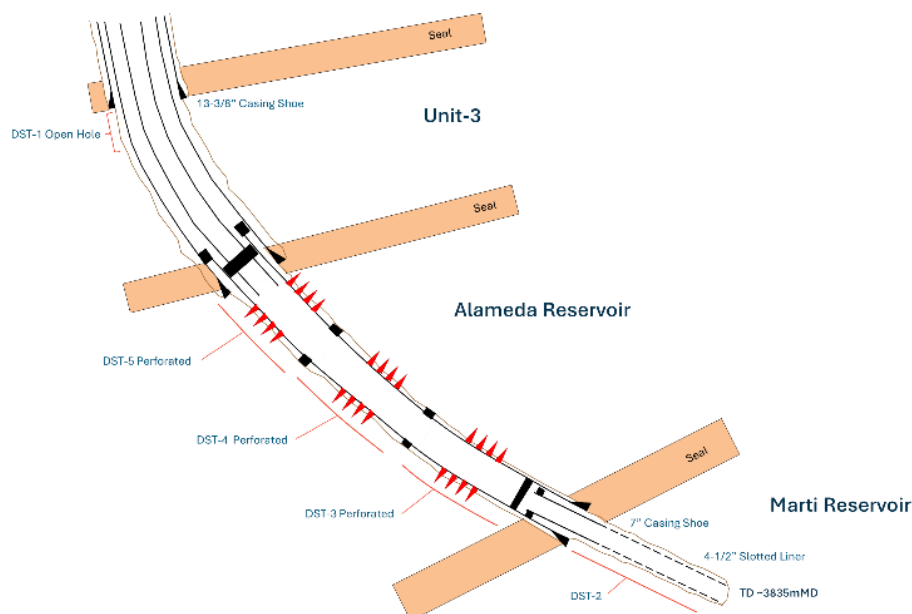


Figure 3 - Alameda-3 drill stem testing programme.

Alameda-3 is designed to prove the results of Alameda-1 which, although having considerable oil shows sometimes accompanied by significant formation pressure in both the Alameda and Marti intervals, was unable to conduct flow tests or collect oil samples for analysis.

Alameda-3 has been designed to accommodate the subsurface conditions encountered by Alameda-1 and is therefore hoped to lead to an increase in the recoverable resource estimate as well as confirm the presence of a lighter, more valuable oil (see Table 1).

Prospective Resources as at 1 August 2022¹(gross unrisked, millions of barrels)

Objective	Low	Best	Mean	High
Amistad 1, 2 & 3	30	88	119	240
Alameda	34	109	148	297
Marti	21	70	95	197
Total	85	267	362	734

Table 1 – Certified resource estimates prior to incorporation of Alameda-2 results

Alameda-2 early production

Early production from Unit 1B at Alameda-2 was completed in the quarter. Production testing was run for a total of ten (10) days, twice the total duration of the Drill Stem Test conducted in this unit previously, resulting in 20 tanker loads of oil being produced and delivered to offsite storage.

The flow peaked at 1,183 barrels of oil per day (BOPD) and was intentionally choked back to ensure a constant rate for the test period to optimise the collection of reservoir data.

The extended period of production also provided important performance data on logistical arrangements for the transport and storage of the oil produced.

The produced oil was sampled for Pressure Volume and Temperature (PVT) analysis and other data obtained were of good quality were analysed by the Company's geoscience team and consultants.

The well was shut in to gain further valuable data on the reservoir's characteristics by monitoring the build-up of pressure in the well.

The conclusions drawn from this analysis have been important factors in the refinement of the development plan, including well design and spacing, for this upper sheet reservoir.

Updated Upper Sheet resource estimates.

Work is complete on updating the resource estimates for the Upper Sheet Amistad Units. Prior to incorporating the results from Alameda-2 the three units of the Amistad reservoir had previously been independently assessed to contain 1.9 billion barrels of oil in place and 88 million barrels of Prospective Resources (unrisked gross best estimate)¹ (see Table 2).

Amistad Reservoir (all units)	Gross (100%) Unrisked Oil (MMbbl)			
	Low (1U)	Best (2U)	Mean	High (3U)
Oil in Place	799	1,939	2,490	4,751
Prospective Resource	30	88	119	240

Table 2 - Independently assessed volumes for the Amistad interval (pre-Alameda-2 well)

The Company's technical team has incorporated the increase in net pay from 100mTVD to 615mTVD (after incorporating the natural fractures) with the much higher quality oil recovered (19° API, 30 cP viscosity and low sulphur content) leading to potentially higher recovery factors into an updated resource assessment for these units. This new data is being discussed with our independent resources and reserves certifier.

