

MELBANA ENERGY LIMITED
ASX Code: MAY

Dr Chris McKeown
Chief Commercial Officer

Good Oil Conference

September 2023



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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 ASX Listing Rules. Conversion factors: 6 Bscf gas equals 1 MMboe; 1 bbl condensate equals 1 boe

Prospective Resources Cautionary Statement (PRSC): 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.

Corporate Overview

Company Information	
Name	Melbana Energy Limited
Listed	1998
Exchange	ASX : MAY
Shares on issue	3,370 million
Market Cap (1 September '23)	\$253 million
Cash (30 June '23)	\$35.1 million

Shareholders	
Board & Management	8.2%
Top 20	25.2%



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. Also serves as Chairman of AJ Lucas Group Limited (ASX: AJL).

Peter Stickland

BSc (Hons) (Geology) GDipAppFin
Technical Director

25 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.

Dr. Chris McKeown

BSc (Hons) (Applied Geology) Ph.D.
Chief Commercial Officer

26 years oil and gas experience, CEO and Executive roles in projects in Europe, the Gulf of Mexico, Southeast Asia, New Zealand and Australia. Has commercialised oil and gas assets, delivered new country entries and farmouts & generated over AU\$1billion in deal flow.

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

B.Sc. (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.

Dr. Duncan Lockhart

B.App.Sc (App.Geol) B.Sc (Hons)
Ph.D.

Exploration Manager

Extensive O&G experience spanning over 32 years in Australia including with BHP, Woodside, OMV, Central Petroleum, Senex and Drillsearch. His strength lies in identifying high value opportunities, providing technical assessments and implementing strategic initiatives.

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.

Dr. Rafael Tenreiro

B.Sc (Min Eng.), M.Sc (Geophys), M.Sc
(Petro Geo.), Ph.D. (Expl Geophys)

Country Manager, Cuba

40 years experience in Cuban Oil industry working in exploration projects including the discovery, evaluation and development of 14 oil fields. Before joining Melbana, he was the Exploration Director for CUPET (National Oil Company of Cuba).

Snapshot: transformational three years and more to come

A lot has happened since Good Oil 2020

Corporate	2020 Market Cap \$18.5m million and \$1.5 million cash
	2023 Market Cap \$253 million and \$35.1 million cash
	2020-2023 raised \$45 million to progress work programmes
Australia	Santos & Total farm into Beehive, funded a 3D seismic acquisition for option to fund exploration well, let option expire
	WA-488-P sold for \$7.5million & forward royalty ¹ . Up to 1.4-billion-barrel Beehive prospect to be drilled in 2024 by US major
	Melbana farming out WA-544-P & NT/P87 adjacent to Beehive with up to 1.2-billion-barrel recoverable resource *
Cuba	Sonangol – Africa’s largest oil producer – farm into Block 9 for \$5 million upfront and fund 2 exploration wells for 70% interest
	Alameda-1 and Zapato-1 drilled. Alameda-1 certified 267 million barrels best case prospective resource in multiple zones *
	Alameda-2 confirms moveable oil over multiple zones, flows over 1900 barrels per day of 19° API 30 cP oil **

Exciting times ahead

Now to next 6 months	Alameda-2 completion in place provides Melbana with cashflows from oil production
	High impact Alameda-3 will be drilled targeting 179-million-barrel prospective resource *
	Initial field development to scale up production to unlock the huge untapped oil potential in PSC
	Australia WA-544-P & NT/P87 farm-out led by same team who farmed out WA-488-P
	Work towards acquiring 3D seismic in Australia
Further 18 months	Execute Cuba development plan and unlock up to 267 million barrels of prospective resource
	Wider PSC potential to be explored and more deals to be done in Cuba
	Potential value generation from drilling in offshore WA-488-P permit
	Reproduce success in other non-OECD markets

