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AC/P70: Maiden Resource Estimates

Highlights

- Maiden resource estimates completed for the undeveloped Vesta and Swan gas and oil field discoveries (and adjacent prospects) located within AC/P70 (Melbana 100%) offshore northwestern Australia.
- Prospective Resource of **2,754 Bcf** and **43 MMbbl** (unrisked gross best estimate*).
- Contingent Resource of **276 Bcf** and **34 MMbbls** (unrisked gross best estimate*) associated with the undeveloped Vesta and Swan oil and gas fields.
- Proximity to existing infrastructure combined with the Contingent Resource significantly reduce the minimum economic pool size for development of any new discovery. Heightened recognition of the importance of gas as a transition fuel combined with the limited number of new offshore exploration opportunities released in recent years lends additional significance to this opportunity.
- Advisor appointed to assist with the identification of a suitably qualified partner to fund the forward work program.

Exploration Manager Dr. Duncan Lockhart commented:

"Our original exploration thesis for AC/P70 was to follow up on the historical oil discoveries at the Vesta and Swan fields and explore for oil. Our proprietary reprocessing of the publicly available 3D seismic resulted in a significant improvement in data quality, which allowed us to identify and map significantly larger exploration targets within and adjacent to the working petroleum systems of the greater Swan and Vesta discoveries. Some of these areas are up-dip of the old discovery wells, further improving the chance of success.

Perhaps most notably, this work re-rates the block as being highly prospective not just for oil but for LNG-scale gas accumulations in a structure which is already proven to trap gas and oil in the shallow reservoirs and relatively close to infrastructure."

* **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 are required to determine the existence of a significant quantity of potentially moveable hydrocarbons. All Prospective Resource volumes presented have been calculated in accordance with Guidelines issued by the Society of Petroleum Engineers in the Petroleum Resource Management System (2018) using probabilistic methods, except totals which are arithmetic.

SYDNEY, AUSTRALIA (26 February 2025)

Melbana Energy Limited (ASX: MAY) (**Melbana**) is pleased to announce the completion of maiden prospective and contingent resource estimates for AC/P70 (Melbana 100%).

About AC/P70

Melbana, via a wholly owned subsidiary, is the operator and 100% holder of AC/P70 - located in the Timor Sea offshore northwestern Australia. The permit, currently in its Primary Term, was awarded to Melbana in 2022[1]. It contains multiple prospects and leads hosted within play fairways known to be prospective for gas and oil and is close to infrastructure that provides a clear path to commercialisation.

The permit is adjacent to multiple oil discoveries and production including the Challis, Jabiru, Skua, Puffin and Cassini oilfields (Figure 1). The Darwin LNG Plant and export facility is located onshore approximately 690km east of AC/P70. An exploration well is not required in AC/P70 until 2027, allowing ample time to select a high potential drilling target. The average water depth is 105m.

