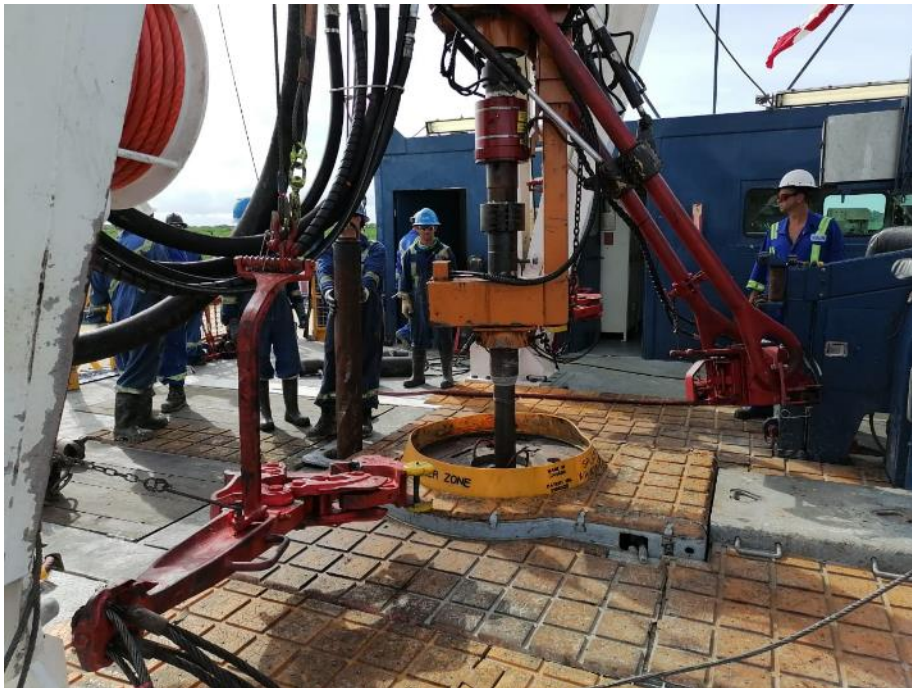


Investor Webinar

16 September 2021



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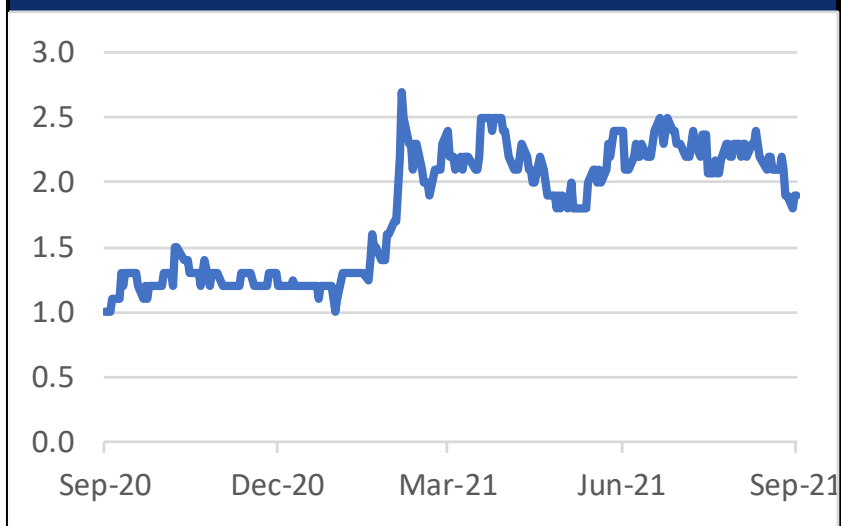
Contingent and Prospective Resources: Unless otherwise specified, the information that relates to Contingent Resources and Prospective Resources for Melbana is based on, and fairly represents, information and supporting documentation compiled by Mr. Dean Johnstone, who is an employee of the company and has more than 34 years of relevant experience. Mr. Johnstone is a member of the American Association of Petroleum Geologists. Mr. Johnstone 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

Corporate Overview

Company Data A\$ (15 September 2021)

