

Quarterly Activities Summary - Period Ended 30 June 2023

HIGHLIGHTS

Cuba

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

- Drilling of the Alameda-2 appraisal well (the first of two appraisal wells in Block 9 planned for this year) commenced during the quarter
- Alameda-2 has a planned total depth of 1,960mMD (1,840mTVD). Its general objective is to allow oil to flow from the three productive units encountered previously in the shallowest of the three oil bearing reservoirs (designated Amistad)
- Production test of Unit 1A (the shallowest unit of the upper Amistad interval) flowed oil to surface unassisted, demonstrating moveable hydrocarbons at this level
- Recovering oil unassisted from this shallow depth (hence lower pressure) was only given a low chance and therefore did not materially contribute to the previous resource estimate
- With a productive interval of 63 metres TVD this interval now needs to be reconsidered and may, with engineering solutions, lend itself to future development
- The volumes of the Amistad structure have been independently estimated as 1.9 billion barrels of Oil in Place and 88 million barrels of Prospective Resource (unrisked gross best estimate)¹.

Corporate

- Appointment of Dr. Chris McKeown as Chief Commercial Officer
- Share registry manager changed to Boardroom Pty. Limited
- \$35.1 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. All quoted volumes have been taken from Independent Expert McDaniel & Associates Competent Persons Report dated 8 March 2022, 4 July 2022 and 28 July 2022. Melbana is not aware of any new information or data that materially affects the information included in that announcement and that all the material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.

SYDNEY, AUSTRALIA (21 July 2023)

Melbana Energy Limited (ASX: MAY) (**Melbana** or the **Company**) provides the following summary in relation to its activities during the quarter ended 30 June 2023.

CUBA

Block 9 PSC (Melbana 30%, Operator)

Drilling of the Alameda-2 appraisal well commenced during the quarter on 20 June 2023. The objectives of this first of two appraisal wells planned for 2023 is to better understand the commercial and technical qualities of the first of the three geologically independent oil-bearing intervals (designated Amistad), each with moveable oil accompanied by high pressure, encountered whilst drilling the Alameda-1 exploration well that completed in 2022. The appraisal program includes the taking of cores, wireline logging, flow testing and quality analysis.

Subsequent to the end of the quarter, the Company announced² the first production results from the first and shallowest unit of the Amistad interval, designated Unit 1A (see Figure 1).

