

Alameda-1: Independent Resources Assessment (Upper Sheet)

Highlights

- Independent reserves expert McDaniel & Associates has made the following assessment of the three oil reservoirs encountered by the Alameda-1 well in the upper sheet¹ in the Block 9 Production Sharing Contract (Block 9 PSC) area, onshore Cuba:
 - 2.5 billion barrels of oil in place
 - a combined 119 million barrels² of Prospective Resource (100% share, unrisks mean estimate)*
 - 86% chance of geological success in at least one of the three zones
- Melbana has a 30% participating interest in Block 9 PSC
- Resource assessment is for the upper units of Alameda-1 only

* 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. 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.

Melbana Energy's Executive Chairman, Andrew Purcell, commented: *"This is the first independent assessment of the results obtained from the drilling of the Alameda-1 well and it confirms the significant potential of what we encountered in the upper sheet. Given that moveable oil was unexpected at these shallow depths, Block 9 now has the potential to provide quicker and cheaper access to significant volumes of oil independent of the deeper zones that were the primary objectives of this well. McDaniel's estimates of Prospective Resource have the potential to increase if the recovery rate they assumed is greater in practice (a possibility given the oil that has been encountered in Alameda-1 appears to be less heavy, under considerably more pressure than that found offshore and, given our well is onshore, more easily able to employ many different secondary recovery techniques and orient the drilling from any direction to exploit the existing fracture system). A separate assessment will be undertaken of the resource potential of the deeper primary objectives once the drilling and testing operations at Alameda-1 have been completed."*

¹ See ASX announcement dated 5 October 2021

² Assuming a typical recovery rate for Cuban heavy oil of 4.8 - 5%

SYDNEY, AUSTRALIA (14 MARCH 2022)

Melbana Energy Limited (ASX: MAY) (**Melbana**) is pleased to report the following results of the independent assessment done by McDaniel & Associates of the three oil bearing units (now collectively referred to as “Amistad”) encountered in the upper thrust sheet whilst drilling the Alameda-1 exploration well.

The drilling of Alameda-1 has provided valuable additional data that has enhanced the understanding of the resource potential of Block 9. Subsurface analysis conducted to date, integrating these data with the re-interpretation of relevant existing data, has focussed on the shallowest zone of interest. All existing seismic data has been re-examined in deriving an integrated structural model, mapping important detachments/seal horizons and faults which separate the recognized structural sheets.

As a result of these works, it has been decided to rename the three zones encountered whilst drilling Alameda-1 to the following:

- Amistad (formerly the Upper Sheet zone);
- Alameda (formerly the N Sheet Duplex); and,
- Marti (formerly the I Sheet Duplex).

The seismic profile shown in Figure 1 was prepared to describe the volumetrics and structural geometries of the relevant sheets and to define the separate units.