ASX Code	MAY
Shares on Issue	2,673m
Options	547m
Last Close	1.9 cps
Market Capitalisation	\$51m
Cash (30 June 21)*	\$10.7m
Debt	nil

Share Price Performance



* Additional funds received since 30 June 2021 include \$2.9 million from sale of investments and \$7.1 million (gross) from the Entitlements Offer

Experience of the Board & Management

Andrew Purcell BEng (Elec), MBA Executive Chairman

Investment banking (Credit Suisse, Macquarie Bank), Australia and Hong Kong. Experienced in resources banking, cross border financing, commodity hedging and corporate turnarounds. 20 years as a public company director in Australia and abroad. Chairman of AJ Lucas Group Limited (ASX: AJL).

Peter Stickland BSc (Hons) (Geology) GDipAppFin Technical Director

30 years global experience in oil and gas exploration commencing with BHP Billiton. CEO of Melbana Energy (2014–2018) and Tap Oil (ASX: TAP, 2008–2010). APPEA Board member (2009–2017).

Michael Sandy BSc (Hons) (Geology) Non-Executive Director

40 years oil and gas exploration experience, managing assets in PNG, Asia the Middle East and the USA. 20 years as a public company director involved in numerous acquisitions and divestments.

Errol Johnstone BSc (Hons) (Geology/Geophysics) Chief Geoscientist

29 year career with ExxonMobil in a variety of exploration and appraisal roles. Recognised industry expert in several key geoscientific disciplines. Responsible for generating many new exploration initiatives internationally resulting in several significant discoveries.

Dean Johnstone BSc (Hons) (Geology/Geophysics) Senior Geoscientist

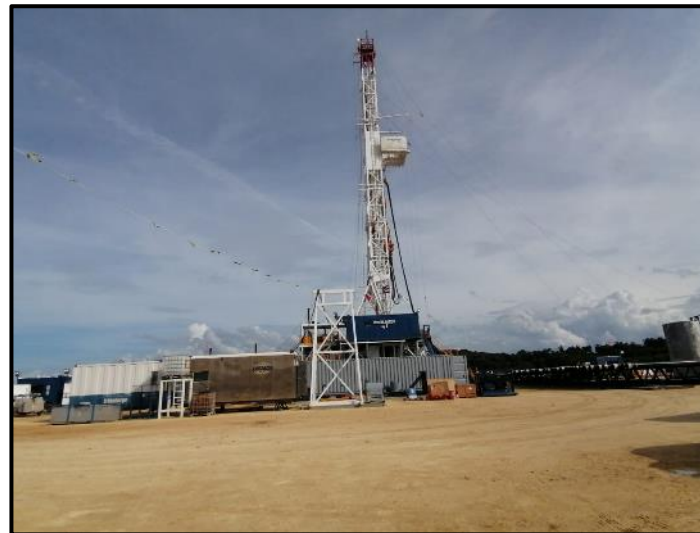
30 years experience in oil and gas exploration, development and production with ExxonMobil and Delhi Petroleum. Mature field opportunity generation a specialty. International experience in Canada, PNG and SE Asia.

Ken Hendrick BEng (Civil), MEngSc, MBA Implementation Manager

Decades of experience in senior project management roles safely executing complex multi-discipline developments for the resources sector, particularly in the offshore oil and gas industry.

Drilling Operations Update

- Drilling operations began on Monday morning, 13 September 2021, Cuba time
- Drilling operations have got off to a good start, with a few minor issues arising during shake down that required drilling to pause whilst they were resolved
- 14 containers of contractor materials and tools arrived in Cuba on the weekend and are currently in the process of clearing customs and being transported to the laydown yard and site
- Melbana has another shipment of casing scheduled to arrive in Cuba next week, well ahead of it being required