* See PRCS on page 2

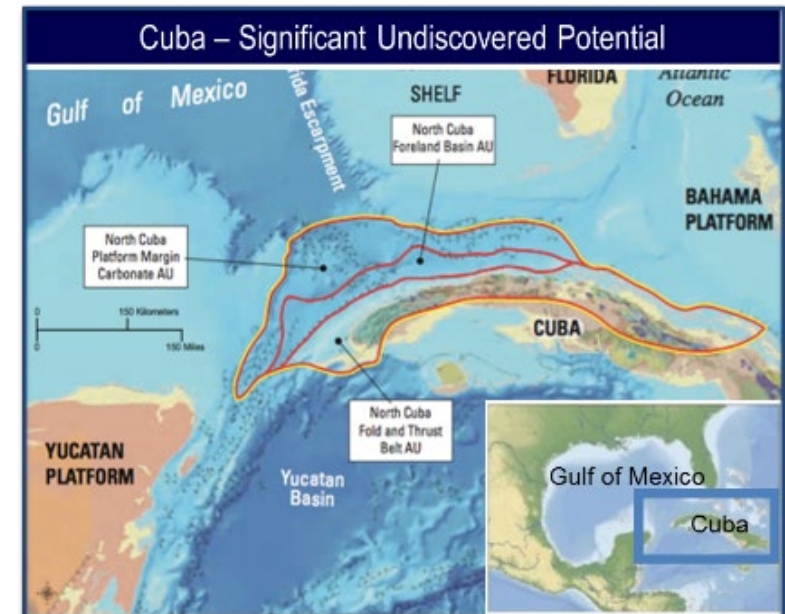
** See announcement on 28th August 2023

¹ Melbana sold the Beehive Project in late 2021, drilling expected in mid 2024

Cuba – An Overview

Why Cuba?

- Melbana personnel have significant experience in analogous geology and petroleum systems
- In our DNA to look where others have not looked, and apply creative thinking
- Under-explored and under-developed south-eastern margin of Gulf of Mexico
- Strong government support for oil industry
 - National consumption ~90,000 barrels of oil per day
 - Domestic production ~45,000 barrels of oil / 3 million cubic metres of gas per day
 - Foreign Investment Laws passed in 2014 to encourage foreign investment. Tax rate 15% and 8 year tax holiday
- Good infrastructure, strong national focus on growing production
- 25+ year history of foreign oil companies operating profitably and repatriating profits
- Supportive Government and regulator (Cupet)
- Exploration adjacent to giant Varadero field: >200 million barrels produced

