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# **Quarterly Activities Summary for Period Ended 30 June 2017**

## **Highlights:**

#### Cuba - Block 9 PSC

- 2018 drill program for up to 2 wells progressed during the quarter with a Cuban engineering firm engaged to conduct studies and to manage regulatory permitting process
- Alameda-1 alone presents an opportunity to drill three objectives with combined exploration potential of 2.5 billion barrels Oil-in-Place and 130 million barrels of recoverable oil (Best Estimate, 100% basis)\*
- Farmout process for Block 9 PSC commenced

#### New Zealand - PEP51153

- Operator advises drilling of the high impact Pukatea prospect anticipated to commence early 2018 with rig secured and site upgrades underway
- Pukatea-1 well is required to be drilled prior to 23 February 2018
- As Melbana becomes increasingly focused on Cuba, it is considering opportunities to reduce its funding requirements while maintaining exposure to the highly prospective Pukatea-1 well

#### MELBOURNE, AUSTRALIA (31 July 2017)

Melbana Energy Limited (ASX: **MAY**) ("**Melbana**" or the "**Company**") provides the following summary in relation to its activities during the quarter ended 30 June 2017.

#### Overview

The June quarter has seen Melbana continue to focus its activities on the world-class Cuban asset, Block 9 PSC (Block 9) which the Company estimates to have exploration potential of 12.5 billion barrels of Oil-in-Place with a Prospective (Recoverable) Resource of 637 million barrels (Best Estimate, 100% basis)\*.

Melbana continues to progress planning for a drilling campaign in Block 9 and aims to drill up to two wells, Alameda-1 and Zapato-1, to commence mid 2018.

<sup>\*</sup>Refer to Cautionary Statement in this report (page 4) relating to estimates of Prospective Resources.



Drilling preparations for Pukatea-1 in New Zealand's onshore Taranaki Basin advanced considerably with the Joint Venture Operator securing a rig via a Letter of Intent and starting site works ahead of the anticipated commencement of drilling in early 2018. The Pukatea prospect is a high impact exploration opportunity, targeting a highly productive conventional reservoir. It is proximal to existing infrastructure and has a number of low cost alternative development paths. However, as Melbana becomes increasingly focused on Cuba it is considering opportunities to reduce its funding requirement for Pukatea-1 while maintaining exposure to the highly prospective Pukatea-1 well.

The Company's Australian projects continued to advance with the reprocessing of 330km of 2D seismic data from WA-488-P in Western Australia's Bonaparte Gulf and progressing farmout discussions. Following the completion of 3D seismic data reprocessing from AC/P50 and AC/P51 in the Ashmore Cartier region of the Timor Sea work begun on the reinterpretation of the permits prospectivity. Subsequent to the end of the quarter Rouge Rock Pty Ltd exercised its options to acquire a 45% participating interest in AC/P50 and AC/P51, which it had earned by undertaking reprocessing work indicitavely valued at \$1.15 million.

### Commenting on the Quarter's activities Melbana Energy's CEO and MD Peter Stickland said:

"With a world-class exploration opportunity identified in Block 9, Melbana is becoming increasingly focused on Cuba. We are progressing towards drilling activity in Cuba, with engineering, procurement and permitting processes underway and drilling targeted to commence mid 2018. The focus on Cuba is leading Melbana to reconsider the best way forward with the other quality assets in its portfolio. As such Melbana is considering all alternatives for its highly prospective permits in Australia and New Zealand that would enable the Company the flexibility to focus more on Cuba while retaining exposure to the upside of its non-Cuban projects for Melbana's shareholders.

Melbana looks forward to keeping the market informed as it progresses Cuba and its other projects."