Given the highly encouraging DST results in the Unit 1A, 1B and Unit 3, it is envisaged that the central field area of highest confidence might be assigned Contingent Resource category.

Development planning

Geological, engineering, commercial and marketing studies commenced during the quarter. These studies are the building blocks of a field development plan and will continue in parallel with discussions with regulators and oil offtakers regarding the potential to export the lighter density, low sulphur, low viscosity crude oil encountered in Alameda-2 Unit 1B (see Figure 4).

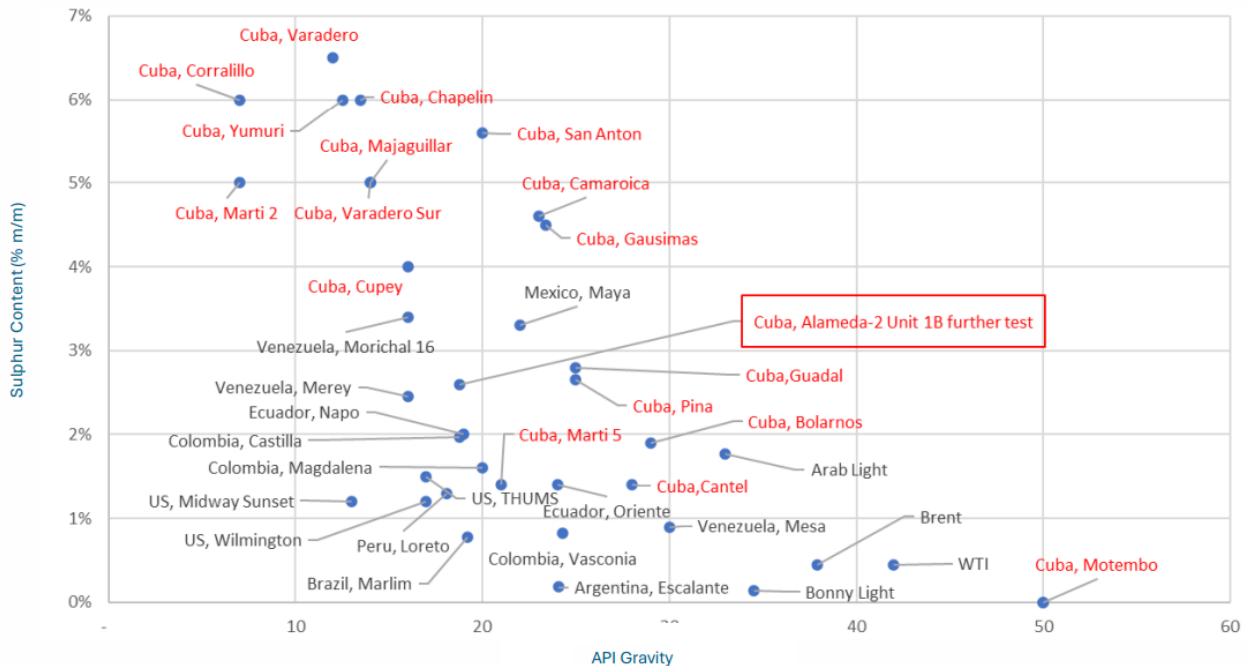


Figure 4 – Unit 1B oil qualities export grade.

The results of Alameda-3 appraisal drilling will be integrated into resources/reserves calculation and forward field development planning.

AUSTRALIA

Hudson Prospect in NT/P87 and WA-544-P (Melbana 100%)

Petroleum exploration permits NT/P87 and WA-544-P, located offshore northern Australia in the Joseph Bonaparte Gulf (see **Error! Reference source not found.5**), were granted to a wholly owned subsidiary of Melbana in November 2020. The primary term was for three years ending November 2023.

During the quarter the Company submitted an 18-month suspension and extension application to the National Offshore Petroleum Titles Administration (NOPTA). The application is currently under review by NOPTA.

During the quarter the Melbana continued with a process to farmout some of its 100% interest in the permit areas to fund the acquisition of a 3D seismic survey to further de-risk the prospect.

