

COMPANY	Melbana Energy Limited (MEL)
CAPITALISATION	MCap \$94.4m Price \$0.028/share DATE: 15TH APRIL 2025 Valuation \$0.072/share (was \$0.075/sh)
EVENT / THEME	Alameda-2 well workover succeeds – now for Cuban oil flows & sales <i>Start of commercial phase. Drilling the next production well starts May</i>
AUTHOR	Lawrence Grech – Resource Analyst
Link to past PAC Research	Link to this report: RN_PAC_15Apr2025 Preparation for production: RR_MAY241207 Valuation revision report: RR_MAY_242806 Maiden Resource RR_MAY240326
KEY UPDATE	<ul style="list-style-type: none"> • Alameda-2 well workover delivers extra 66.7% to 488 bbl oil/day (bopd). MAY owns 30% of Cuban venture. <ul style="list-style-type: none"> ➢ <i>This compared to earlier attempt to commence flows from the most productive reservoir, Unit 1B.</i> • Alameda-2 Unit 1B is now a dedicated commercial well producing from shallow reservoir. <ul style="list-style-type: none"> ➢ <i>Production is trucked to a bunker to accumulate a saleable inventory for tanker export from nearby port.</i> ➢ <i>The 19°API oil while heavy has a favourably lower viscosity than most Cuban output.</i> ➢ <i>Product specifications and marketing are largely established based on ~10,000 bbl to date worth ~A\$1m.</i> <p><i>Forthcoming activities...</i></p> <ul style="list-style-type: none"> • Amistad-2 commercial development oil well is to start drilling late May 2025, with another well to follow <ul style="list-style-type: none"> ➢ <i>The Stage-1 2025 campaign is to have <u>three wells flowing by year's end</u>.</i> ➢ <i>Flow rates are yet to be determined. A possible ~1,000 bopd run rate equates A\$10m pa revenue to MAY.</i> ➢ <i>Approvals, well-pads already constructed and shallow depth means quick drilling and modest cost to enable quick payback.</i> • Australian offshore exploration licence areas could be source of additional excitement over 2025/26 <ul style="list-style-type: none"> ➢ <i>While timing uncertain – EOG's approved exploration drilling in WA-488-P Basin offshore Western Australia could see benefits for MAY as it retains contingent cash and royalty interest.</i> ➢ <i>MAY is actively seeking farmouts for its other exploration blocks all in proven petroleum provinces in North-west Australia. MAY's past keen technical work has yield hi-value farmouts/sale prices.</i>

Competitive advantage emerges from challenges

Key observation – MAY has a highly developed scientific approach for diagnosis and fast application of in-field solutions to dealing with problems such as wellbore damage, and how to handle complex carbonate reservoirs.

MAY leverages its internal exploration and production expertise with available talented and practical Cuban engineering as well as international expertise.

MAY's investigations revealed reasons for why a 1,235 bopd test flow after restart, saw only 293 bopd, as being fluid and chemical invasion damage from shut-in process. Combination of added perforations and staged acid treatments resulted in improvement, even without coiled tubing unit with nitrogen service that's normally used.

Preventative action for future producers – bodes well for higher-rate wells

Melbana's technical team reviewed cores and drilling fluid's role in reservoir damage. The result is Melbana Reservoir Drilling Fluid (RDF). Water-based, it reduces risk of clogging fractures while maintaining drilling safety.

Assets Gallery - Cuba

Amistad-1 labelled below, is the same well as "Alameda-2" which discovered oil in multiple portions of the Unit-1 reservoirs in the diagonal section of well bore.

Unit 1B was the most productive and completed for production at comparatively shallow depths of less than 1,100 metres.

Amistad-2 is due to start drilling late May 2025. It is an appraisal/development well designed to intersect various portions of Unit 1B carbonate reservoirs with an angled well.

A 3rd well will be similarly drilled in the DecH'2025 for production growth.

The Deeper Plays

The Alameda-1 and -3 wells also drilled to the much deeper lower Alameda and Marti Reservoir groups with encouraging oil shows.

Technical problems precluded conclusive flow tests of the economic significance of hundreds of metres of gross pay. This remains a big multi-hundred million bbl play but is also too expensive at this time to definitively prove its commercial potential.