Peter Stickland

**Managing Director and Chief Executive Officer** 

Attachments: Activity Summaries by Project Area

\*Refer to Cautionary Statement in this report (page 4) relating to estimates of Prospective Resources

Contingent and Prospective Resources: The information in this presentation that relates to Contingent Resources and Prospective Resources for Melbana is based on, and fairly represents, information and supporting documentation compiled by Peter Stickland, the Managing Director and Chief Executive Officer of Melbana. Mr Stickland B.Sc (Hons) has over 25 years of relevant experience, is a member of the European Association of Geoscientists & Engineers and the Petroleum and Exploration Society of Australia, and 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



# **Cuba**

As an early mover into Cuba, Melbana is now one of the few western companies (and the only ASX listed company) with a footprint in the expanding Cuban hydrocarbon sector. The geology of the block has analogies to petroleum systems in which Melbana's technical personnel have significant experience, and Melbana sees substantial potential in Cuba overall and Block 9 in particular.

During the quarter, Melbana conducted a site visit to the surface locations of the two highest priority prospects, Alameda and Zapato, and engaged a Cuban engineering consulting firm to undertake some aspects of well design and manage the regulatory permitting process for drilling, incorporating operating and environmental licences as well as civil approvals. Melbana also commenced a farmout process during the quarter.

The Block 9 exploration period is split into four sub-periods with withdrawal options at the end of each sub-period. Subsequent to the end of the quarter Melbana received confirmation of regulatory approval to amend the Block 9 exploration work program, deferring the obligation to undertake a 200km 2D seismic survey in the second exploration sub-period starting November 2017 to the third sub-period starting November 2019 and accelerating the obligation to drill an exploration well from the third sub-period to the second. The amendment was requested to better align the work program to Melbana's goal of drilling up to two exploration wells in Block 9.

Melbana has identified Block 9 as one of the world's most exciting exploration plays with exploration potential for approximately 12.5 billion barrels of Oil-in-Place with a Prospective (Recoverable) Resource of 637 million barrels (Best Estimate, 100% basis)\* of potentially high quality oil. The prospectivity assessment also identified 19 individual prospects and leads which the Company has been prioritising so as to focus on the highest impact, lowest risk drill opportunities.

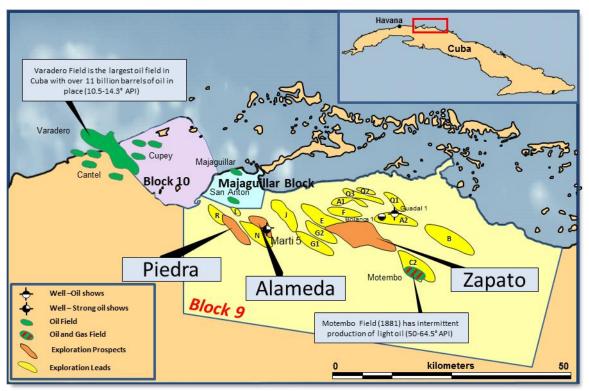


Figure 1. Block 9 with high graded drilling targets

<sup>\*</sup>Refer to Cautionary Statement in this report (page 4) relating to estimates of Prospective Resources



### Alameda-1 - High Priority Exploration Opportunity

The highest ranked exploration drilling opportunity is the proposed Alameda-1 well which will test a combined exploration potential of over 2.5 billion barrels Oil-in-Place and 130 million barrels of recoverable oil on a 100% unrisked, Best Estimate basis\* and over 400 million recoverable barrels aggregate high side potential (Table 1 and Table 2). This exploration well has been designed as a mildly deviated well, with a total measured depth of 4,000m (Figure 2) to enable the well to penetrate three independent exploration objectives; the primary Alameda objective as well as the shallower N and U1 objectives.

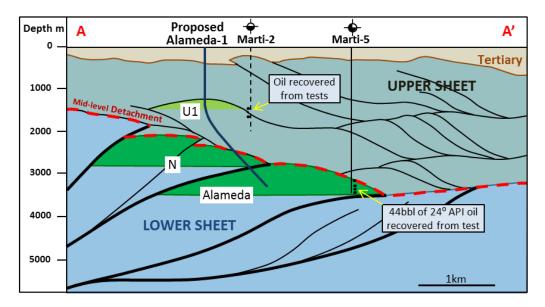


Figure 2. Schematic cross section for proposed Alameda-1 well

The U1 objective is a structure indicated on seismic as being updip of the tested oil recoveries in the Marti-2 well. While characterised as an exploration well, the chance of success at Alameda-1 benefits from two old wells, Marti-2 and Marti-5, both of which recovered oil from the objectives targeted in Alameda-1. Alameda-1 would take approximately 80 days to drill based on historical information.