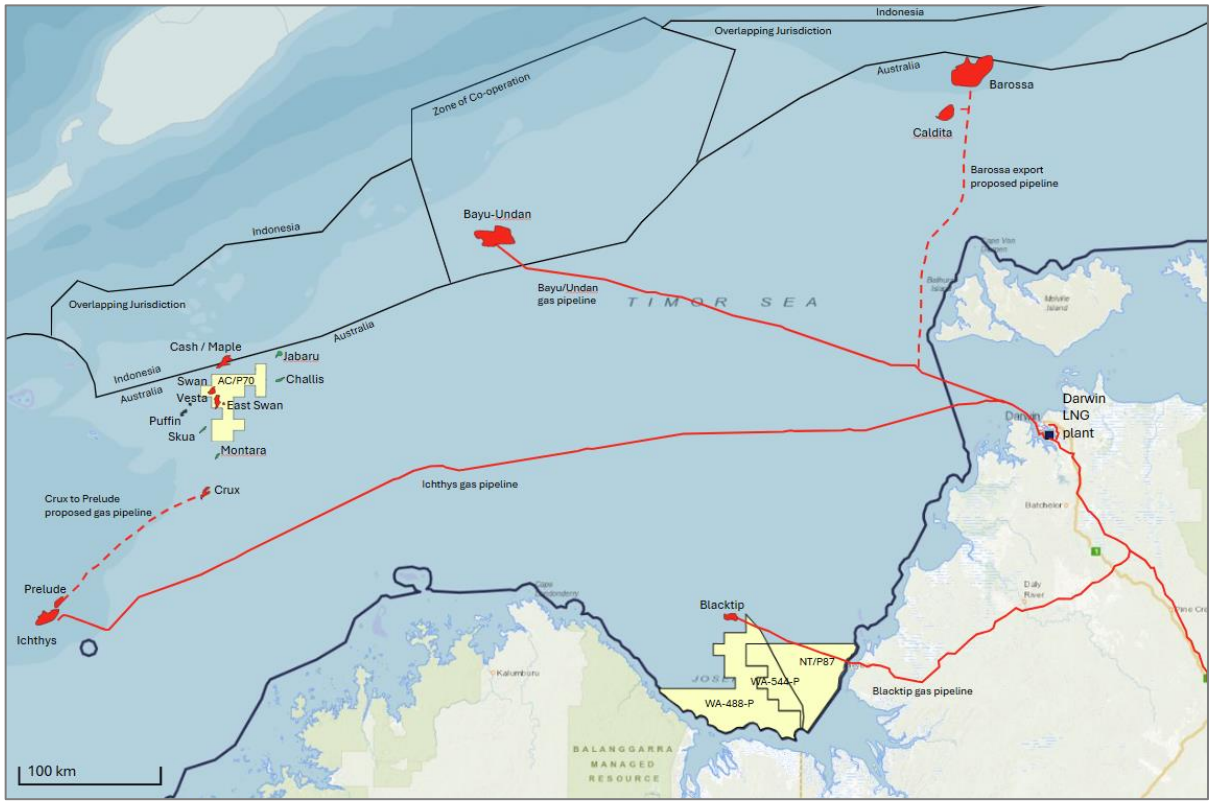

Figure 1 - AC/P70 permit located in offshore northwestern Australia

The permit contains the undeveloped Swan gas field, discovered by Arco in 1973 while exploring for oil and which was further appraised by an additional two wells by BHP in 1991. Wireline pressure data and recovered gas samples from several sands of the Cretaceous Puffin sandstone confirmed a common pressure regime and the presence of mobile gas.

The Vesta oil and gas field was discovered by ENI in 2005, also whilst exploring for oil, and was appraised by a second well. Three drill stem tests (DST) confirmed the presence of producible oil and gas from the Jurassic "Spec Di" reservoir but the field has not been

[1] See ASX announcement dated 16 February 2022

developed. Significant and relatively high probability-of-geologic success (Pg) prospective resources are interpreted within un-tested compartments up-dip of the discovery wells.

During 2024, in fulfilment of its work commitments, 500km^2 of the publicly available Pantheon 3D seismic survey data was reprocessed. Interpretation of the reprocessed data indicated a larger than previously interpreted closure at Swan in the deeper Jurassic aged Spec Di and Plover sections. The permit also holds the potential for large, un-tested, Triassic and Permian structural closures.