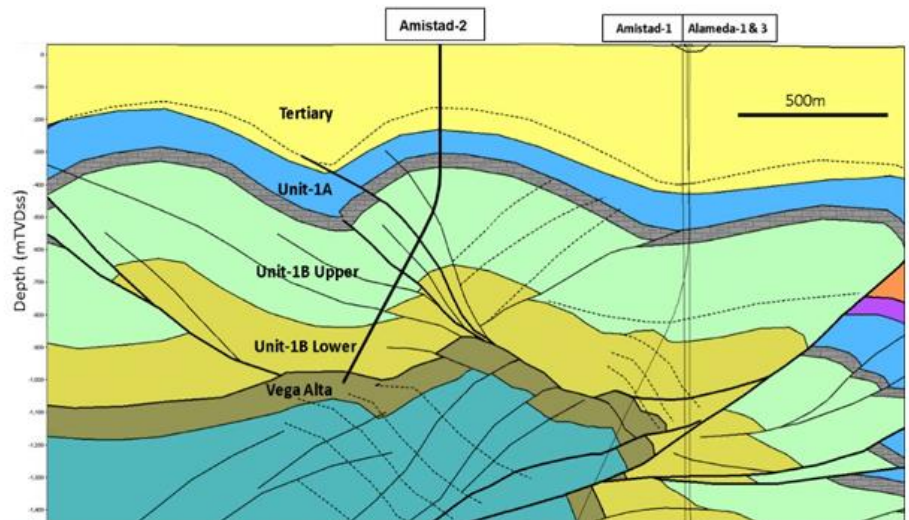


Figure 6 – Well trajectory of Amistad-2 up dip of Alameda-2 (referred to here as Amistad-1)

Trucking route of ~90km to bunkers and then loadout to export oil tankers



Approvals & facilities for trucking are now working



Figure 2 - Loading of Unit 1B crude oil to tanker at the Alameda-2 wellsite

Field plan and well-pad layout for Amistad formation commercial development

Drill pads approvals achieved and some constructed

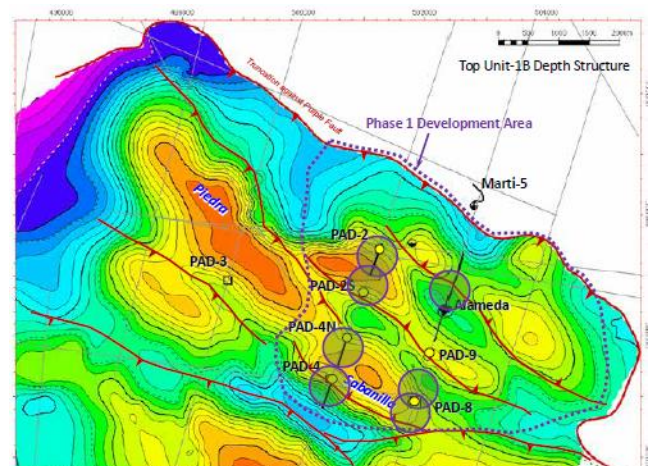


Figure 1 - Planned Unit 1B wells targeting 1C resource in eastern part of Alameda field

Resource Statement – for Amistad Unit 1B and 1A

Big in-place Resources in the Amistad Formation

The critical element for Reserves will be % of in-place Resource recoverable.

MAY's developing experience with producing from these carbonate reservoirs could see expanding Reserves over time as recovery factor improves with oil field practice.

Source: MAY Releases and McDaniels and Associates

Unrisked Resources Mar'24 + Jul'24 for Unit 1A				Low	Best	High	Chance of	Chance of
Amistad Unit 1B Resource				P90 % mm bbl	P50 % mm bbl	P10 % mm bbl	Discovery %	Development %
Favoured case								
Original Oil in Place - 100% Equity								
Amistad Unit 1B East - Develop't pending				130	331	909	100% = already Discovered	
Amistad Unit 1B West - Prospective				229	656	1,831	70% = likely to be discovered	
Amistad Unit 1A - Prospective				292	711	1,788	70% = likely to be discovered	
Unit 1B & 1A total				651	1,698	4,528	Big in-place resource at Unit 1B	
Recovery Factor of Oil in place				%	%	%		
Amistad Unit 1B East - Develop' pending				12.3%	13.9%	14.2%	Recovery factors well above 3 - 5%	
Amistad Unit 1B West - Propective				12.7%	13.7%	14.4%	Recovery factors well above 3 - 5%	
Amistad Unit 1A - Prospective				3.8%	4.5%	4.9%	Much lower recoveries assumed	
Unit 1B & 1A total				8.6%	9.9%	10.6%		
Unrisked Resources - 100% Equity								
Amistad Unit 1B East - Develop't pending				16	46	129	100.0%	80.0%
Amistad Unit 1B West - Prospective				29	90	264	70.0%	75.0%
Amistad Unit 1A - Prospective				11	32	88	70.0%	50.0%
Unit 1B & 1A total				56	168	481	Unit 1A heavy development risk.	
Risked Resources - 100% Equity							Adjusting for chance of	
Unit 1B - adjusted for Disc & Dev't chance				28	84	242	discovery <u>and</u> development	
Unrisked Resources - MAY Equity 30%								
Amistad Unit 1B East - Develop't pending				5	14	39	100.0%	80.0%
Amistad Unit 1B West - Prospective				9	27	79	70.0%	75.0%
Amistad Unit 1A - Prospective				3	10	26	70.0%	50.0%
Unit 1B & 1A total				17	50	144	Unrisked mil bbl net to MAY	