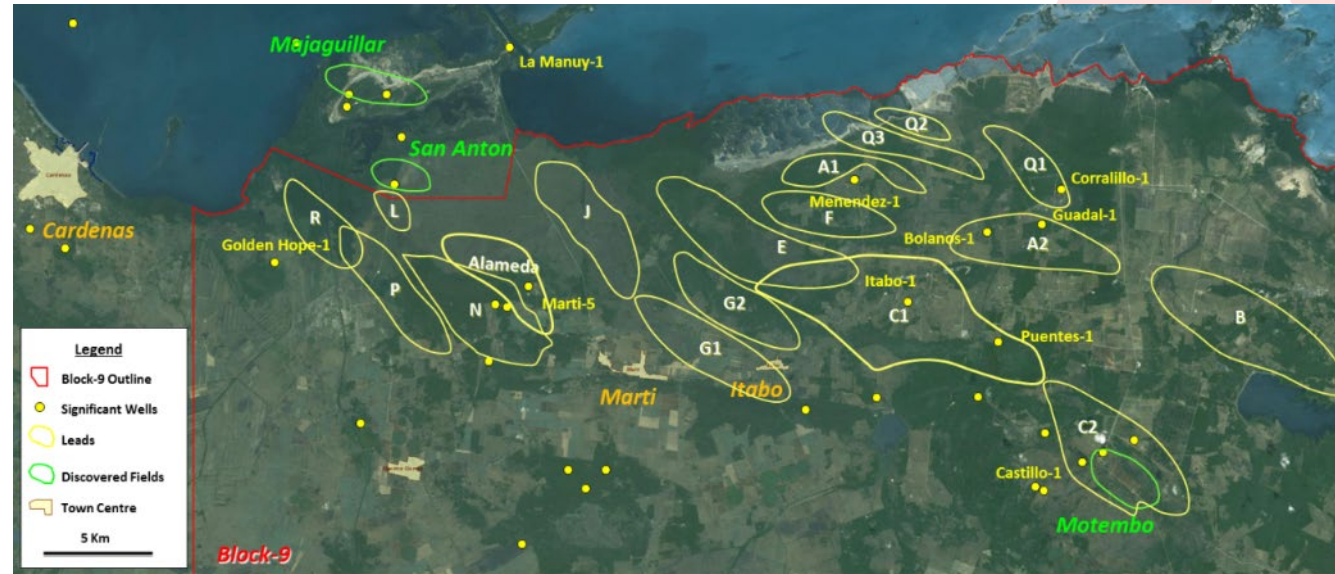


US Geological Survey (2004): "Total undiscovered technically recoverable reserves in North Cuba Basin of 4.6 billion barrels of crude oil, 9.8Tcf of natural gas and 900 million barrels of natural gas liquids"



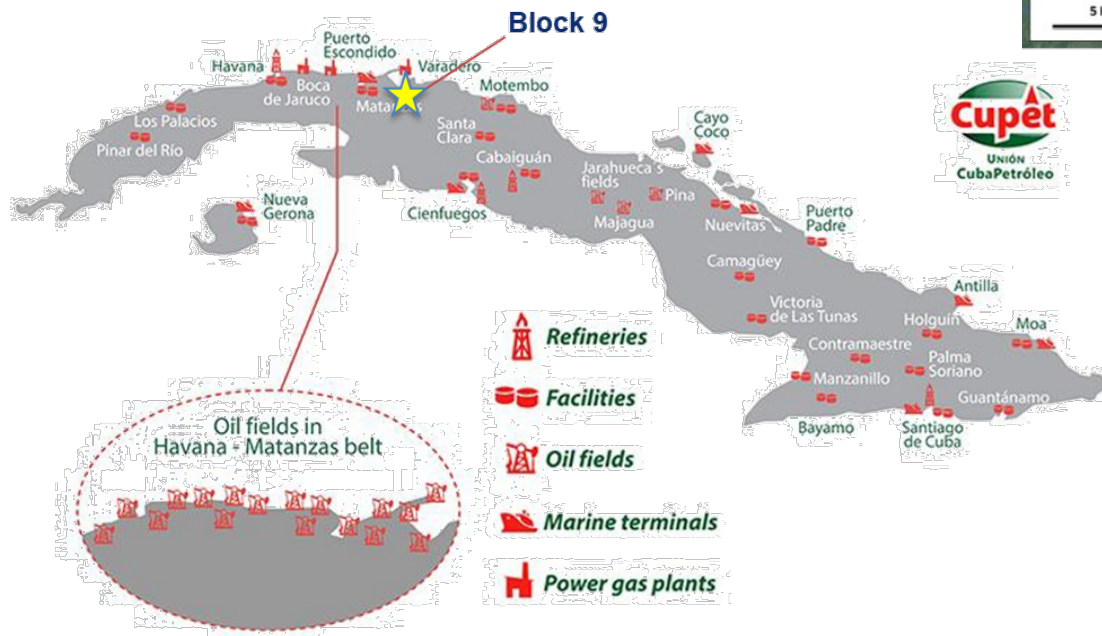
Our Key asset: Block 9 – Operating Environment and Exploration Runway

- Close (85km) to oil terminal at Matanzas (deep water port)
- Close to significant discovered fields (Varadero > 11 billion barrels of oil in place)
- Access to workforce: Cardenas approximately 5km west of Block 9 (population ~100,000)
- More than 19 leads identified for future exploration



Block 9 exploration running room

Block 9 is proximate to established and active oil field infrastructure and has a lot of running room for further exploration