Alameda-1 drilling site - 14 September 2021



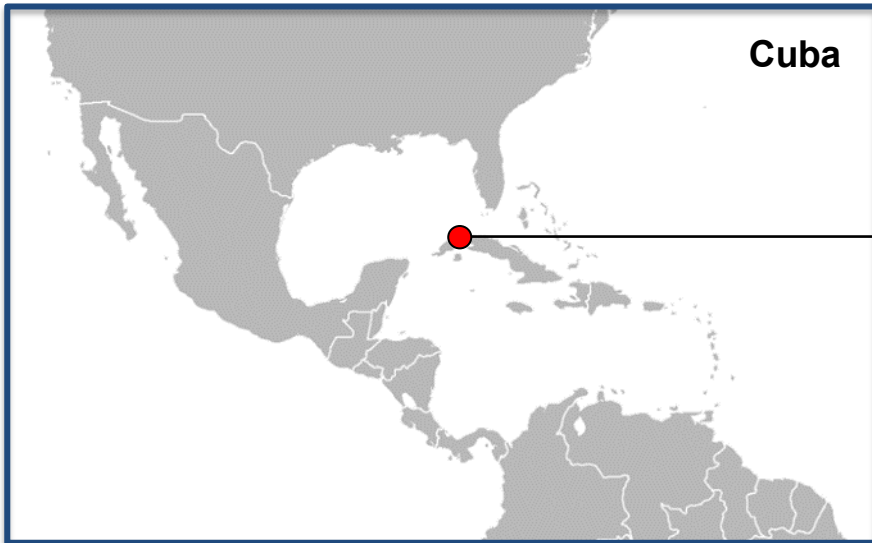
Results of Entitlements Offer

- \$7.1 million raised, therefore providing the funding Melbana requires for its share of the remaining costs of the Cuban drilling campaign that has now begun
- The Entitlements Offer attracted good shareholder participation, with many applying to take up additional shares above their entitlement
- The new shares along with the attaching options were issued on 10 September with quotation commencing on 13 September
- The attaching options are exercisable at \$0.035 at anytime until the expiry date of 10 Sep 2022. These are now trading on the ASX under the ticker MAYO

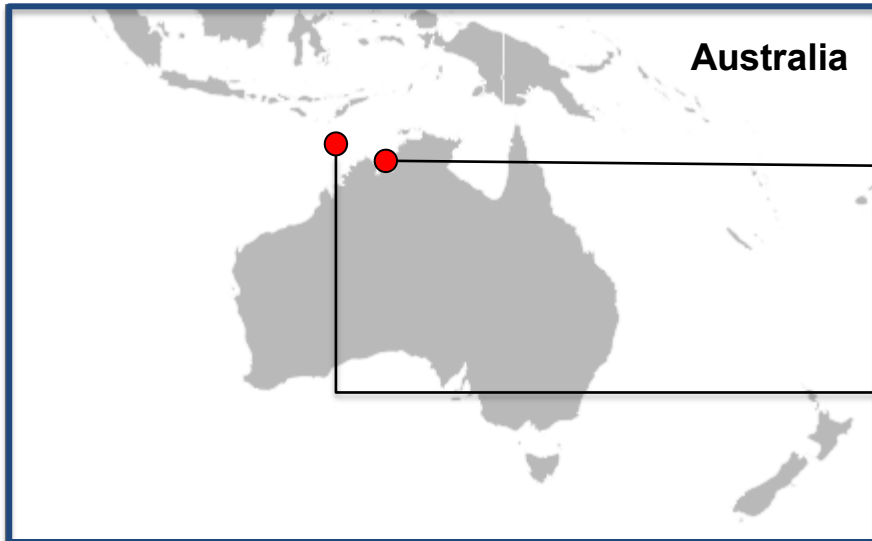


Melbana's Drilling Manager inspecting drilling operations at the Alameda-1 site on 14 September 2021

Project Locations and Summary



- Two high-impact onshore exploration wells
- **Drilling commenced September 2021**
- Testing a combined resource of **236 million barrels of oil****
- Proven hydrocarbon system, proximity to good oil storage and export infrastructure and existing large oilfields
- Drilling program to test four separate targets
- Melbana is operator, partnered with the National Oil Company of Angola (Sonangol)
- International contractors with extensive Cuban experience

