

## WA-488-P Beehive Option Period Commences

### Highlights:

- Final processed 3D seismic survey data received and accepted by Total, Santos and Melbana
- Total and Santos now have 6 months to exercise option to farm-in and drill the first exploration well which is planned to be the Beehive-1 exploration well
- If option exercised, Melbana (20%) fully carried through drilling
- Total and Santos have accelerated commencement of drilling planning work into the first quarter of this year, providing potential for drilling of Beehive-1 well in 2H 2020 in the event option is exercised
- Beehive assessed by Independent Expert McDaniel & Associates to contain a best estimate prospective resource of 388 million barrels of oil equivalent (Melbana's share 78 million barrels of oil equivalent)<sup>1,2</sup>

MELBOURNE, AUSTRALIA (3 April 2019)

Melbana Energy Limited ('**Melbana**') (ASX: **MAY**) is pleased to advise that the final processed data from the Beehive 3D Seismic Survey undertaken during August 2018 has been received from the processing contractor, quality checked and accepted as the Final Data Set by Total, Santos and Melbana.

From a contractual perspective, the acceptance of the processed survey data as the Final Data Set has triggered the contractual commencement of a six month "option period" whereby Total and Santos each have an option, exercisable together or individually, to acquire a direct 80% participating interest in the permit and drill an exploration well, which is planned to be the Beehive-1 exploration well. If the option is exercised, Melbana will be fully carried on all costs incurred from the time the option is exercised until 90 days after the rig is released after drilling this well.

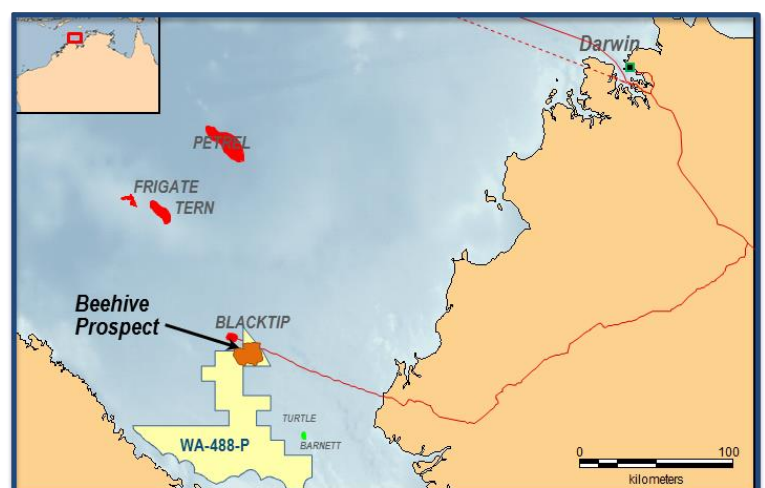


Figure 1 – Beehive Location

The option to farm-in and drill the first exploration well is exercisable at any time by Total and/or Santos, but no later than six months from the date when the Final Data Set was delivered.

If the option is exercised, drilling is anticipated in the second half of 2020, with Melbana estimating the cost of the Beehive-1 exploration well to be within the US\$40-\$60 million range.

**Melbana Energy's CEO, Robert Zammit, said:**

*"The triggering of the contractual six month option period is a milestone in Melbana's commercial arrangement with Total and Santos for Beehive, which is the largest undrilled hydrocarbon prospect in Australia. Under the agreement reached with Total and Santos in December 2018, commencement of drilling planning work has been accelerated into the first quarter of this year and is progressing, including drafting of an environment plan, well concept identification and commencement of rig selection to ensure readiness for drilling in the second half of 2020 in the event the option is exercised by Total and/or Santos."*

<sup>1</sup> Independent Expert McDaniel & Associates Competent Persons Report 30 June 2018

<sup>2</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.

## **WA-488-P Background**

### **Commercial**

Total and Santos have an option (exercisable together or individually) to acquire a direct 80% participating interest in the permit in return for fully funding the costs of the first exploration well in the permit along with any other costs incurred by the Joint Venture from the time of exercise of the option until 90 days after release of the drilling rig from this well. The option is exercisable by either Total or Santos at any time but no later than 6 months\* from the acceptance of the final processed seismic survey data. This data has now been received by Total and Santos, starting the 6 month window.