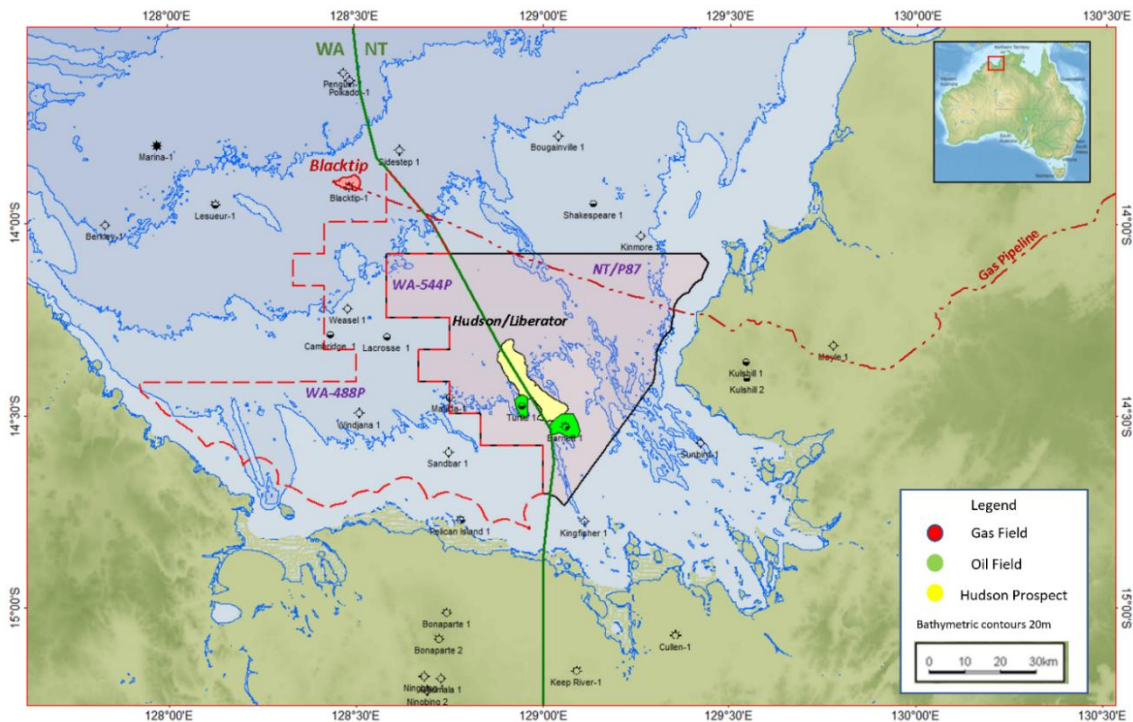


Figure 5 - Location of the Hudson Prospect in northern Australia

AC/P51

During the quarter an application was submitted to NOPTA for the surrender of petroleum exploration permit AC/P51. The Company has no direct interest in this permit area nor any financial liability to it but it does have a small indirect cash interest, contingent on certain elections being made by the titleholders.

HEALTH AND SAFETY

No lost time incidents occurred during the reporting period.

CORPORATE

Payments to related parties and their associates, totalling \$122 thousand as outlined in Section 6 of the accompanying Appendix 5B, related to payment of directors' fees.

There was there was 2,715 barrels of oil produced from early production testing activities in the quarter. There were no receipts from oil production or substantive development expenditure during the quarter.

The Company had total cash on hand of \$20.1 million as at 31 December 2023.

For and on Behalf of the Board of Directors: For further information please contact

Mr Andrew Purcell
Executive Chairman

Dr. Chris McKeown
Chief Commercial Officer
+61 2 8323 6600

Ends -

APPENDIX A – TENEMENTS

INTERESTS HELD AT THE END OF THE QUARTER

TYPE	LOCATION	TITLEHOLDERS	INTEREST
PSC Block 9	Cuba	Melbana Energy Limited	30%
PSC Santa Cruz	Cuba	Melbana Energy Limited	100% ²
PEL WA-544-P	Australia	MEO International Pty Limited	100%
PEL NT/P87	Australia	MEO International Pty Limited	100%
PEL WA-488-P	Australia	EOG Resources Australia Block WA-488 Pty Limited	Cash, contingent on certain elections being made with respect to the PEL, and payments, contingent on exploration success ³
PEL AC/P51	Australia	Vulcan Exploration Pty Limited Rouge Rock Pty Limited	Cash, contingent on option exercise, then Royalty, contingent on exploration success ⁴
PEL AC/P70	Australia	Melbana Energy AC/P70 Pty Limited	100%

² Award subject to receiving all regulatory approvals, some of which are outstanding