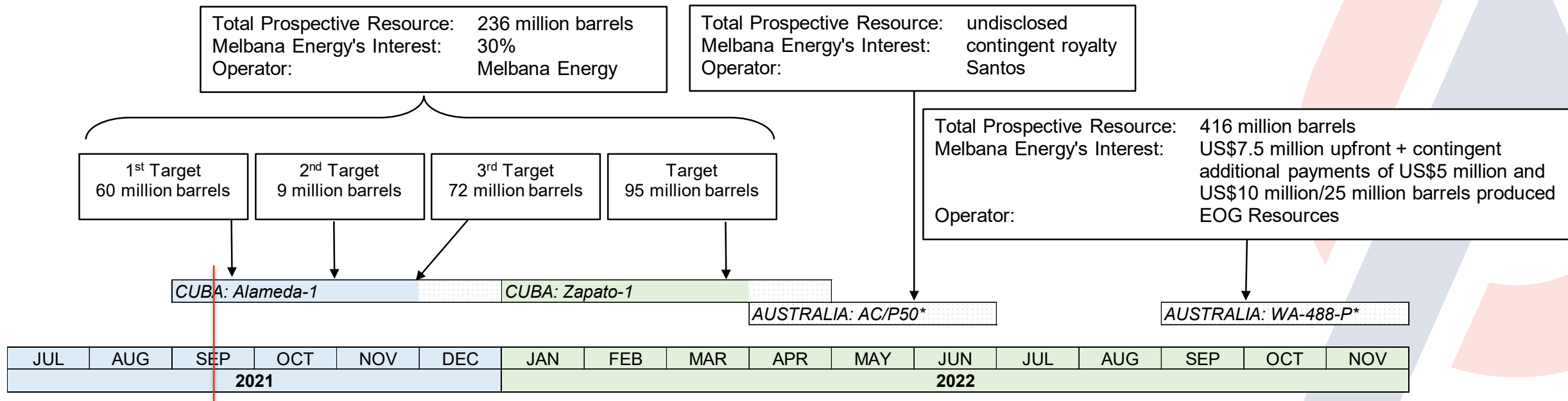


- Two offshore exploration wells to be drilled testing a combined resource of at least **416 million barrels of oil/equivalent****
- Melbana to receive USD7.5 million from sale of its permit WA-488-P, subject to satisfaction of conditions precedent (which include receipt of regulatory approvals for sale)
- Planning underway for **2022** drilling season
- Experienced operators (Santos and US Fortune 500 company)
- Melbana has no funding commitment to these wells
- Melbana would receive royalties/cash+royalties in success case

** See Prospective Resources Cautionary Statement on page 7

Drilling Schedule

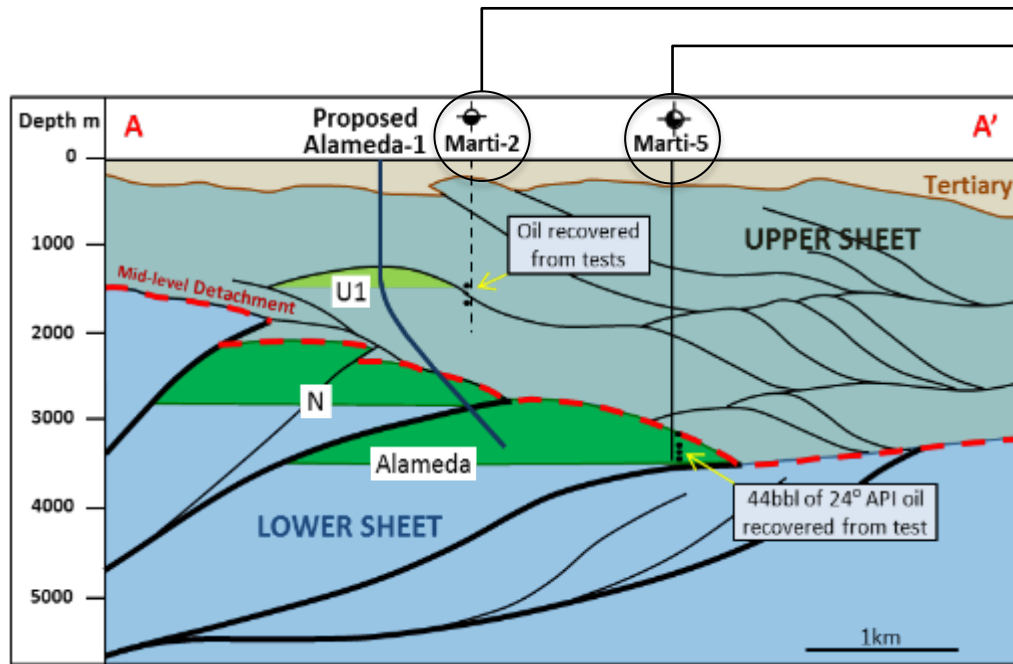
MELBANA ENERGY HAS INTERESTS IN FOUR UPCOMING EXPLORATION WELLS TESTING >650 MILLION BARRELS^α OF PROSPECTIVE RESOURCE