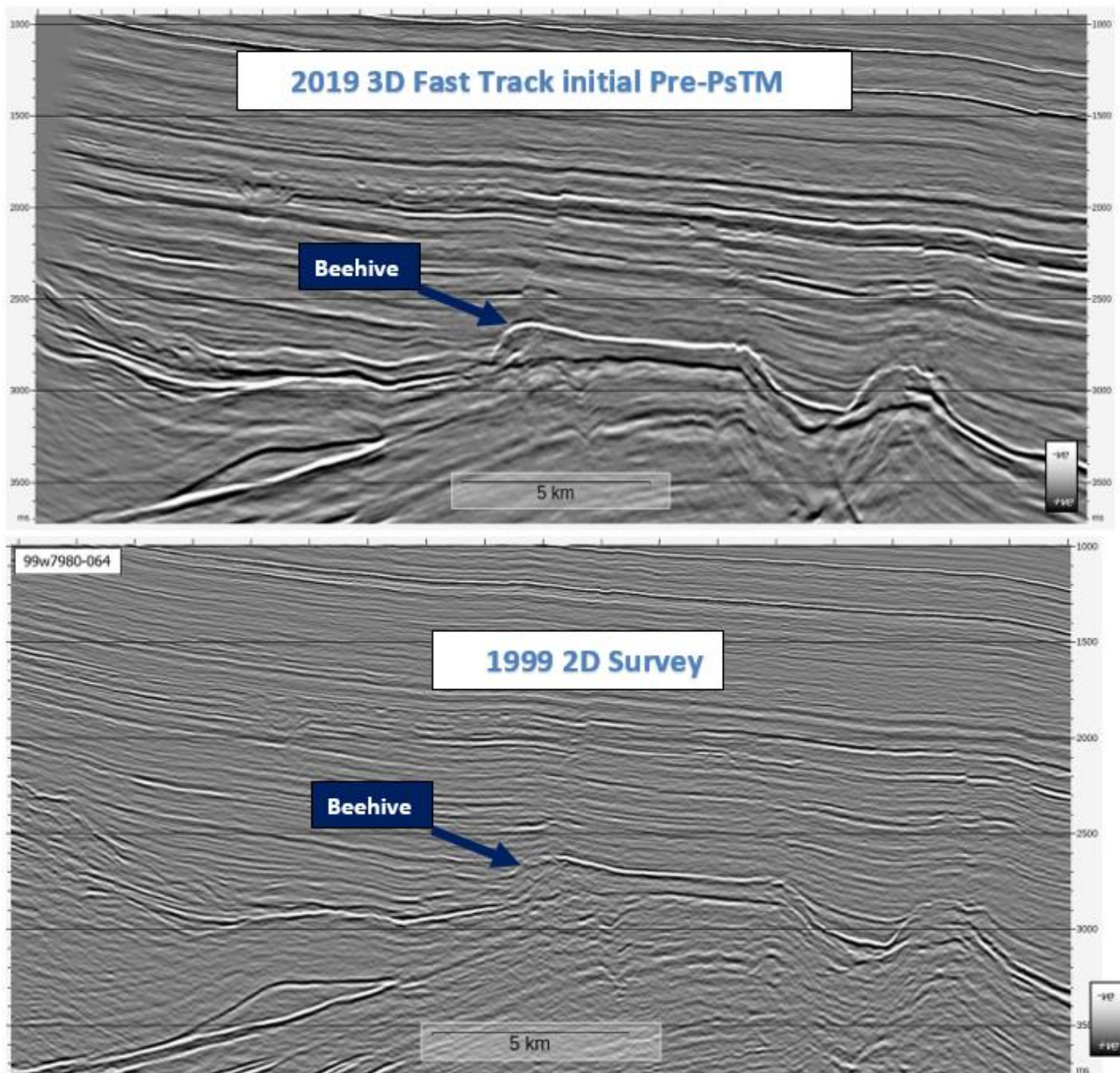
Beehive is located close to several existing facilities including Ichthys project and Blacktip field and pipeline offering several options for future gas monetization. In the event of a commercial discovery, Melbana will repay carried funding from its share of cash flow from the Beehive field. Melbana will have no re-payment obligations for such carried funding in the event there is no commercial discovery and development in WA-488-P.