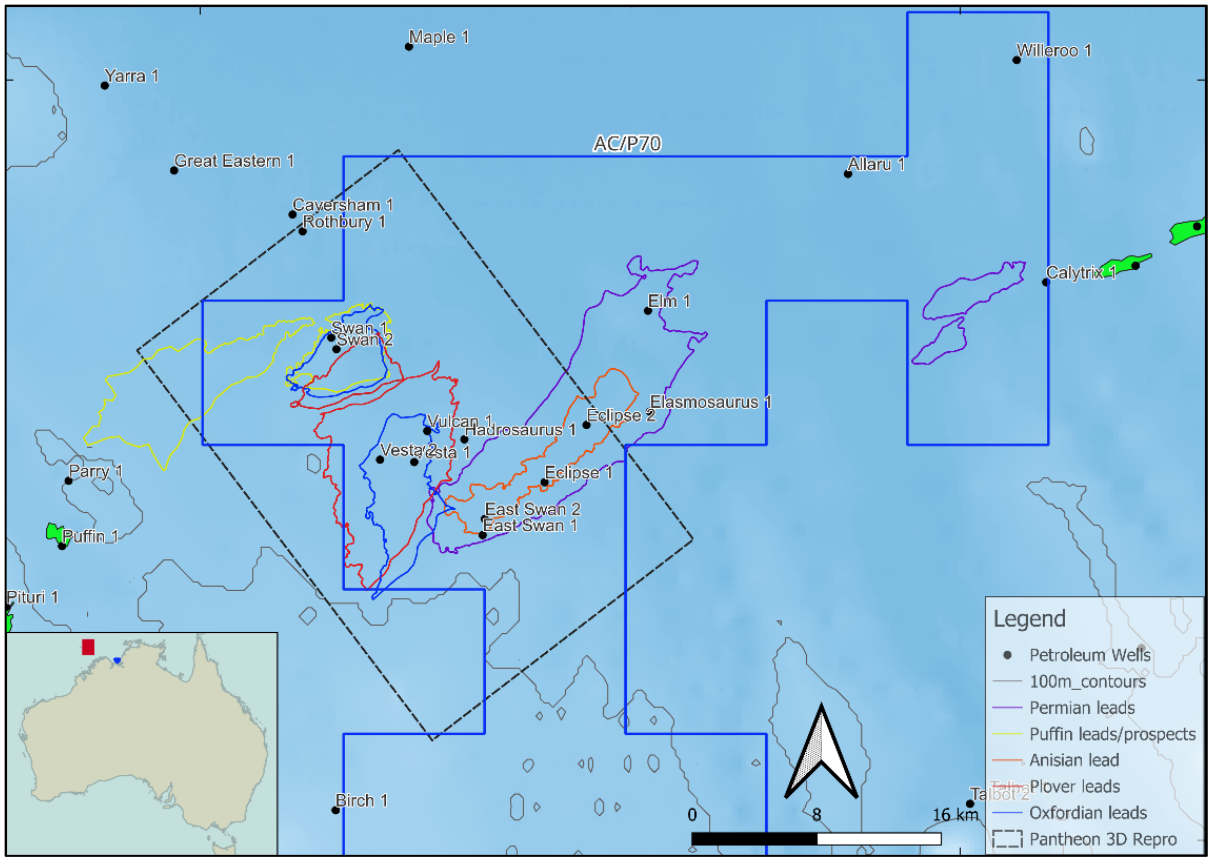

Figure 2 - AC/P70 permit prospect and lead location

Maiden Contingent Resources

Melbana's maiden AC/P70 Contingent Resource** (Development Unclarified), effective 1 January 2025, is within the Swan and Vesta gas and oil fields (Table 1):

- The Swan gasfield was discovered in 1973 and defined by the Swan-1, Swan-2, Swan-3 and Swan-3ST1 wells, from which wireline pressure data defined a common pressure regime and recovered gas samples to surface. The field has not been developed.

- The Vesta oilfield was discovered in 2005 with the Vesta-1 well, in which three DSTs were conducted in the Spec Di reservoir and produced gas and oil. The field remains undeveloped.

*Table 1 - AC/P70 Contingent Resource Estimates (unrisked gross volumes)***

Field	Hydrocarbon	1C	2C	3C
Vesta – (Spec Di)	Gas (Bcf)	39	105	199
	Oil (MMbbl)	10	30	47
Swan – (Puffin)	Gas (Bcf)	132	171	211
	Oil (MMbbl)	3	4	5
Rec Gas Arithmetic Totals	**Gas (Bcf)**	**171**	**276**	**410**
Rec Oil Arithmetic Totals	**Oil (MMbbl)**	**13**	**34**	**53**

****Contingent Resource** - The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) related to discovered accumulations. These estimates have an associated risk of development. Future appraisal and evaluation are required to determine the existence of a commercial quantity of potentially economically recoverable hydrocarbons. All Contingent Resource volumes presented have been calculated in accordance with guidelines issued by the Society of Petroleum Engineers in the Petroleum Resource Management System (2018) using probabilistic methods, except permit totals which are arithmetic.