Risked Valuation – \$0.072/share

Our valuation is \$243m or \$0.072/share.

This is slightly down on our previous \$0.075/share risked valuation on financial estimates.

Further definition will be revealed with the MarQ 2025 report.

We have no specific recommendation at this stage.

Source: PAC Partners estimates

Melbana Energy Ltd		Equity Melbana	Resource P50 Best	Resource Best	Net of Risk Valuation	Valuation	Risk Valn Melbana	Riskd Valn/share
Price	\$0.028		Unrisked	Riskd				
Shares No	3,370	%	mm bbl	mm bbl	%	A\$/boe	A\$m	A\$/share
Volume Source: McDaniels Resource Update								
Amistad Unit 1B East - Develop't pendir		30.0%	14	11	80.0%	\$9.50	105	\$0.031
Amistad Unit 1B West - Prospective		30.0%	27	14	52.5%	\$9.50	135	\$0.040
Amistad Unit 1A - Prospective		0.0%	10	3	35.0%	\$3.80	13	\$0.004
Amistan Unit 1B & 1A total			50	29			252	\$0.075
Adjusted for Commercial and other risks				29	63.3%	\$5.59	160	\$0.047
Other Amistad FM		30.0%	0	0	0.0%	\$9.50	0	\$0.000
- awaiting McDaniel Resource Update								
Prospective Formations - Alameda-3 drilling ambiguous flow tests								
Alameda Formation - Prospective		30.0%	33	7	22.0%	\$9.50	68	\$0.020
Marti Formation - Prospective		30.0%	21	5	22.0%	\$9.50	44	\$0.013
Total Lower Formations			54	12			112	\$0.033
Adjusted for Commercial and other risks				12	66.7%	\$6.34	75	\$0.022
Total Alameda Field Valuation			104	40	26.1%	\$5.81	235	\$0.070
Acreage Valuation: 10% of base valuation							23	\$0.007
Cash @ 31 Dec 24							10	\$0.003
Other Net Current items @ 31 Dec24							-6	
Option and capital raised							0	
Mar Q expenditure est.							-4	
Net Financial Items incl.Future contract liabilities							0	\$0.000
Corporate costs NPV							-15	-\$0.005
Total Valuation							243	\$0.072

Australian assets – strategy of excitement with other companies' money

WA-488-P (Melbana contingent cash and royalty interest) – Bonaparte Basin offshore Western Australia

MAY sold its interest in permit WA-488-P in Nov 2021 to EOG Resources Australia. MAY is entitled to further payments from EOG Australia totalling USD5.0 million (subject to them making certain future elections with regards to the permit) and a **royalty of US\$10.0 million for each 25 million barrels** of oil equivalent in the event oil is produced from the permit area should the exploration well be a commercial success.

EOG has received all the approvals it needs to drill up to three wells, exploration and/or appraisal, into the Beehive structure within a defined activity area approximately 45 km² in size. The wells could be drilled at any time within a 5-year window under this EP, commencing no earlier than 1 January 2025 and to be completed no later than 31 December 2029. MAY has no exposure to any future costs associated with this permit.

WA-544-P and NT/P87 (Melbana 100%) – Bonaparte Basin offshore Western Australia/Northern Territory

The Company continued studies and seismic planning and consultation to investigate less invasive alternatives to seismic acquisition, which would require a variation to the existing Year 4 work commitment. The Company continued a process to identify potential farminee(s) to fund a forward work program.