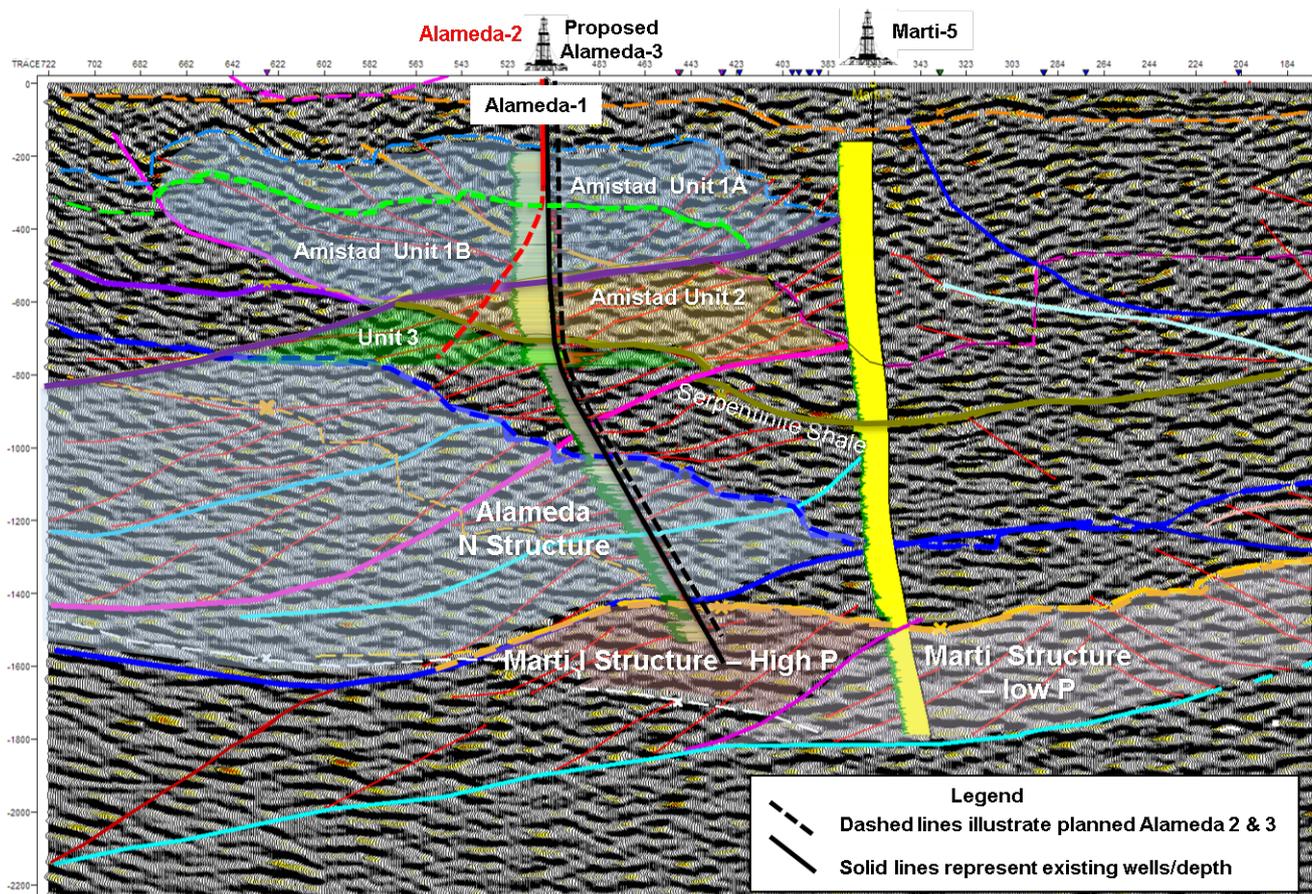


Figure 1 - Targets, trajectory and progress of the first appraisal wells Alameda-2

² See ASX announcement dated 5 July 2023

Two whole rock cores were taken within the upper portion of the reservoir at separate intervals between 476 - 481 mMD and 505 - 508 mMD. The presence of black oil was noted in naturally fractured limestone in both cores (see Figure 2).

Flow testing operations of Unit 1A then commenced over a gross open hole interval of 63 metres (445 - 508 mMD) with the upper packer set within the casing. Black oil flowed to surface after a 5-hour period through a 32/64" choke, but not at a measurable rate and with a maximum well head pressure at surface of 125 psi. The maximum well head pressure measurement has been calculated to be the equivalent of the interval pressure supporting a column of dead oil in the string and accounts for the low flow rate seen at the surface. A total volume of 40 barrels of oil were recovered at surface and samples sent for laboratory analysis (see Figure 3). Initial results indicate that the oil recovered has an API gravity of 11.7° (at standard temperature), a typical quality for shallow oil given bacteria that removes the lighter end of the hydrocarbon chain can exist at the temperatures there. Viscosity was 3783 cP at 50°C.

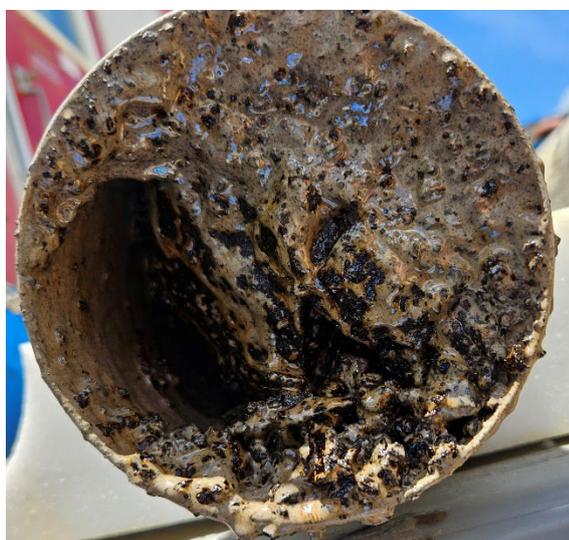


Figure 2 - Core showing the presence of black oil in naturally fractured limestone



Figure 3 - Sampling oil recovered at surface for lab analysis

Such API and viscosity values are similar to other shallow oil fields in the northern Cuban fold belt where more than 200 million barrels of oil has been produced over the past 20 years. Production from these fields use a combination of various pumping methods and free flow.