³ See ASX announcement dated 24 November 2021

⁴ See ASX announcement dated 7 May 2021

APPENDIX B – APPENDIX 5B – DISCLOSURES UNDER ASX LISTING RULE 5.30 PREVIOUSLY RELEASED TO THE MARKET

ALAMEDA-2: UNIT 1B	
LR 5.30 (a)	Alameda-2 appraisal well, conventional oil.
LR 5.30 (b)	Block 9 PSC, onshore Cuba about 140 km east of the capital, Havana.
LR 5.30 (c)	Melbana Energy holds a 30% interest and operatorship.
LR 5.30 (d)	N/A
LR 5.30 (e)	Fractured limestone.
LR 5.30 (f)	A total of 75 metres of perforations were open between 700 metres MD and 942 metres MD.
LR 5.30 (g)	Extended production testing was undertaken with a 24-hour initial flow period followed by an 8-hour shut-in. The well was then re-opened and flowed for a further 9 days. The well was then shut-in on 29 October for a planned 20-day pressure build-up survey.
LR 5.30 (h)	Additional lab results confirm a 19-degree API oil with a relatively low viscosity was recovered at surface. Further PVT analysis is underway to determine oil properties.
LR 5.30 (i)	No formation water was recovered.
LR 5.30 (j)	A total of 2,715 barrels of oil have been recovered over the duration of the test and trucked to a battery. The choke size for the majority of the test period was 12/64” with a corresponding average oil rate of 293 BOPD and ranged up to 30/64” and a peak of 1,183 BOPD during the PVT sampling process.
LR 5.30 (k)	N/A
LR 5.30 (l)	No non-hydrocarbon gasses were recorded during testing.
LR 5.30 (m)	N/A

APPENDIX C – GLOSSARY OF KEY TERMS

Term	Meaning
Barrel	One barrel of oil; 1 barrel = 35 imperial gallons (approx.) or 159 litres (approx.); 7.5 barrels = 1 tonne (approximately, depending on the oil density); 6.29 barrels = 1 cubic metre.
BBL	Barrels
BOPD	Barrels of oil per day
BSW	Basic sediment and water
Carbonate	Class of sedimentary rocks which mainly contains calcite, aragonite and dolomite.
COS	Geological chance of success
cP	Centipoise
DST	Drill Stem Test – a procedure for testing the pressure and productive capacity of a geological formation.
M	Thousands
MM	Millions
Metres MD	Metres, Measured Depth
Metres TVD	Metres, Total Vertical Depth
Prospect	A project associated with a potential accumulation that is sufficiently well defined to represent a viable drilling target.
Prospective Resources	Those quantities of petroleum that are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations.
Unrisked	Prior to taking into account the chance of discovery.

Appendix 5B

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

Name of entity

MELBANA ENERGY LIMITED

ABN

43 066 447 952

Quarter ended
("current quarter")

31 December 2023

Consolidated statement of cash flows	Current quarter	Year to date (12 months)
	\$A'000	\$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
1.2 (c) production	-	-
(d) staff costs*	(748)	(1,606)
(e) administration and corporate costs	(521)	(1,208)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	61	422
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)	-	-
1.9 Net cash from/(used in) operating activities	(1,208)	(2,392)
<i>*Some staff costs are reallocated in exploration & evaluation</i>		
2. Cash flow from investing activities		
Payment to acquire or for:		
(a) entities	-	-
(b) tenements	-	-
2.1 (c) property, plant and equipment	-	-
(d) exploration & evaluation	(13,379)	(25,654)
(e) investments	-	-
(f) other non-current assets	-	-
2.2 Proceeds from 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 (Contributions from JV Partner)	5,038	13,510
2.6 Net cash from/(used in) investing activities	(8,341)	(12,144)

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

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
3. Cash flows from financing activities		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
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	-	-
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	-	-
4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of period	31,224	35,124
4.2 Net cash from/(used in) operating activities (item 1.9 above)	(1,208)	(2,392)
4.3 Net cash from/(used in) investing activities (item 2.6 above)	(8,341)	(12,144)
4.4 Net cash from/(used in) financing activities (item 3.10 above)	-	-
4.5 Effect of movement in exchange rates on cash held	(1,607)	(520)
4.6 Cash and cash equivalents at end of period	20,068	20,068
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	20,068	31,224
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)	20,068	31,224
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	122	
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>		
<i>Director fees, salaries & superannuation expenses.</i>		
7. Financing facilities <i>Note: the item 'facility' includes all forms of financing arrangements available to the entity.</i> <i>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 - Outstanding Cash Calls from JV Partner	22,768	-
7.4 Total financing facilities	22,768	-
7.5 Unused financing facilities available at quarter end		22,768
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.		
N/A		

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

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from/(used in) operating activities (Item 1.9)	(1,208)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1 (d))	(13,379)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(14,587)
8.4 Cash and cash equivalents at quarter end (item 4.6)	20,068
8.5 Unused finance facilities available at quarter end (item 7.5)	22,768
8.6 Total available funding (item 8.4 + item 8.5)	42,836
8.7 Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	2.94
<i>Note: if the entity has reported positive relevant outgoings (i.e. 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:	
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:	
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:	
<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

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

Date:

23 January 2024

Authorised by:

The Board of Melbana Energy Limited**Notes**

- The 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.
- 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 standard applies to this report.
- 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.
- 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 - e.g. 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".
- If this report has been authorised for release to the market by your board of directors, you can 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.