WA-552-P (Melbana 100%) – Carnarvon Basin Western Australia

Sep 2024, MAY announced it been granted this permit under the Australian Government's 2022 Offshore Permits Exploration Acreage Release. Work commitments for the primary 3-year term comprise of desktop work only. Located offshore Western Australia in the Dampier Sub-basin of the Northern Carnarvon basin. WA-522-P contains several small oil discoveries but Melbana's concept for the block is a new deeper, carbonate play.

AC/P70 (Melbana 100%) – Ashmore & Cartier Islands, Australia

MAY this year released estimates of Contingent Resource of 276 Bcf and 34 MMbbls, plus Prospective Resource of 2,754 Bcf and 43 MMbbl (unrisked gross best estimate). This permit contains the undeveloped Vesta-1 oil discovery drilled in 2005. The Vesta-2 appraisal well drilled in 2007 identified a gas cap. This complex field is an opportunity with MAY's 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.

The Company intends to advance a farm-in process in the coming months.

Capital Structure

MAY's quarterly report is due in coming weeks. We will recalibrate cash position after recent workover activities and cash payments timing of joint venture partner, Sonangol. Our preliminary assessment is as follows:

Capital Structure Melbana Energy Ltd	Share Price \$0.028	Strike price Raise price A\$/unit	Units mil	Capitalis- ation A\$mil.	Capital Raised A\$mil.	In Money Securities =1
Ordinary shares	\$0.028		3,370.2	94.4		1
Performance Rights entitle \$0.12/sh.		\$0.000	37.6	0.0	0.000	0
Performance Rights entitle \$0.192/sh.		\$0.000	8.5	0.0	0.000	0
Total in-money securities			3,370.2	94.4	0.000	
Total Securities			3,416.2			
Cash @ 31 Dec 24				9.7		
Other Net Current items @ 31 Dec24				-5.9		
Option and capital raised				0.0		
Mar Q expenditure est.				-3.5		
Net Financial Items incl.Future contract liabilities				0.3		
Enterprise Value				94.0		

Source MAY announcements, PAC Partners estimate of MarQ spend.

Corporate profile

COMPANY BACKGROUND

Melbana Energy Limited (ASX – MAY) is an ASX-listed oil & gas explorer and developer in Cuba and Australia. It is graduating to commercial oil production in Cuba from the field it discovered onshore called Alameda.

Formerly known as MEO, Melbana has built-up and successfully traded a portfolio of assets in hydrocarbon rich basins. It has done this with technical excellence, value-adding and prudent risk-taking. More drilling, production testing and deal execution can add to valuation.

Key Risks of Investment

Melbana Energy has risks of early-stage oil & gas exploration/development companies, but are not limited to:

- Exploration and appraisal well operations are inherently risky as wells may experience operational problems as well as encounter unexpected results or failures to delineate commercial hydrocarbons.
- MAY's Block 9 asset has **complex geology**, that makes interpreting 2D seismic difficult. While MAY has made great strides in complimenting seismic with other predictive processes, there remains high exploration risk. *3D-seismic is being considered to aid well siting and resource/reserve estimation.*
- Risks also apply to laterally set appraisal wells, as reservoir quality can change markedly over short distances.
- MAY is moving from a pure exploration company to a combined production and explorer-developer company. This transition will at least initially requires funding. Despite best efforts and attractive assets, MAY could find difficulties in obtaining debt and equity funding to permit output expansion.
- While MAY have experienced timely licence and operations signoffs to date and positive engagement to date, there may be changes to or practical difficulties in obtaining regulatory permissions to moving to full field development.

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Recommendation Criteria

Investment View

PAC Partners Investment View is based on an absolute one-year total return equal to capital appreciation plus yield.

A Speculative recommendation is when a company has limited experience or early project stage from which to derive a fundamental investment view.

Speculative buy = We expect the stock's total return (nominal yield plus capital appreciation) to exceed 20% over 12 months. The investment may have strong capital appreciation but also has a high degree of risk and there is a significant risk of capital loss.

Speculative Buy	Buy	Hold	Sell
>20%	>20%	20% – 5%	<5%

Risk Rating

PAC Partners has a four tier Risk Rating System consisting of: Very High, High, Medium, and Low. The Risk Rating is a subjective rating based on: Management Track Record, Forecasting Risk, Industry Risk and Financial Risk including cash flow analysis.

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- The author of this report – **Lawrence Grech**.
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