Testing operations for this first and shallowest unit are now complete and results are being evaluated.

The three units of the Amistad reservoir have been independently assessed to contain 1.9 billion barrels of oil in place and 88 million barrels or Prospective Resources (unrisked gross best estimate)¹ (see Table 1).

Table 1 - Independently assessed volumes for the Amistad interval

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

Health and Safety

No lost time incidents occurred during the reporting period.

AUSTRALIA

AC/P70 (Melbana 100%)

Petroleum Exploration Permit AC/P70, located offshore northern Australia in the Territory of Ashmore and Cartier Islands, was granted to a wholly owned subsidiary of Melbana in February 2022. The primary term was for three years ending February 2025.

AC/P70 contains the undeveloped Vesta-1 oil discovery, drilled in 2005. An appraisal well drilled in 2007 identified a gas cap. This complex field is an attractive opportunity to a junior explorer like Melbana with the technical capability and track record of identifying new play types and attracting large, well-funded, partners to test its exploration theses, often by overturning conventional thinking.

During the reporting period an application for a suspension and extension of AC/P70 was approved by the regulator – the National Offshore Petroleum Titles Administrator. The primary term, during which the drilling of one exploration well must take place, now ends in August 2027³.

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 Figure 4), were granted to a wholly owned subsidiary of Melbana in November 2020. The primary term was for three years ending November 2023.

The permit areas, containing the undeveloped Turtle and Barnett oil discoveries, are adjacent to WA-488-P which Melbana sold to a US oil major in 2021. That company is making a country entry to drill the Beehive prospect – an isolated carbonate build up - located within WA-488-P. Isolated carbonate build ups host some of the world's largest oil reservoirs, but it is an untested play type in Australia. Melbana has no exposure to the cost of that exploration well but has contingent cash and royalty interests, respectively subject to future elections made by the purchaser and production following a successful exploration well.

Subsequent to the end of the current reporting period, Melbana announced⁴ that it had completed its initial studies (including reprocessing and reinterpretation of legacy 2D seismic data) and identified a

³ See ASX announcement dated 19 April 2023

⁴ See ASX announcement dated 4 July 2023

new conceptual target within these permit areas it is calling the Hudson Prospect – also an isolated carbonate build up. See Table 2 for its initial estimate of the Prospective Resources of the Hudson Prospect, based on a probabilistic assessment with a 12% estimate for the chance of hydrocarbons.

Table 2 – Internal resource estimates for the Hudson Prospect

Hudson Prospect	COS ⁵	Gross (100%) Prospective Resources ¹			
		Low (1U)	Best (2U)	Mean	High (3U)
Oil Only (mmbbl)					
STOOIP		9	371	1,573	4,845
Recoverable	12%	2	90	395	1,184
Gas Only (BCF)					
GIIF		16	700	3,070	10,097
Recoverable	12%	11	466	2,034	6,741

