

**MELBANA ENERGY LIMITED**  
**ASX Code: MAY**

**Dr Chris McKeown**  
Chief Commercial Officer

**Global Energy Week**  
**London**

June 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.

# Index

1. Who We Are
2. Cuba, Block 9
  - Why Cuba?
  - Operating Environment and Exploration Runway
  - What We Found
  - What Next for Cuba
3. ...and Australia?
4. Funding Position and Corporate Initiatives
5. Summary



Jenny, Armando, William and Emilio - Melbana Energy, Cuba

# Corporate Overview

| Company Information    |                        |
|------------------------|------------------------|
| Name                   | Melbana Energy Limited |
| Listed                 | 1998                   |
| Exchange               | ASX Code MAY           |
| Shares on issue        | 3,370 million          |
| Market Cap (23 May 23) | \$300 million          |
| Cash (31 March 23)     | \$37.5 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

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 and generated over AU\$1billion in corporate 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).

# Our Projects

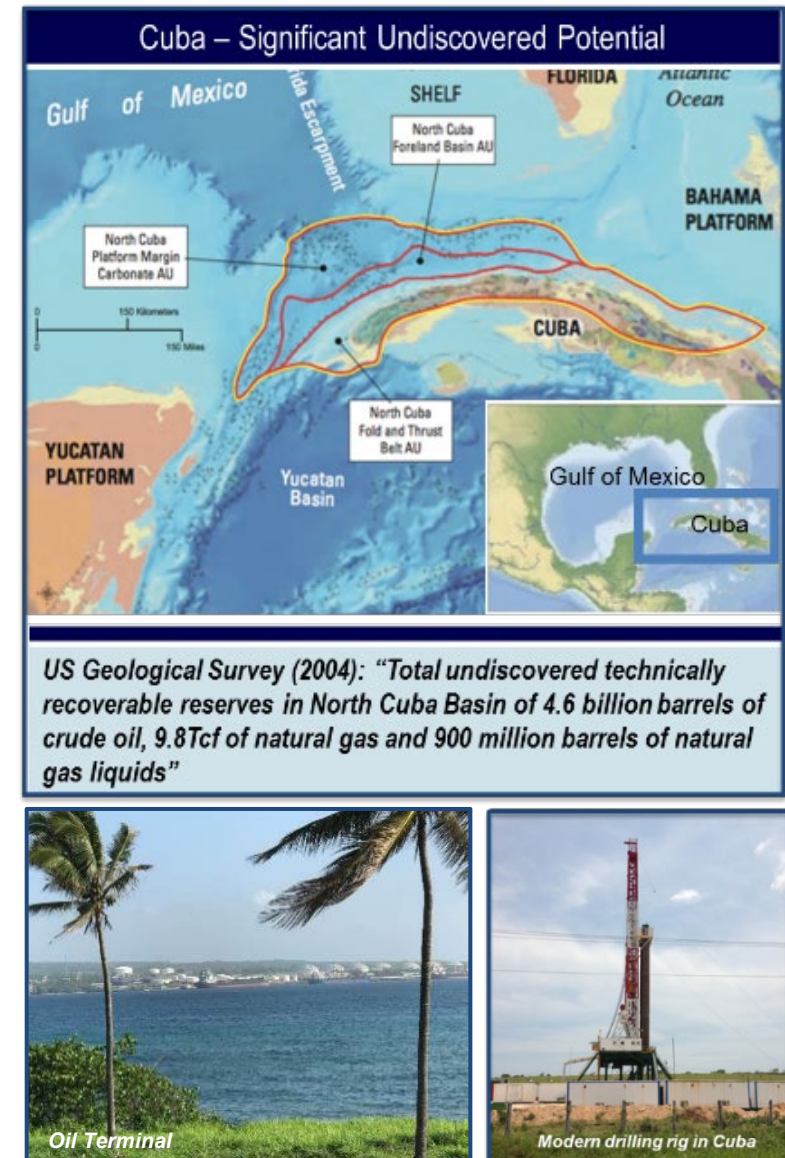


# Cuba – An Overview

## Why Cuba?

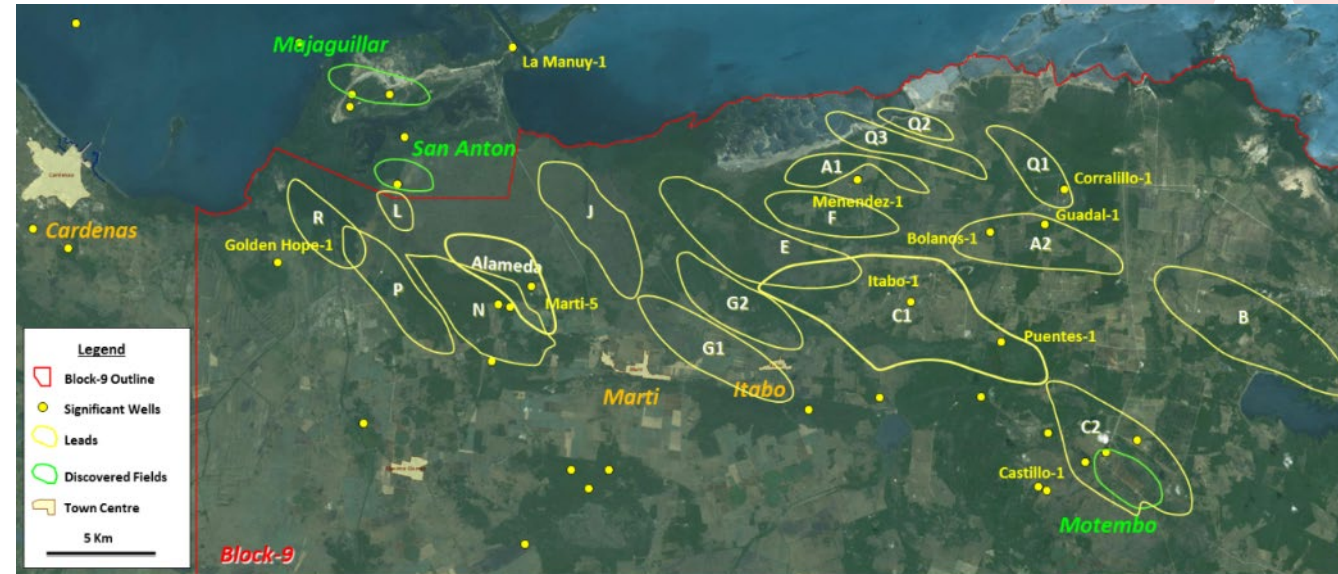
- Melbana personnel have significant experience in analogous geology and petroleum systems
- In our DNA to look where others have not looked, and apply creative thinking
- Under-explored and under-developed south-eastern margin of Gulf of Mexico
- Strong government support for oil industry
  - National 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 15-22.5% 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
- Exploration adjacent to TSX-listed Sherritt's producing area (~14,000 bbl/d)\*

\* Sherritt International Corporation Year End 2017 Results



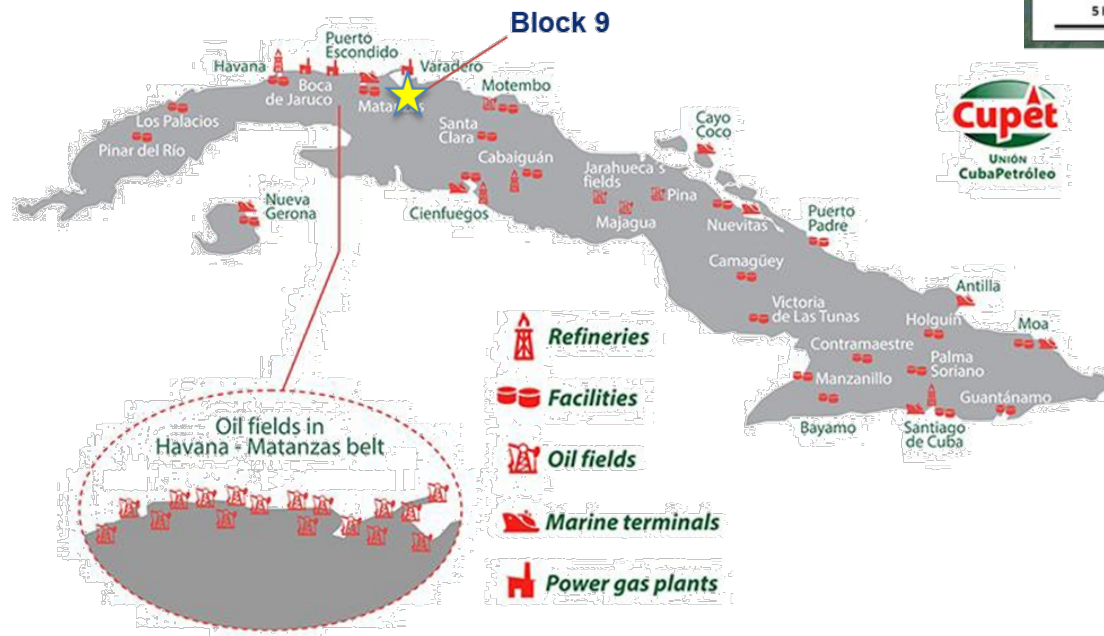
# Our Key asset: Block 9 – Operating Environment and Exploration Runway