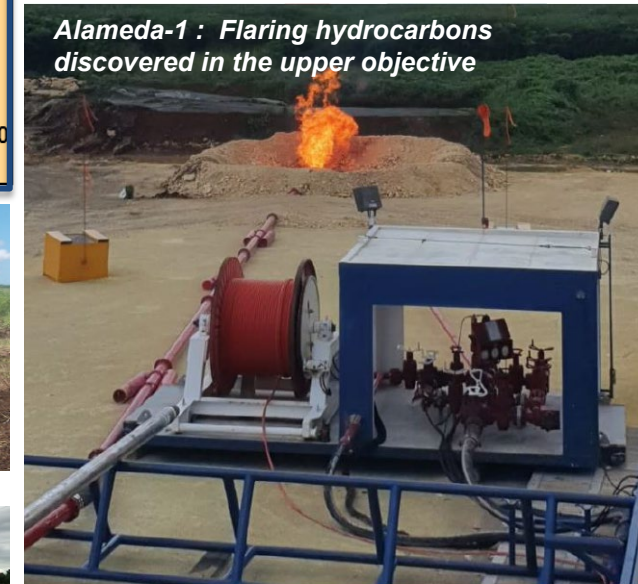
Our Journey to this point in Block 9

PSC (2,380 km²) located onshore and close to infrastructure

- Prequalified as Operator 2013
- Identified Block 9 as preferred opportunity
- 2015 Melbana Energy awarded Block 9 PSC
- Mid-2016 opened Havana office
- Appointed experienced, high calibre ex-Cupet Cuba Representative
- Substantial geological data aggregation and integration work has provided a block wide Structural/Stratigraphic interpretation during 2016/2017
- Preparations for drilling, including permitting for Alameda and Zapato wells, civil works tenders completed during 2020-2021
- Angolan National Oil Company, Sonangol, became the Joint Venture partner in 2020
- Alameda-1 and Zapato-1 drilled in 2021/2022
- Alameda-1 has been an oil discovery over 5 zones



Alameda-1 : Melbana/Sonangol Drilling Team



Alameda-1 : Flaring hydrocarbons discovered in the upper objective

Flaring of hydrocarbons from 1,832m



What We Found in 2021/2022

Alameda-1 (TD of 3,916 mMD) intercepted three geologically independent reservoirs, each with moveable oil under high pressure, that were subsequently independently assessed¹ to contain:

- Oil in place - 5.0 billion barrels
- Prospective Resource - 267 million barrels (gross unrisks best estimate) *

Amistad

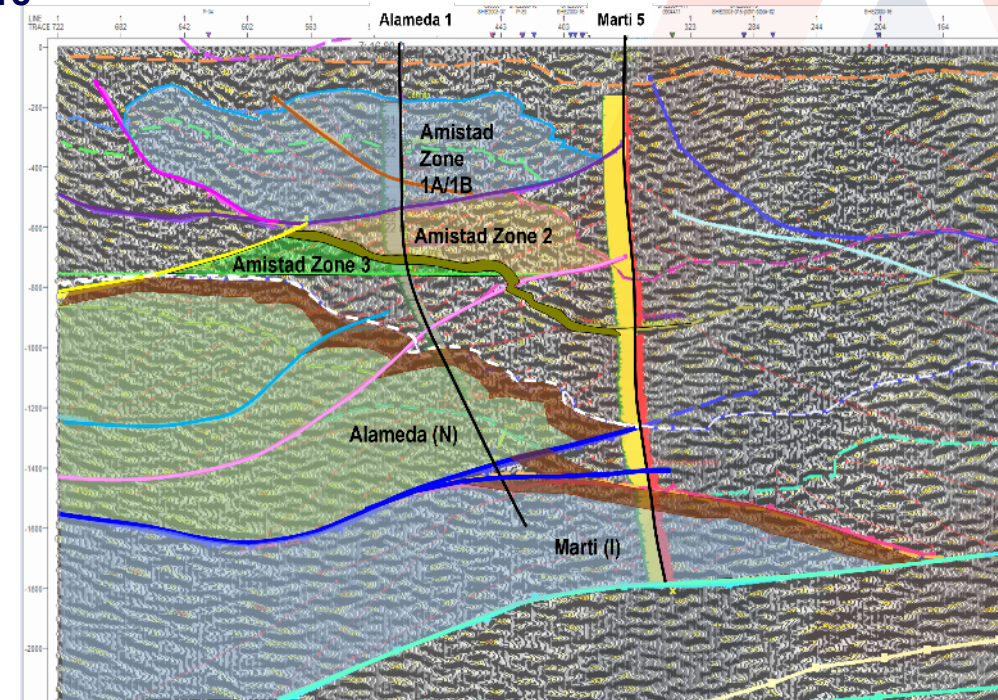
- 1.94 billion barrels of oil in place, 88 million barrels of Prospective Resource *