* Timing of the two Australian exploration wells as estimated by Melbana Energy. Exact dates are at the Operator's discretion and dependent on receipt of various regulatory approvals, rig availability etc.

^α 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 is required to determine the existence of a significant quantity of potentially moveable hydrocarbons. All quoted volumes are Prospective Resources (Best Estimate) and have been taken from Independent Expert McDaniel & Associates Competent Persons Report, released to ASX on 7 August 2018, as adjusted by Melbana Energy for area relinquishment. Melbana is not aware of any new information or data that materially affects the information included in that announcement and that all the material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.

Cuba, Block 9 (1st well, Alameda-1)



Marti-5 wellsite (2003)



Marti-2 wellsite (2003)

Alameda Prospective Resources (100%, MMstb)**

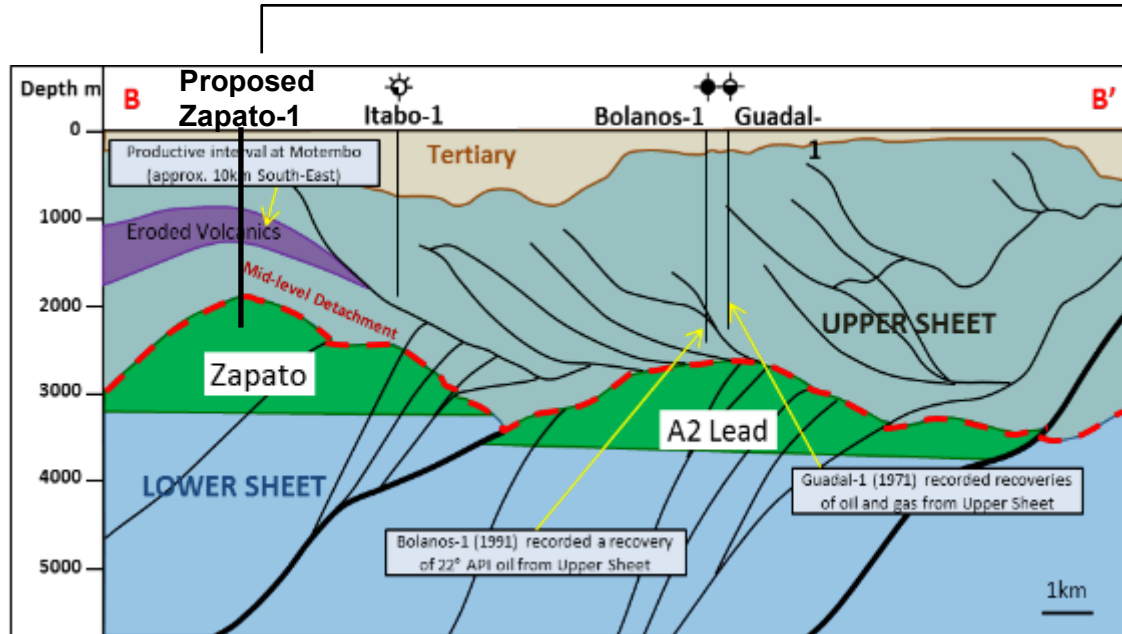
Objective	CoS*	Low	Best	High	Mean
U1	15%	24	60	132	71
N	23%	4	9	20	11
Alameda	32%	39	72	128	79

* Chance of Success (independently assessed)