- 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*



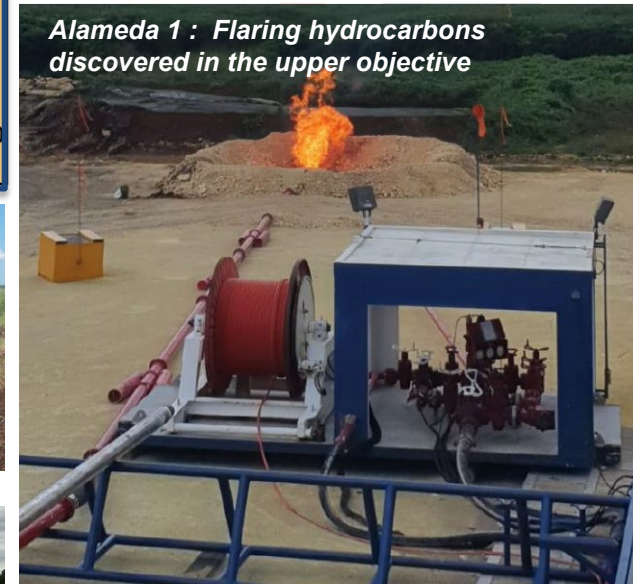
# Melbana Progress On Block 9 So Far

**PSC (2,380 km<sup>2</sup> or 588,000 acres) 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**



**Alameda 1 : Flaring hydrocarbons discovered in the upper objective**

**Flaring of hydrocarbons from 1,832m**





# What We Found

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

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

## Amistad

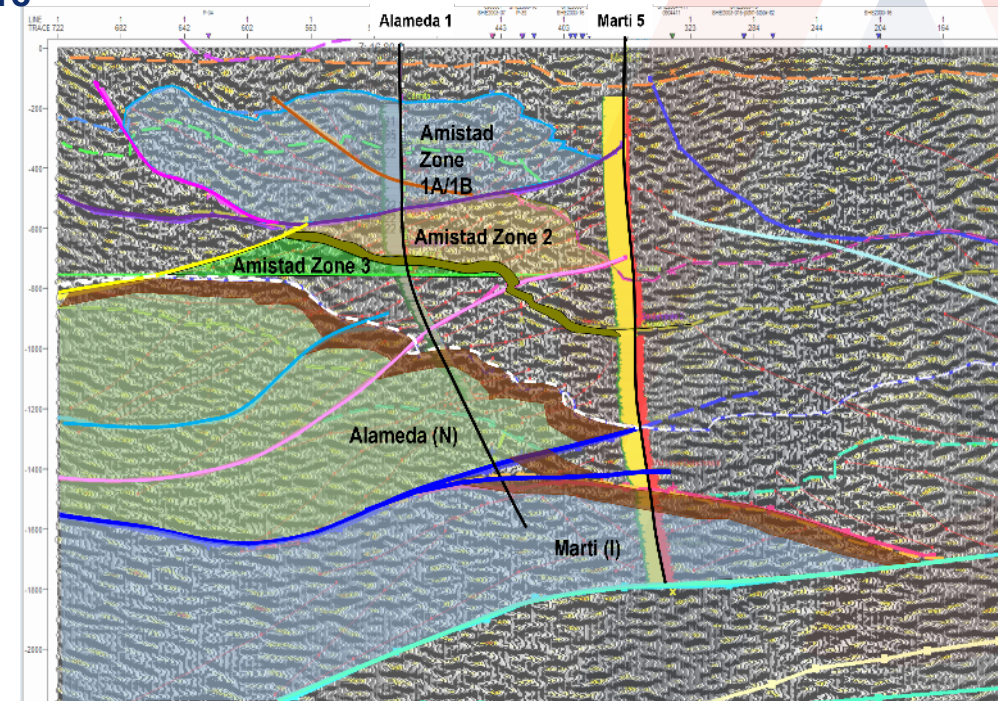
- 1.94 billion barrels of oil in place, 88 million barrels of Prospective Resource\*

## 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\*



**Alameda – independently assessed<sup>1</sup> resources  
(gross 100% unrisks, million of barrels – Melbana WI 30%)**

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

<sup>1</sup> McDaniel & Associates, Competent Persons Report August 2022  
\* See Prospective Resources Cautionary Statement (PRCS) on page 2