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\* Santos & Total each have an option to acquire a 40% working interest, which must be exercised within 6 months of the commencement of the option period. In the event that only one party exercises its option, this party will be granted a new option to acquire an 80% interest, exercisable up to 7 months after the commencement of the original option period

## Seismic Survey and Processing

The Beehive 3D Seismic Survey was recently acquired by Polarcus using their vessel Polarcus Naila and consisted of the acquisition of approximately 700km<sup>2</sup> of seismic data over the Beehive Prospect and Egret lead in the Joseph Bonaparte Gulf, 225 km southwest of Darwin. The Beehive 3D Seismic Survey was operated by Australian gas company Santos pursuant to an Operations Services Agreement and was fully funded by French major Total and Santos. The acquisition of the 3D seismic survey provides potential for further de-risking of the Beehive prospect and will facilitate consideration of a preferred location for the Beehive-1 exploration well. Seismic processing is an important computer algorithm based activity which results in the iteration of seismic data to suppress noise, enhance signal and migrate seismic events to the appropriate location in space. Processing steps typically include analysis of velocities and frequencies, static corrections, stacking, and migration. All of these steps are required in order to interpret the geological structure of the subsurface. The 3D seismic survey is of excellent quality and shows a significant improvement in data quality and definition of the lateral edges of the large Beehive carbonate reef structure.

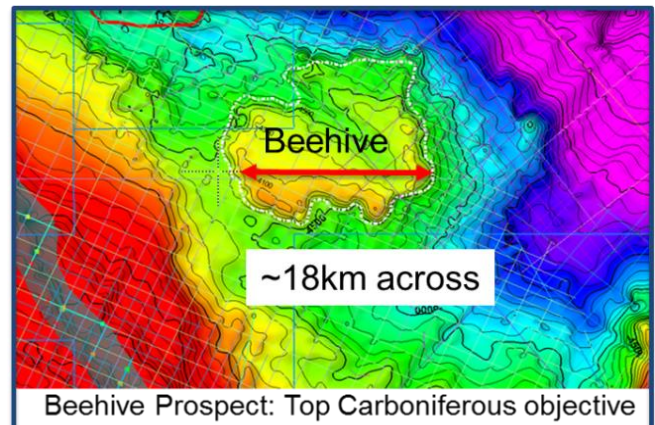


*Improved clarity - 3D Seismic Survey imaging vs 1999 2D Seismic Survey imaging*

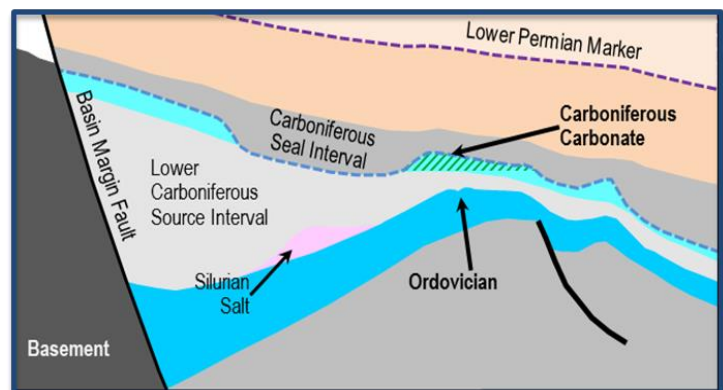


## Technical

The Beehive prospect is a Carboniferous age 180km<sup>2</sup> isolated carbonate build up with 400m of mapped vertical relief, analogous to the giant Tengiz field in the Caspian Basin. It is located in 40m water depth suitable for a jack up rig, within ~75km of shore and developable by either FPSO or pipeline to existing infrastructure. This play type is new and undrilled in the Bonaparte Basin with no wells having been drilled to this depth in the basin.



The carbonate reservoir is also interpreted to be the same age as the 2011 Ungani-1 oil discovery in the Canning basin, which tested at 1,600 bopd demonstrating a high quality reservoir. Beehive is a much larger build up than Ungani and has excellent access to the Lower Carboniferous source rock in adjacent depocentres.



Potentially the largest undrilled hydrocarbon prospect in Australia, the Beehive prospect was recently assessed by Independent Expert McDaniel & Associates as having significant prospective resources as outlined in the following table:

Table 1 - Exploration Prospective Recoverable Resource estimates for Beehive

Objective	Chance of Success	Recoverable Prospective Resource (MMboe) <sup>1,2</sup>			
		Low	Best	High	Mean
Beehive	20%	91	388	1,645	704

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