** See Prospective Resources Cautionary Statement on page 7

- 1st well Alameda-1 designed with mild (30°) deviation to allow testing of 3 separate targets
- To be drilled adjacent to previous discoveries that flowed oil to the surface
- Well pad constructed and ready for operations
- Contractor mobilisation order imminent

Cuba, Block 9 (2nd well, Zapato-1)



Motembo area

Zapato Prospective Resource (100%, MMstb) **

	CoS*	Low	Best	High	Mean
Zapato	23%	38	95	214	114

* Chance of Success (independently assessed)

** See Prospective Resources Cautionary Statement on page 5

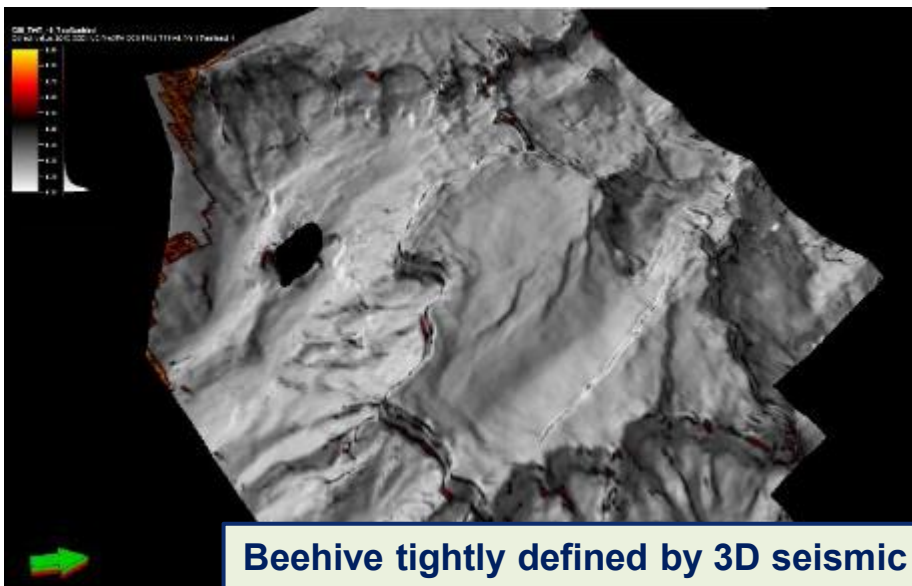
- 2nd well Zapato-1 to test a structure identified by strong gravity and magnetic results that aligns with structural interpretation derived from seismic and surface data
- The well is adjacent to the shallower Motembo oil field which produced high quality light crude (50 – 64.5° API)
- Zapato-1 will be drilled immediately following the completion of Alameda-1

Australia, WA-488-P (Beehive Prospect)

