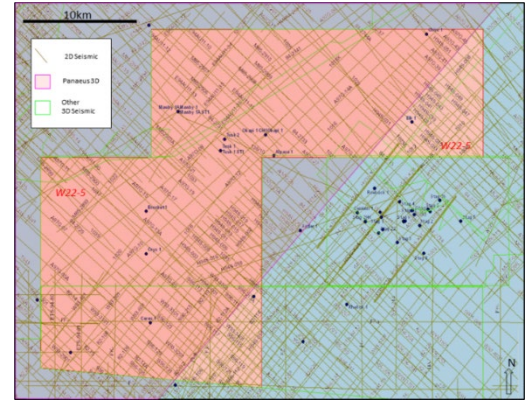
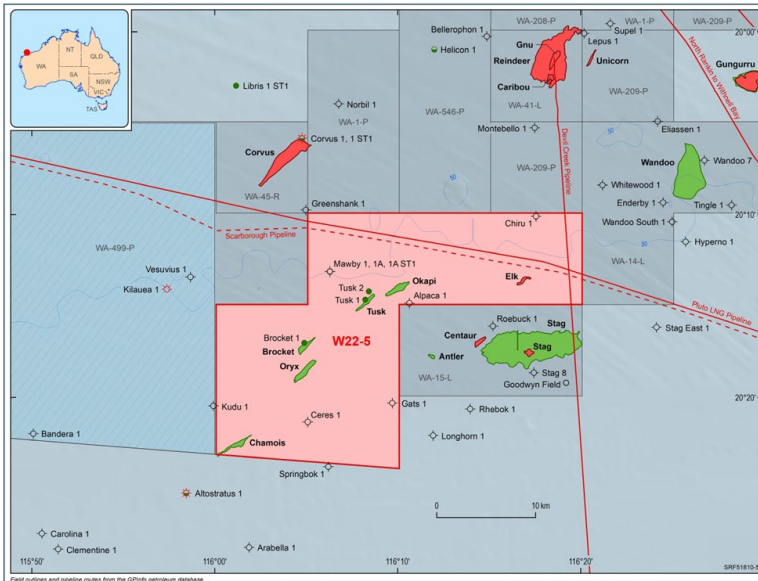


## PROJECT SUMMARY

### Oil and gas discoveries, drilling opportunities and multiple play types ADJACENT TO EXISTING PRODUCTION AND DISCOVERIES



### HIGHLIGHTS

- ◆ Newly awarded exploration permit (from 2022 bid round).
- ◆ Hosts existing shallow discoveries, adjacent to many more, and close to existing infrastructure.
- ◆ Significant leads identified in multiple plays based upon existing data.
- ◆ Light work programme in Primary Term aimed at firming up deeper Palaeozoic Carbonate Play.
- ◆ Secondary Term discretionary exploration well not due until 2030.

### BACKGROUND

Melbana Energy Limited (ASX: MAY) (Melbana) is 100% equity holder and operator of petroleum exploration permit WA-552-P (the "Permit"), offshore Western Australia in the Dampier Sub-basin of the Northern Carnarvon basin.

The Permit area has been explored since the 1960s and contains several oil discoveries, including Tusk, Okapi, Brocket, Oryx and Chamois and is to the west of the Stag oil field which has been producing oil since 1998.

The future of this region depends on developing and testing some entirely new / deeper play concepts targeting very large gas opportunities.

### PLAYS AND PETROLEUM SYSTEM

Melbana was awarded the Permit following an extensive review of seismic and well data within the greater northwest shelf region using new interpretation approaches and by leveraging our extensive worldwide experience within carbonates and salt related tectonics.

The aim of these studies has been to use successful Palaeozoic carbonate buildup play analogues from the Middle East, USA and Caspian to identify new play types for potential large gas accumulations in Australia.

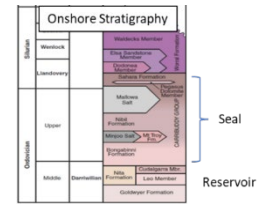
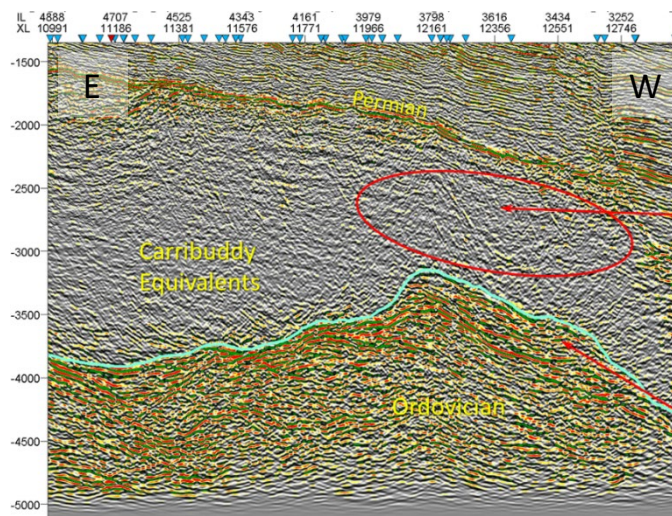
Melbana are exploring the potential for isolated Carbonate buildups sealed by salt and shale. The play was identified by Melbana on the existing Panaeus 3D seismic survey.

To date, this is an unproven play in the offshore region and has previously been interpreted as a volcanic edifice, thus, the key risk is the presence of carbonate and, by extension, reservoir quality.

### POTENTIAL FOR GIANT ISOLATED CARBONATE BUILDUP

The backstepping internal stratigraphic stacking, demonstrated here on the Paneous 3D, makes the case for an interpretation of a long lived and multi layered carbonate isolated platform.

The detached faulting here may also be showing salt withdrawal/welded forms which increase the likelihood of a salt layer interpretation for the blind section over the build-up.



- Rotated reflectors within Pre-Permian
- Detached on top of carbonate target
- Either fault blocks rotating on salt or welded salt
- Good indication of topseal
- Backstepping Carbonate geometries with internal stacking character

### WORK PROGRAMME

The work programme is focused on seismic reprocessing to better define internal geometries and potential fields modelling to help differentiate the alternative interpretation of volcanics, which are present in the Cambrian (the Antrim Volcanics) Halls Creek mobile zone behind the Kimberley block.

Melbana will work the regional geophysical datasets and incorporate all relevant observations, including those from regional gravity and magnetic datasets. Seismic reprocessing will be interpreted and mapped with the goal of building understanding of the deeper potential volumes of oil and gas.

### CURRENT PERMIT CONDITIONS

The Minimum Work Requirements for the first three years of the Permit are firm, following which Melbana may elect to proceed to Permit year 4 and so on thereafter on a year-by-year basis.

	Permit Year	Program	Cost (A\$m)
Primary	1-3	Reprocess 240km <sup>2</sup> of the Paneous 3D seismic survey.	0.4
		Reprocess and 2D modelling of a subset of vintage gravity and magnetic data sets totalling a minimum of 45 lineal kilometres.	0.1
		Geological and Geophysical studies.	0.3
Secondary	4	Geological and Geophysical studies and ranking of drilling opportunities.	0.6
	5	Studies and operations planning	0.2
	6	Drill 1 Well	30.0

### FIND OUT MORE

Melbana Energy has been listed on the ASX since 1998 (formerly MEO Australia). Headquartered in Sydney, Australia, the Company has a portfolio of attractive exploration, appraisal and development stage opportunities in Australia and Cuba. Australia is an attractive exploration and production destination, with low sovereign risk and attractive tax and royalty regulatory regime.

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