Objective	Chance of Success	Oil-in-Place (MMstb)													
	%	Low	Best	High	mean										
U1	17%	40	503	1,851	759										
N	22%	75	818	2,580	1,114										
Alameda	32%	62	1,293	4,278	1,829										

Table 1: Exploration Oil-in-Place estimates for objectives of proposed Alameda-1 well

\*Prospective Resources Cautionary Statement: The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate 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.



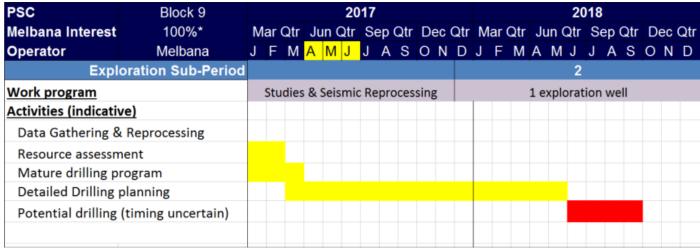
Objective	Chance of Success	Recoverable Prospective Resource (MMstb)											
% Low	Best	High	mean										
U1	17%	2	25	93	38								
N	22%	4	41	129	56								
Alameda	32%	3	65	214	91								

Table 2: Exploration Prospective Recoverable Resource estimates for objectives of proposed Alameda-1 well

Melbana's focus is on detailed planning for a drilling campaign in Block 9. The Company's aim is to drill up to two wells in Block 9 commencing mid 2018. Based on a range of potential drill targets, a two well campaign would cost in the range of US\$10-30 million, and ongoing subsurface studies may yield further high quality, attractive drilling objectives. Melbana has commenced farmout activities for Block 9, with a data room opened in its Melbourne office.

The key focus for the Company during the coming months will be:

- Continuing farmout activities
- Ongoing detailed analysis of the current high priority drilling targets
- Preparation of detailed well design and drilling plans
- Seeking Cuban regulatory approvals required for drilling in 2018
- Identification of long lead procurement and contracting actions for planned drill program
- Detailed contractor evaluation and selection in preparation for field contract commitments



<sup>\*</sup> Subject to a conditional 40% option to be exercised no later than 2 September 2017 held by Petro Australis Limited.

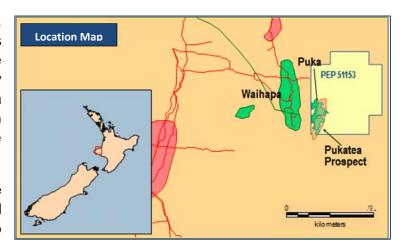


# **New Zealand: Taranaki Basin**

## PEP51153 (Melbana 30%, TAG 70% & Operator)

The PEP51153 Joint Venture (Melbana 30%, Tag Oil (TSX: TAO) 70% and Operator) has approved plans to drill Pukatea-1, with the Operator advising that drilling is currently planned to commence early 2018. The Pukatea prospect is a high impact exploration opportunity, targeting the highly productive conventional Tikorangi Limestone reservoir.

During the quarter the PEP51153 Joint Venture secured a local rig to drill Pukatea-1 and commenced site civil and construction works to upgrade the existing drill pad.



Melbana believes the regional setting provides solid indicators of Pukatea's potential prospectivity. The uplift in Prospective Resources is based on the Operator's analysis of Pukatea and the adjacent Waihapa field (~3km from Pukatea), which is an important analogue having produced in excess of 23MMboe with initial well rates of ~5,000bpd. The Pukatea prospect is located updip and above the lowest known oil in the Waihapa field. The Douglas well drilled in 2012 at the edge of the Pukatea prospect encountered oil shows and 145m of reservoir interval, implying over 350m of updip potential at the Pukatea location. Furthermore, PEP51153 also contains the shallower Puka oil accumulation, which was discovered in 2012 and has previously produced from two wells under extended production test at 100bpd, but is currently shut-in.