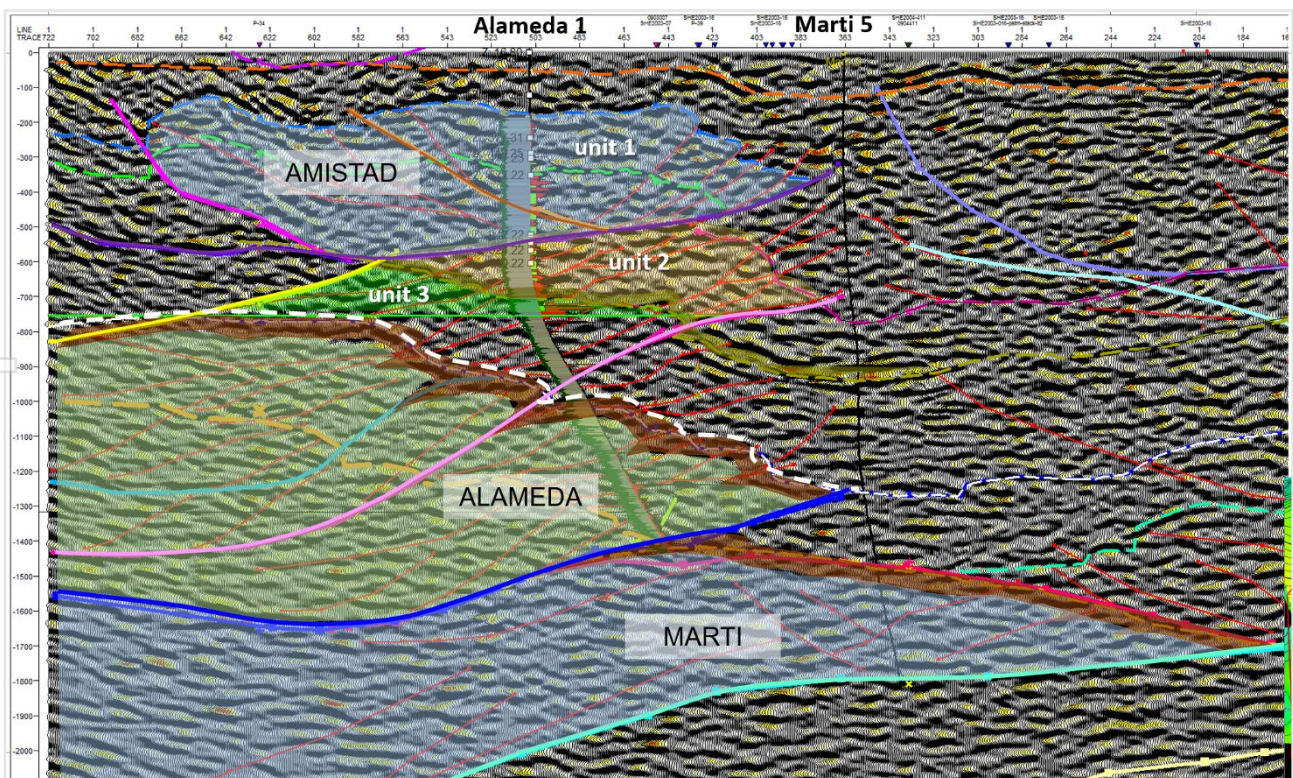


Figure 1 – Updated interpretation of the subsurface at Alameda-1

The following table summarises the findings of McDaniel & Associates of the crude oil prospective resource of the upper sheet units of Alameda-1.

Zone	COS ¹	Gross (100%) Unrisked Prospective Resources (MMbbl) ²			
		Low (1U)	Best (2U)	Mean	High (3U)
Amistad Unit 1a & 1b	43%	10	30	41	83
Amistad Unit 2	43%	11	32	44	86
Amistad Unit 3	56%	9	26	34	72
Total Upper Units		30	88	119	240

Zone	COS	Melbana's Working Interest (30%) ³ Unrisked Prospective Resources (MMbbl) ²			
		Low (1U)	Best (2U)	Mean	High (3U)
Amistad Unit 1a & 1b	43%	3	9	12	25
Amistad Unit 2	43%	3	10	13	26
Amistad Unit 3	56%	3	8	10	22
Total Upper Units		9	27	35	73

McDaniels consider the three Units to be independent from a geological risk perspective and have estimated an 86% chance of geological success of at least one occurrence in the three units.

Notes:

¹ COS = Chance of Success. The Prospective Resources have not been adjusted for the chance of development (COD), which is estimated by McDaniel to be 70%. Quantifying the COD requires consideration of both economic contingencies and other contingencies such as legal, market access, political, social licence, internal and external approvals and commitment to project finance and development timing. As many of these factors are as yet unknown they must be used with caution.

² The numbers quoted here are defined as Prospective Resources which are the same category of estimates of yet-to-be-drilled volumes in exploration prospects. In this case oil and gas shows and flows have actually been encountered and confirmed by electric logging, so Melbana believes that these numbers deserve a different category. However, industry and ASX guidelines stipulate that they be categorised as Prospective Resources so Melbana will continue to use that category - however observers should be aware of this anomaly.

³ Net working interest Prospective Resources are based on Melbana's 30% working interest. Net entitlement Prospective Resources are the net working interest Prospective Resources less royalties payable to others. These royalties are determined by the Block 9 Production Sharing Contract (PSC) and are dependent on a number of factors such as commodity prices, development costs and operating costs and as such cannot be reliably determined at this stage.

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

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McDaniel' methodology for determining Prospective Resources for Upper Amistad Units in Amistad-1

All the prospective resources assigned as part of this assessment have been estimated probabilistically as this is the most appropriate method given the high degree of uncertainty in the various input parameters. In the case of Block 9 in Cuba, there is a fair bit of uncertainty in the structural mapping but it is our opinion that Melbana has conducted a reasonable interpretation with the geological and geophysical data available. Distributions of the various reservoir and fluid parameters were determined based on parameters from Alameda-1 well, McDaniel's experience of other fields in the area or general worldwide data and probabilistic calculations of the unrisks oil-in-place (OIIP) and recoverable resources were prepared for each prospect.

The prospects were risked using five parameters: source, migration, reservoir, structure (or trap) and seal.

Contingent and Prospective Resources: Unless otherwise specified, the information that relates to Contingent Resources and Prospective Resources for Melbana is based on, and fairly represents, information and supporting documentation compiled by Mr. Peter Stickland, who is a Director of the company and has more than 30 years of relevant experience. Mr. Stickland is a member of the European Association of Geoscientists & Engineers and the Petroleum and Exploration Society of Australia. Mr. Stickland consents to the publication of the resource assessments contained herein. The Contingent Resource and Prospective Resource estimates are consistent with the definitions of hydrocarbon resources that appear in the Listing Rules. Conversion factors: 6 Bscf gas equals 1 MMboe; 1 bbl condensate equals 1 boe; "MMstb" means million stock tank barrels of oil.