Key contingencies that prevent classification of the Contingent Resource as Reserve include:

- Confirmation of a commercial quantity of recoverable hydrocarbons.
- Financial appropriations sufficient to develop the recoverable hydrocarbon volume.
- Regulatory approval to proceed with a proposed development.

New Prospective Resources

Melbana's maiden Prospective Resource* for AC/P70 has been identified in and estimated for a combination of deeper and adjacent structures to the Swan and Vesta fields (greater Swan-Vesta structure) effective 1 January 2025 as summarised in Table 2:

*Table 2 - AC/P70 Prospective Resource Estimates (unrisked gross volumes)**

Prospect	Hydrocarbon	Pg	Mean	Low 1U	Best 2U	High 3U
Vesta Deep (Plover)	Gas (Bcf)	16%	338	71	231	730
Vesta North (Spec Di) (Gas Cap on Oil rim)	Gas (Bcf)	42%	200	116	195	287
	Oil (MMbbl)	42%	45	22	43	71
Swan Deep (Spec Di)	Gas (Bcf)	23%	222	112	206	352
Swan Deep (Plover)	Gas (Bcf)	16%	143	55	126	253
Swan North-West	Gas (Bcf)	44%	198	155	196	243
East Swan Deep (Triassic)	Gas (Bcf)	18%	702	200	569	1397
East Swan Deep (Permian)	Gas (Bcf)	24%	1402	337	1231	2695
Rec Gas Arithmetic Totals	**Gas (Bcf)**		**3205**	**1046**	**2754**	**5957**
Rec Oil Arithmetic Totals	**Oil (MMbbl)**		**45**	**22**	**43**	**71**

Prospective Resources

The identified Prospective Resources are contained within three greater structures:

1. Swan:
    - Strong gas shows were observed in the Spec Di sands (same reservoir as the Vesta discovery) during the drilling of Swan-2 in 1980 but were not tested.
    - A large closure is mapped beneath the Swan discovery in the Plover Formation.
2. Vesta:
    - A large Spec Di closure is mapped up-dip of the Vesta discovery wells in the “High Case” P10 volume.
    - A large closure is mapped below the Vesta discovery in the interval equivalent to the Plover Formation. This was a target of the 2005 drilling program, but the operator was unable to reach this depth due to the high pressures encountered. Improvements in drilling practices over the last 20 years mean that this interval can now be safely drilled.
    - Vesta North is in a discrete fault compartment, to the north of the Vesta discovery and volumes have been estimated for the Spec Di reservoir. However, the structure may also be prospective in the Plover Formation but volumes for this lead are yet to be estimated.
3. East Swan:
    - Comprised of two large untested plays in AC/P70 (Triassic and Permian) within one structure. These prospects have a combined potential Prospective Resource of 1.8 Tcf (Best Estimate*) and could be drilled with a single well.

Commercialisation Pathway

The permit is adjacent to existing production and facilities offering a clear pathway to commercialisation of any significant discovery.

Melbana has engaged an advisor to assist it with farming out some of its 100% interest in the permit to a suitably qualified partner in return for an upfront cash contribution to back costs and funding the forward technical work programme, which includes an exploration well.

ENDS

For and on Behalf of the Board of Directors:

Mr Andrew Purcell
Executive Chairman

Ends -

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Competent Persons Statement

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 ASX Listing Rules. Volumes have been calculated using probabilistic methods, except totals which are arithmetic, in accordance with guidelines of the Petroleum Resources Management System published by the Society of Petroleum Engineers (revised 2018).