Prospective Resource Summary for Pukatea is set out in the table below:

100% MMboe*	COS**	Low	Best	Mean	High	
Pukatea -100%	19%	1.3	12.4	17.1	40	

<sup>\*</sup> Prospective Resources Cautionary Statement: The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate 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.

The Pukatea prospect is proximal to existing infrastructure and has a number of low cost alternative development paths. The Pukatea-1 well is planned to be drilled from the existing Puka production pad where three wells have previously been drilled. TAG operates the nearby Cheal production complex, ~5km from the Pukatea prospect location and according to latest publicly available data released by the operator, produces at approximately 1,000boepd.

<sup>\*\*</sup> COS means "Chance of Success"



Melbana believes oil and gas economics in the Taranaki Basin can be robust in the current price environment. TAG recently reported an independent expert valued TAG's 2P Reserves in nearby fields at ~A\$20/barrel on an NPV10 basis\*.

The minimum work program for PEP51153 is as follows:

Period	Work Commitment
No later than 23 February 2018	Drill one well to a location and depth agreed between the permit holder and the Chief Executive;

PEP51153 currently expires on 23 September 2018.

Permit	PEP 51153		2017												20	18					
Melbana Interest	30%	M	ar	Qtr	Ju	ı Qtı	r S	ер	Qtr	De	ec (	Qtr	Ma	ar C	Qtr	Jı	un C	Qtr	Se	ер (	Qtr
Operator	TAG Oil	J	F	М	Α	M J	J	Α	S	0	N	D	J	F	М	Α	М	J	J	Α	S
	Permit Year					9									1	10					
Work program								1	l we	ell											
Activities (indicati	ve)	Г																			
Drilling preparati	ons																				
Drill Well Pukate	a-1																				
Testing (success	case)																				

<sup>\*</sup>TAG Oil media release 20 June 2017



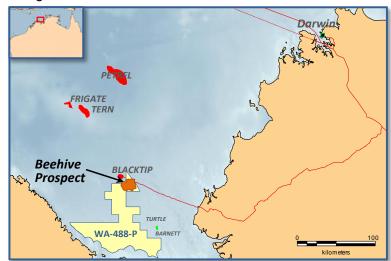
## **Australia**

## Bonaparte Gulf: Petrel sub-Basin: WA-488-P (Melbana 100%)

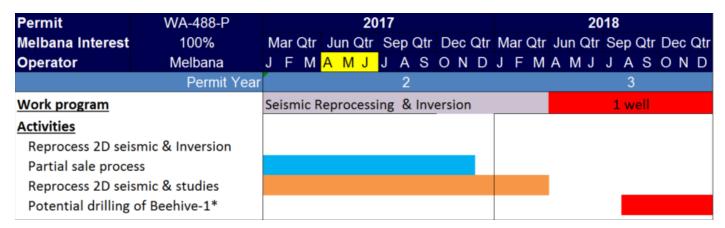
WA-488-P is located in the southern Bonaparte Gulf and covers an area of 4,105km<sup>2</sup>. The permit was awarded to Melbana in May 2012 as part of the acreage Gazettal Round.

Leveraging the 2011 Ungani-1 oil discovery in Carboniferous aged reservoirs in the nearby Canning Basin, Melbana has identified the giant Beehive prospect, a new play type within the Bonaparte Basin.

During the quarter work continued on the project to reprocess a further 330km of 2D seismic data which will be followed by a stratigraphic interpretation study and an analogue field study. Initial results of reprocessing activities were reviewed and are encouraging.



A formal farmout process continued during the quarter and discussions were progressed with potential farminees. The potential drilling of the Beehive prospect and any other material cost associated with field activity within WA-488-P is subject to a successful farmout.