Alameda

- 1.87 billion barrels of oil in place, 109 million barrels of Prospective Resource *

Marti

- 1.23 billion barrels of oil in place, 70 million barrels of Prospective Resource *



This has the potential to rank amongst the world's greatest onshore oil discoveries.

About one third of the pre-drill independent estimate for the oil in place in Block 9 was found by this first exploration well.

Alameda – independently assessed ¹ resources (gross 100% unrisks, million of barrels – Melbana WI 30%)

	Low	Best	Mean	High
Oil-in-Place	2,145	5,041	6,355	12,047
Prospective Resources*	85	267	362	734

¹ McDaniel & Associates, Competent Persons Report August 2022

* See Prospective Resources Cautionary Statement (PRCS) on page 2

Latest news from Cuba: the current appraisal drilling campaign

First Appraisal Well: Alameda-2

- Goal was to log, core and test all three units of the Amistad formation, intersected during the drilling of Alameda-1 between 450m and ~2,000m, targeting 88 million barrels of Prospective Resource *
- Alameda-2 drilling commenced June 2023 and reached TD (1975m) ahead of schedule on 31st July 2023
- Results on following slide.

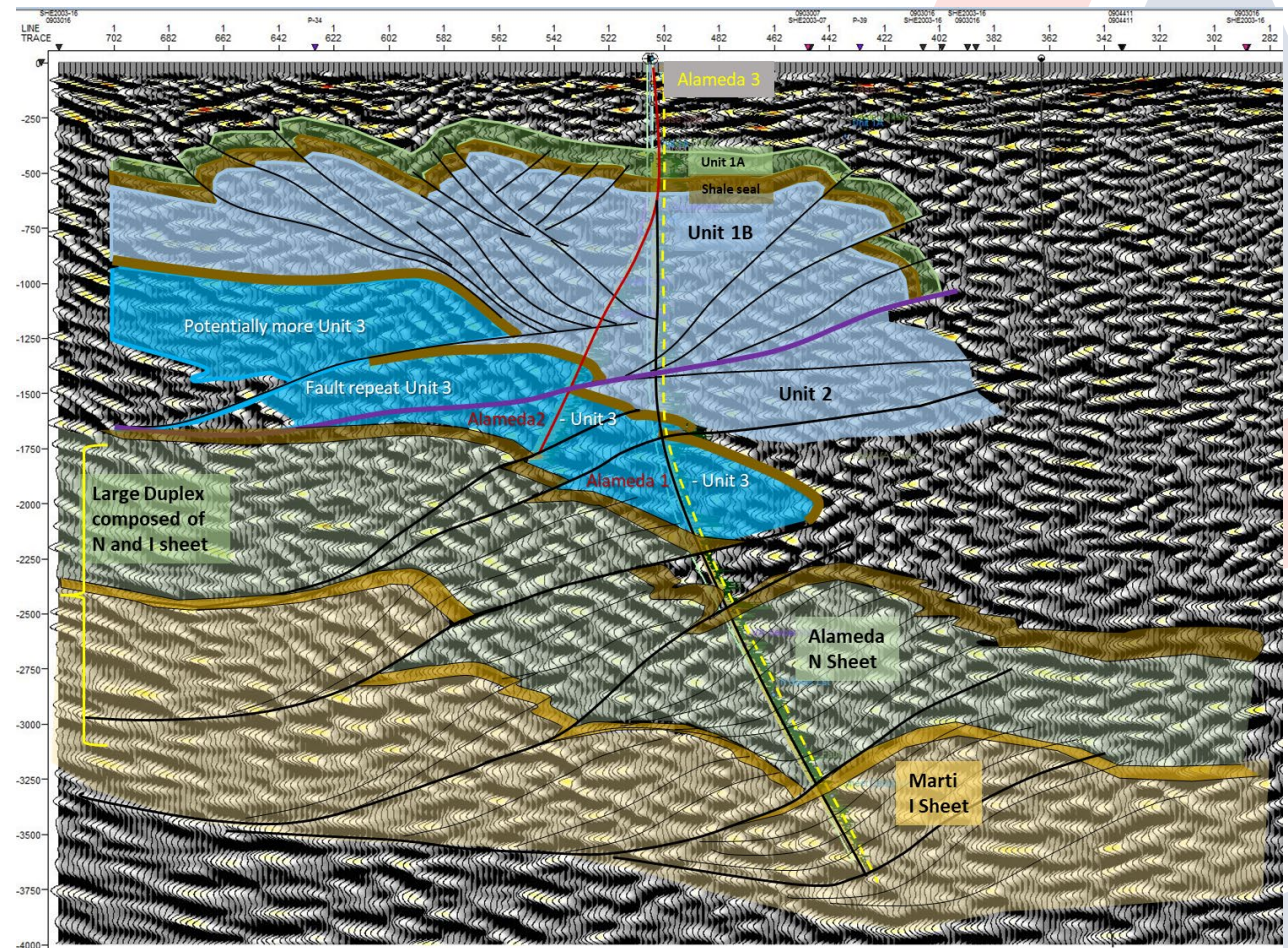
Second Appraisal Well: Alameda-3

- Drilling to commence following Alameda-2
- Test the Alameda and Marti formations
- 179 million barrels of Prospective Resource *

Same project management team and same contractors, thus leveraging the hard-earned experience they gained drilling Melbana's first two exploration wells in Cuba

* Gross unrisked best estimate Prospective Resource, See PRCS on page 2

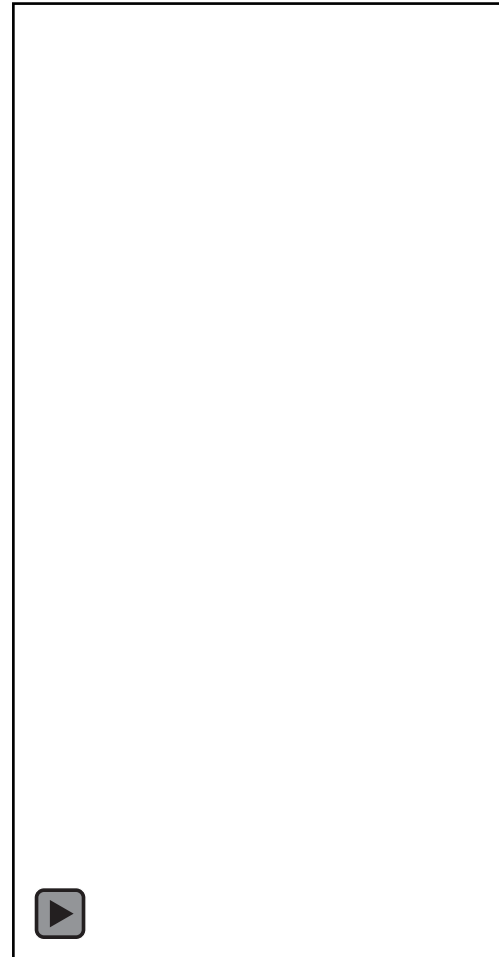
Alameda-2 drilled and completed in Unit 1B. Plan is to bring production online as soon as practicable.



