# Australia – Bonaparte Gulf: WA-488-P



Beehive – largest undrilled prospect in Australia WA-488-P is located in the Petrel subbasin between ENI's producing Blacktip gas field and the undeveloped Turtle and Barnett oil discoveries. It has an area of 4,074 km<sup>2</sup> and lies in relatively shallow water (40 metres).

Melbana originally defined the potentially giant Beehive prospect from a tight grid of high quality 2D seismic data. A 3D seismic survey, fully funded by French supermajor Total and Australia's Santos, was completed in August 2018.



first exploration well in WA-488-P in return for receiving an 80% participating interest in the permit. The conditions to be satisfied were Santos concluding a farmdown of its right to an 80% participating interest by 4 March 2020 then, subsequently, securing an extension to the current permit year (to align with rig availability). Santos advised it was unable to satisfy the first of these conditions by the deadline so an unencumbered 100% interest in WA-488-P has reverted to Melbana.

Australia

**Beehive** 

Prospect

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Melbana subsequently applied for and received a one-year extension to the current permit year and is currently updating its volumetric analysis of Beehive using the high-quality data received from the 3D seismic survey. Work on rig selection and an application for an environmental permit has begun.

Potentially the largest undrilled hydrocarbon prospect in Australia, Melbana is seeking a partner interested in using the considerable work that has gone into the assessment of this prospect and the planning of a well to fund the drilling of this new and exciting play type in Australian waters.

The Beehive prospect is characterized by independent expert McDaniel & Associates as having significant prospective resources as outlined in the following table:

Chance **Prospective Resource**<sup>1</sup> of Objective **Success** Low High Mean Type Best Beehive Gas (BCF) 134 534 2,199 936 Oil (MMbbl) 69 299 1,279 548 TOTAL 20% 91 388 1,645 704 (MMboe)

#### **Prospective Resources**<sup>1</sup>

<sup>1</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. Prospective resources have been estimated using the Probabilistic Method. All quoted volumes taken from Independent Expert McDaniel & Associates Competent Persons Report 30 June 2018. Gas to Oil Factor: based on Mcf to BOE energy equivalence conversion of 6 to 1.

Independent Expert McDaniel & Associates estimates Prospective Resource of up to <u>1.6 billion</u> barrels of oil

## **Beehive Technical Overview**

Multi-billion barrel Tengiz analog



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, is suitable for a jack up rig and lies 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 there.

Beehive is analogous to the giant Tengiz field in the Caspian basin, which is also a Carboniferous isolated carbonate build up. 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 highquality reservoir. Beehive is a much larger build up than Ungani and has excellent access to the Lower Carboniferous source rock in adjacent depocentres.

Melbana has completed reprocessing and





an inversion study of selected seismic lines across the Beehive Prospect with very encouraging results which, when taken with the results of the recent 3D survey, have enhanced the understanding of the Beehive reservoir and seal units.

### **Beehive 3D Seismic Survey**

3 D Survey completed mid-2018 The Beehive 3D seismic survey, undertaken in July and August of 2018, provided modern 3D imaging over and further derisked the Beehive Prospect. It also provided insights into the preferred location for the Beehive-1 exploration well.

During the planning of the Beehive 3D seismic survey, a new lead was identified and the survey area was extended by  $\sim 100 \text{km}^2$  ( $\sim 16\%$ ) to provide coverage over



the newly identified lead (Egret) that is partially within the boundary of WA-488-P. The extension of the survey area was within the approved scope and operational envelope of the Beehive 3D seismic survey. The Beehive 3D seismic survey, including the extension over the Egret lead was fully funded by Santos and Total.



# Improved Data quality with the Beehive 3D Work Program

Permit Year	End Date	Minimum Work Requirements	Estimated Expenditure (indicative only)
2	21 Sep 2018	<ul> <li>Geological and Geophysical Studies</li> <li>Survey Data Proprietary Processing</li> <li>150km 2D Broadband Reprocessing and Seismic Inversion</li> <li>330km 2D Broadband Seismic Reprocessing, Seismic Stratigraphic Interpretation and Analogue Field Study</li> </ul>	A\$200,000 A\$300,000 A\$150,000 A\$250,000
3	21 Dec 2021	One Exploration Well	A\$20,000,000
4	21 Sep 2020	400km <sup>2</sup> New 3D Seismic Survey (2018 3D Survey credited against this)	A\$5,000,000
5	21 Sep 2022	Geological and Geophysical Studies	A\$200,000
6	21 Sep 2023	One Exploration Well	A\$20,000,000

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