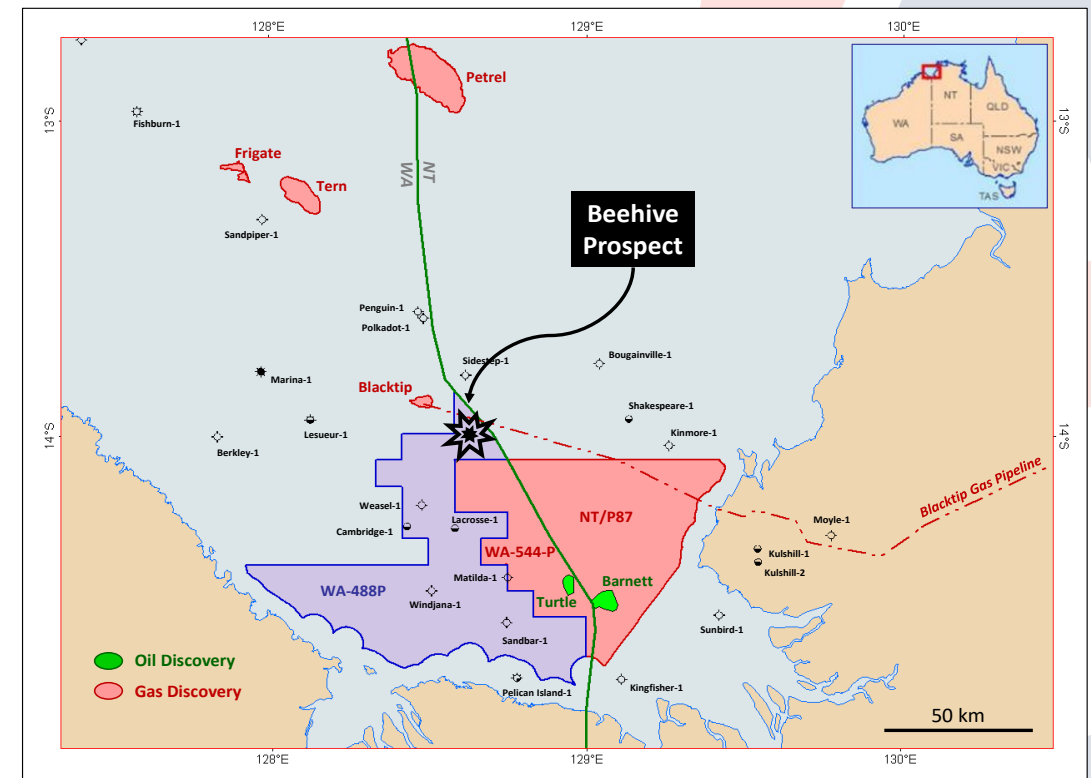
- Permit WA-488-P sold in April 2021 to a US\$60 billion Fortune 500 O&G company. Planning underway for 2022 drilling
- Melbana to receive US\$7.5 million initial payment (upon receipt of regulatory approvals/ satisfaction of conditions precedent)
- Contingent additional payments of US\$5 million and US\$10 million per 25 million barrels produced (in success case)
- Beehive is a carbonate build up, a formation that tends to work big on success (upper estimate 1.4 billion barrels**)
- Melbana has mapped similar carbonate build ups to Beehive in its adjacent permits WA-544-P and NT/P87 (Melbana 100%), which also contain the undeveloped oil discoveries Turtle and Barnett

Prospective Resources (100%, MMboe) **

Beehive	CoS*	Low	Best	High	Mean
Carboniferous objective	20%	37	416	1,424	599



* Chance of Success (independently assessed)



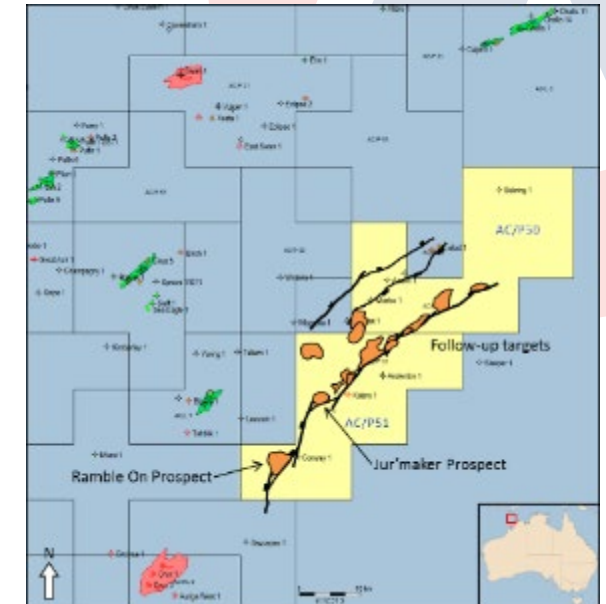
** See Prospective Resources Cautionary Statement on page 7

Other Permits/Investments

- AC/P50 sold to Santos/Sapura OMV. Melbana received cash and is entitled to receive future royalty payments if the exploration well is successful - planning underway for 2022 drilling
- AC/P51 under option to Santos/SapuraOMV. If exercised, Melbana would receive similar consideration for the sale of AC/P50
- Tassie Shoal Projects have received environmental approvals (valid to the early 2050s) to build methanol and LNG plants on the Tassie Shoal, using the discovered but undeveloped gas resources available in the area
- Melbana has completed the divestment of its holdings in two other ASX O&G companies, Metgasco and Byron Energy, effective 3 August 2021. Net cash proceeds realised approximately \$2.9 million



Tassie Shoal Projects



AC/P50 and AC/P51



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