Latest news from Cuba

Alameda-2 drilling and testing complete

- Unit 1A recovered 11.7° API oil with 3,783 cP viscosity at surface from a 63 metre MD interval starting from 445 metres MD. Flow rates at surface not established but 40 barrels of oil flowed unassisted to surface (through a 32/64" choke), exceeding expectations
- Unit 3 intercepted 200 metres up dip and 500 metres to the south of where Alameda-1 intercepted it. Moveable oil of a similar quality to Unit 1A confirmed. Testing indicated potential to flow at about 750 bopd
- Pre-drill prognosed Unit 2 DST did not demonstrate moveable hydrocarbons to surface at the location tested
- Unit 1B recovered 18.7° API oil with 30 cP viscosity at surface from a 70 metre TVD perforated section – less than 20% of the total Net Pay for Unit 1B (when incorporating fractures). Stabilised unassisted flow rate to surface of 1,235 bopd measured over 12 hours on a 36/64" choke, peaking at 1,903 bopd
- Logged Net Pay for the entire Amistad Formation has been increased from 109 metres to 346 metres TVD – further increasing to 615 metres when the highly fractured limestones are incorporated (45% of the gross interval)
- Unit 1B has now been completed for future production, whilst Units 1A and 3 have been suspended for potential future development and production
- Forward Plan
 - Continue to interpret logs, cores, oil samples, test results
 - Prepare rig for move to work on Alameda-1 and then move to drill Alameda-3 appraisal well
 - Prepare summary of new logs and appraisal findings for independent certification
 - Prepare Block 9 development plan: more wells to be drilled



Oil in the tanks from DST-4 (Unit-1B)



First tanker of oil from DST-4 (Unit-1B)



Alameda-2 completion

...and Australia?

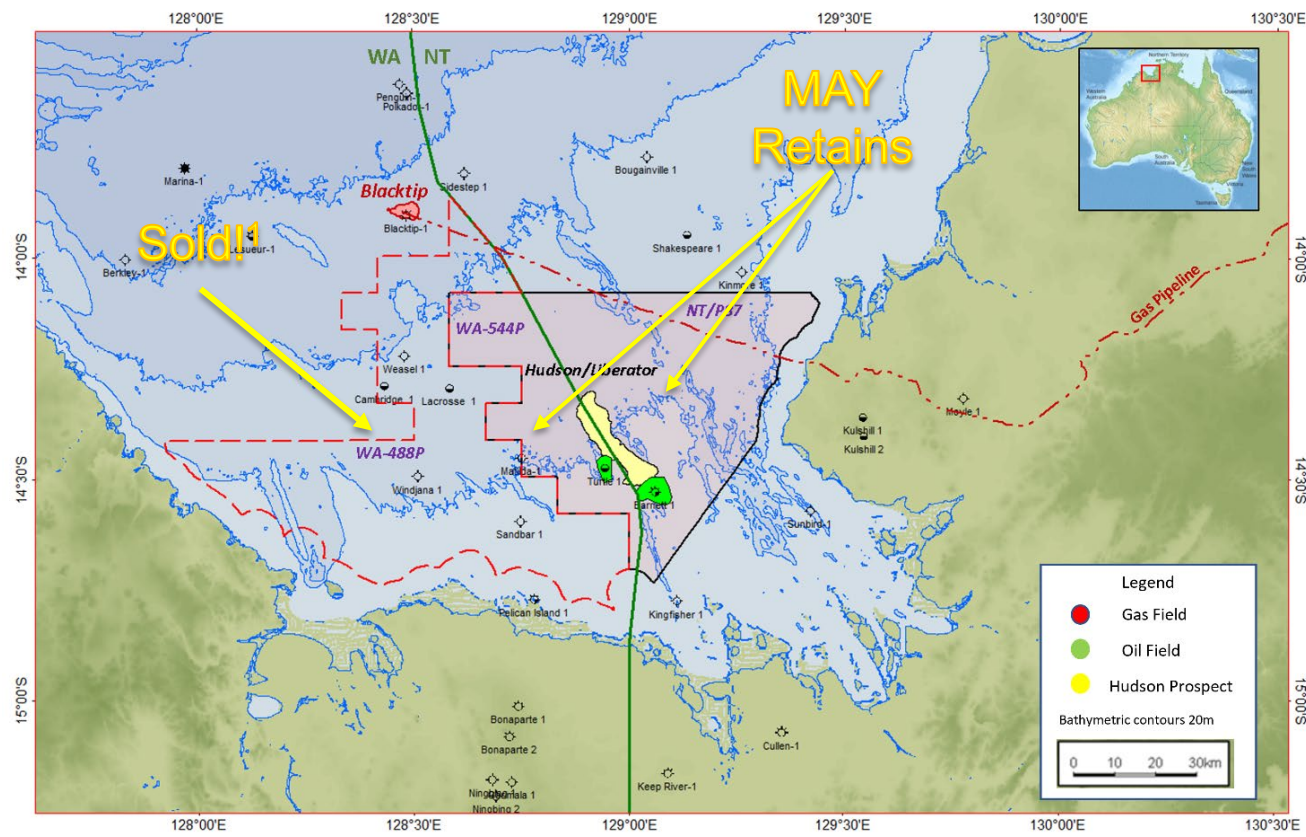
Exploration well to be drilled by late 2024