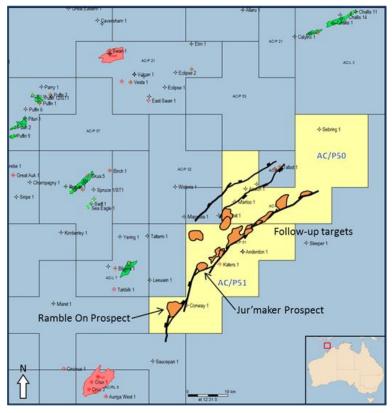
# Ashmore Cartier Region, Timor Sea: Vulcan Sub-Basin

## AC/P50 and AC/P51 (Melbana 55%\*)

AC/P51 contains the Ramble On prospect, a new play type that has proven analogues in other Basins. This prospect is on trend with the recently reported West-1 (Auriga) discovery near Crux gas/condensate field, resulting in renewed industry interest in the region.

Previously, Melbana had announced that it had executed an agreement with Rouge Rock which granted them an option to acquire a 45% interest in the AC/P50 and AC/P51 Exploration Permits. In exchange for the grant of the option, Rouge Rock agreed to undertake and fund the remaining primary statutory work program for each permit consisting of seismic reprocessing and other technical activities ("Reprocessing Work").

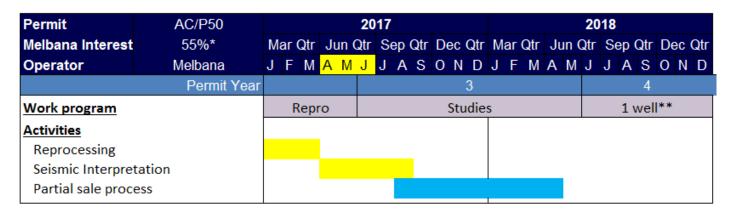
During the quarter 3D seismic Reprocessing Work was completed, significantly improving the data quality. Interpretation can now commence on the newly improved seismic data.

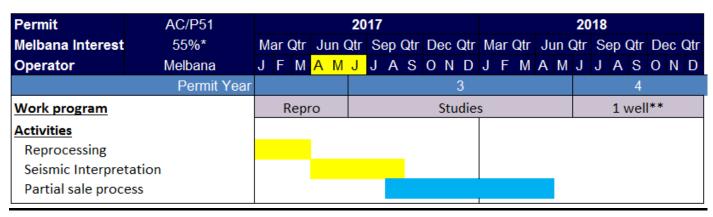


Subsequent to the end of the quarter Rouge Rock formally notified Melbana of the exercise of its options to acquire a forty five percent (45%) participating interest in the AC/P50 and AC/P51 exploration permits. The indicative value of the reprocessing work undertaken by Rouge Rock is approximately \$1.15 million. The exercise of the options by Rouge Rock is a demonstration of the prospectivity in AC/P50 and AC/P51.

\*Both permits are subject to an option to acquire a 5% interest currently held by Far Cape Energy Pte Ltd ("Far Cape"). Under this option agreement, Melbana will carry Far Cape's participating interest in the first well should Melbana elect to drill a well in either permit.







<sup>\*</sup>Subject to option granted for 5% participating interest for both permits

<sup>\*\*</sup> Continuation into the 4th Permit Year is discretionary



# **Tassie Shoal Gas Processing Projects**

## (Melbana 100%)

Industry is expected to seek opportunities to collaborate to secure lowest cost and efficient resource development in Australia, especially as titleholders with stranded discoveries are under resource tenure pressure. The unique concept of the Tassie Shoal Projects represents an opportunity for collaboration with Melbana to develop a commercialisation path for the significant, discovered but undeveloped resources in the region, for the benefit of all stakeholders.

Subsequent to the quarter it was reported by ConocoPhillips that the Barossa gas field is proposed to be developed as feedstock to the Darwin LNG facility from 2023\*. This leaves the Evans Shoal Gas field (~28% CO<sub>2</sub>) without a publically stated development path. The Tassie Shoal LNG and/or Methanol Projects remain as potential development paths for stranded Evans Shoal gas.