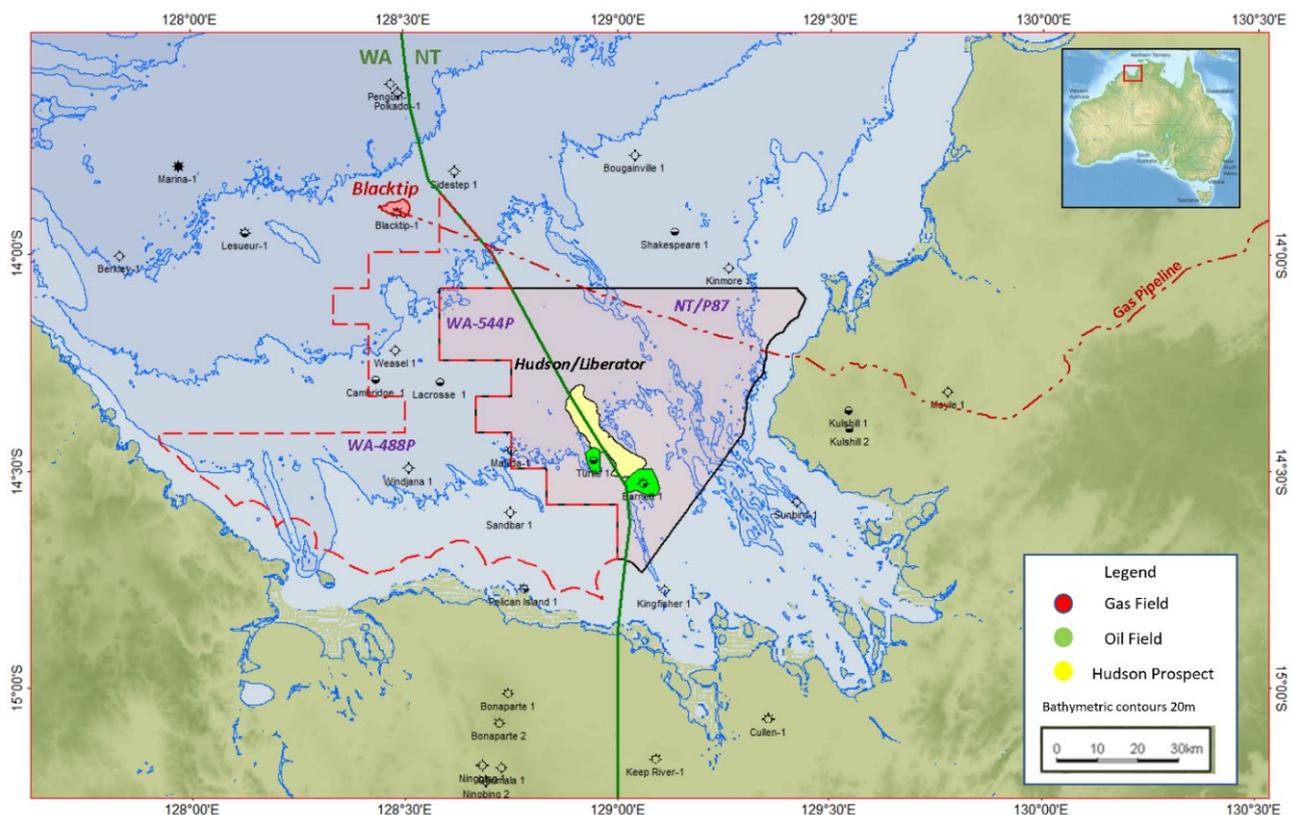


Figure 4 - Location of the Hudson Prospect in northern Australia

Melbana has commenced a process to farmout some of its 100% interest in the permit areas to fund the acquisition of a 3D seismic survey to further derisk the prospect.

⁵ geological chance of success

CORPORATE

During the quarter Melbana's executive team expanded when Dr. Chris McKeown joined as Chief Commercial Officer. Chris has held a range of executive roles including CEO and VP Business Development in projects in Europe, the Gulf of Mexico, Southeast Asia, New Zealand and Australia. Over his 26-year career, Chris has commercialised oil and gas assets, delivered new country entries and farmouts and generated over \$1 billion in corporate deal flow. He joins Melbana after a decade with New Zealand Oil & Gas (ASX: NZO).

Also during the quarter the Company changed its registry provider to Boardroom Pty. Limited.

Payments to related parties and their associates, totalling \$207 thousand as outlined in Section 6 of the accompanying Appendix 5B, related to payment of directors' fees.

The Company had total cash on hand of \$35.1 million as at 30 June 2023.