- Melbana sold its permit WA-488-P in late 2021 to a US\$75 billion market cap Houston based Fortune 500 oil and gas company that is making a country entry to drill the Beehive Prospect – up to 1.4 billion barrels of oil (Prospective Resource*, high estimate)
- Consideration received: upfront payment of US\$7.5 million plus future contingent cash payments of US\$5 million and royalties of US\$10 million per each 25 mmbobe produced
- Melbana has no funding commitments in this permit
- Melbana retains 100% of the adjacent WA-544-P & NT/P87 containing the discovered but undeveloped Turtle and Barnett discoveries and Hudson Carbonate Platform opportunity
- Melbana seeking farminee(s) to fund forward work programme (3D seismic survey and contingent drilling option)

Gross Prospective Resources*

Oil Only (mmbbl)	P90	P50	Mean	P10
STOOIP	9	371	1,573	4,845
Recoverable	2	90	395	1,184
Gas Only (bcf)	P90	P50	Mean	P10
GIIF	16	700	3,070	10,097
Recoverable	11	466	2,034	6,741

Melbana has no liability for exploration drilling in WA-488-P and would receive significant cash payments and royalties should it be successful.



* See PRCS on page 2

¹ Melbana sold the Beehive Project in late 2021, drilling expected in mid 2024

Summary

- Fully funded in Cuba and has no financial commitments to upcoming Australia well
- Melbana has a first-class geoscience team that has a track record of advancing new ideas that have been taken up by some of the world's largest oil and gas companies
- It also has a management team that has formalised agreements and funding arrangements to allow these ideas to be pursued and a project management team that has repeatedly proven it can successfully execute drilling programs in new countries (this time during an international pandemic)
- Melbana has significant interests in two appraisal wells (Cuba) in 2023 and one exploration well in Australia (Beehive) in 2024
- Of the 5.0 billion barrels of oil in place encountered by Alameda-1, the combined Prospective Resource* of 267 million barrels of oil (100%, best estimate – Melbana 30%) assumes typical Cuban recovery rates
- Given increases in net pay and oil quality encountered in oil Alameda-2 the potential for recoverable volume uplift will be analysed and discussed with reserves certifier
- Melbana also has a material interest in the outcome of the Beehive exploration well, expected to be drilled in 2024, and it has no funding commitments towards its execution. When they work, these play types tend to work big and Beehive is independently assessed* to have up to 1.4 billion barrels of Prospective Resource** (100%, high estimate)
- Melbana seeking to farm out its adjacent Hudson Carbonate Platform opportunity that we believe could host up to 395 mmbbl *** or 2,034 bcf ***
- Melbana is well placed for a transformative 2023 and 2024



Yorlany, Laura, Osvaldo and Armando
Melbana Energy - Cuba

* McDaniel & Associates

** See PRCS on page 2

*** Melbana internal assessment see PRCS on page 2



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Energy

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