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

Mr Andrew Purcell
Executive Chairman

Ms Cate Friedlander
Company Secretary
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Ends -

APPENDIX A – TENEMENTS

INTERESTS HELD AT THE END OF THE QUARTER

TYPE	LOCATION	OWNER	INTEREST
PSC Block 9	Cuba	Melbana Energy Limited	30%
PSC Santa Cruz	Cuba	Melbana Energy Limited	100% ⁶
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 ⁷
PEL AC/P51	Australia	Vulcan Exploration Pty Limited, Rouge Rock Pty Limited	Cash, contingent on option exercise, then Royalty, contingent on exploration success ⁸
PEL AC/P70	Australia	Melbana Energy AC/P70 Pty Limited	100%

⁶ Award subject to receiving all regulatory approvals, some of which are outstanding

⁷ See ASX announcement dated 24 November 2021

⁸ See ASX announcement dated 7 May 2021

APPENDIX B – DISCLOSURES UNDER ASX LISTING RULE 5

ALAMEDA-2: UNIT 1A	
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)	No updated gross or net pay is being reported for Unit 1A in Alameda-2 as no wireline logs were run over this interval. In Alameda-1 a total of 3.1 metres of net pay was recorded from the available logs from an interval of 306 metres.
LR 5.30 (e)	Fractured limestone and interbedded chert
LR 5.30 (f)	Unit tested over a 63 metre interval from 445 mMD to 508 mMD
LR 5.30 (g)	An open hole test was undertaken and the cumulative flow period was 16 hours.
LR 5.30 (h)	Black dead oil was flowed to surface.
LR 5.30 (i)	The BSW was 26% (25% water and 1% sediment). No gas was encountered.
LR 5.30 (j)	Choke size varied from 32/64” to 8/64”. Flow rate was too small to measure at surface and 40 barrels of dead oil was recovered.
LR 5.30 (k)	No stimulation techniques have been used for this test.
LR 5.30 (l)	No gases were recovered in this test.
LR 5.30 (m)	Oil quality has been measured at 11.7° API at 60°F. Viscosity was 3783 cP at 50°C.

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
BOE	Barrels of oil equivalent
BSW	Basic sediment and water
Carbonate	Class of sedimentary rocks which mainly contains calcite, aragonite and dolomite.
COS	Geological chance of success
cP	Centipoise
M	Thousands
MM	Millions
mMD	Metres, Measured Depth
P10	the term used to describe the volume of hydrocarbons defined as having a better than 10% chance of occurrence.
P50	the term used to describe the volume of hydrocarbons defined as having a better than 50% chance of occurrence.
P90	the term used to describe the volume of hydrocarbons defined as having a better than 90% chance of occurrence.
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.
Stock Tank Oil	Volume of oil at nominal atmospheric storage pressure and temperature (as opposed to reservoir conditions).
STOOIP	Stock tank oil originally in place.
TVD	Trued vertical depth
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")

30 June 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	19
Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
1.2 (c) production	-	-
(d) staff costs*	(547)	(1,841)
(e) administration and corporate costs	(538)	(1,815)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	397	504
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	(150)	(625)
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	(40)	(54)
1.9 Net cash from/(used in) operating activities	(878)	(3,812)
<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	(12,388)	(43,613)
(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	-	(76)
2.4 Dividends received (see note 3)	-	-
2.5 Other (Contributions from JV Partner)	10,760	32,012
2.6 Net cash from/(used in) investing activities	(1,628)	(11,677)

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	-	15,808
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)	-	(42)
3.10 Net cash from/(used in) financing activities	-	15,766
4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of period	37,508	35,569
4.2 Net cash from/(used in) operating activities (item 1.9 above)	(878)	(3,812)
4.3 Net cash from/(used in) investing activities (item 2.6 above)	(1,628)	(11,677)
4.4 Net cash from/(used in) financing activities (item 3.10 above)	-	15,766
4.5 Effect of movement in exchange rates on cash held	122	(722)
4.6 Cash and cash equivalents at end of period	35,124	35,124
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	35,124	37,508
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)	35,124	37,508
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	207	
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 Director fees, salaries & superannuation expenses.</i>		
7. Financing facilities <i>Note: the item '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 - Outstanding Cash Calls from JV Partner	12,389	-
7.4 Total financing facilities	12,389	-
7.5 Unused financing facilities available at quarter end		12,389
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)	(878)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1 (d))	(12,388)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(13,266)
8.4	Cash and cash equivalents at quarter end (item 4.6)	35,124
8.5	Unused finance facilities available at quarter end (item 7.5)	12,389
8.6	Total available funding (item 8.4 + item 8.5)	47,513
8.7	Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	3.58
<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:	

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

- 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:

20 July 2023

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.