*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*

# What We Found (Melbana WI 30%)

**Alameda-1 exploration well increased the pre-drill prognosed Prospective Resources (gross unrisked best estimate)\* by 89%**

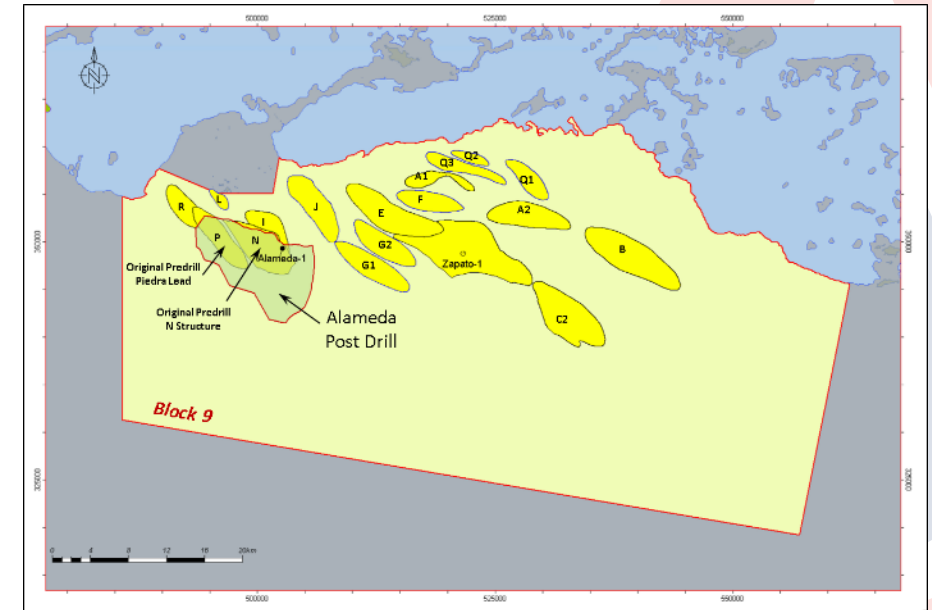
- *Pre drill*, prognosed volumes independently estimated to be **141 million** barrels of Prospective Resource (gross unrisked best estimate)\*
- *Post drill*, prognosed volumes independently estimated to be **267 million** barrels of Prospective Resource (gross unrisked best estimate)\*

**Alameda – Prospective Resources\* (gross unrisked, millions of barrels)**  
as at 1 July 2021 (pre drill)<sup>1</sup>

| Objective             | Low       | Best       | Mean       | High       |
|-----------------------|-----------|------------|------------|------------|
| Amistad 1, 2 & 3 (U1) | 24        | 60         | 71         | 132        |
| Alameda (N)           | 4         | 9          | 11         | 20         |
| Marti (Alameda / I)   | 39        | 72         | 79         | 128        |
| <b>Total</b>          | <b>67</b> | <b>141</b> | <b>161</b> | <b>280</b> |

**Alameda – Prospective Resources\* (gross unrisked, millions of barrels)**  
as at 1 August 2022 (post drill)<sup>1</sup>

| Objective        | Low       | Best       | Mean       | High       |
|------------------|-----------|------------|------------|------------|
| Amistad 1, 2 & 3 | 30        | 88         | 119        | 240        |
| Alameda          | 34        | 109        | 148        | 297        |
| Marti            | 21        | 70         | 95         | 197        |
| <b>Total</b>     | <b>85</b> | <b>267</b> | <b>362</b> | <b>734</b> |



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

\* See PRCS on page 2

<sup>1</sup> McDaniel & Associates

# 2022 in Review

Reached target depth on both of the first two exploration wells in Cuba, despite challenging international operating environment due to COVID-19

## Alameda - 1

- Achieved target total depth of 3,916mMD / 3,694 mTVD in April 2022
- Intersected moveable oil in three independent reservoirs for total net pay of 278 mTVD
- Formation pressures encountered were very high in each reservoir
- Strong oil shows (oil flowed to surface)

## Zapato - 1

- Achieved target total depth in November 2022
- Slow drilling due to thicker than expected volcanic sequence
- Suspended well, leaving possibility of re-entry at a later date



Chairman and Ricardo - Drilling Manager, Cuba



Oil on the shakers at Alameda - 1

# What Next for Cuba?

## First Appraisal Well: Alameda-2

- Drilling commenced June 2023
- Target depth of circa 2,100m, currently at 454mMD, casing set and cemented on 26 June 2023
- Test all three units of the Amistad formation
- 88 million barrels of Prospective Resource\*  
(gross unrisks best estimate – Melbana 30%)

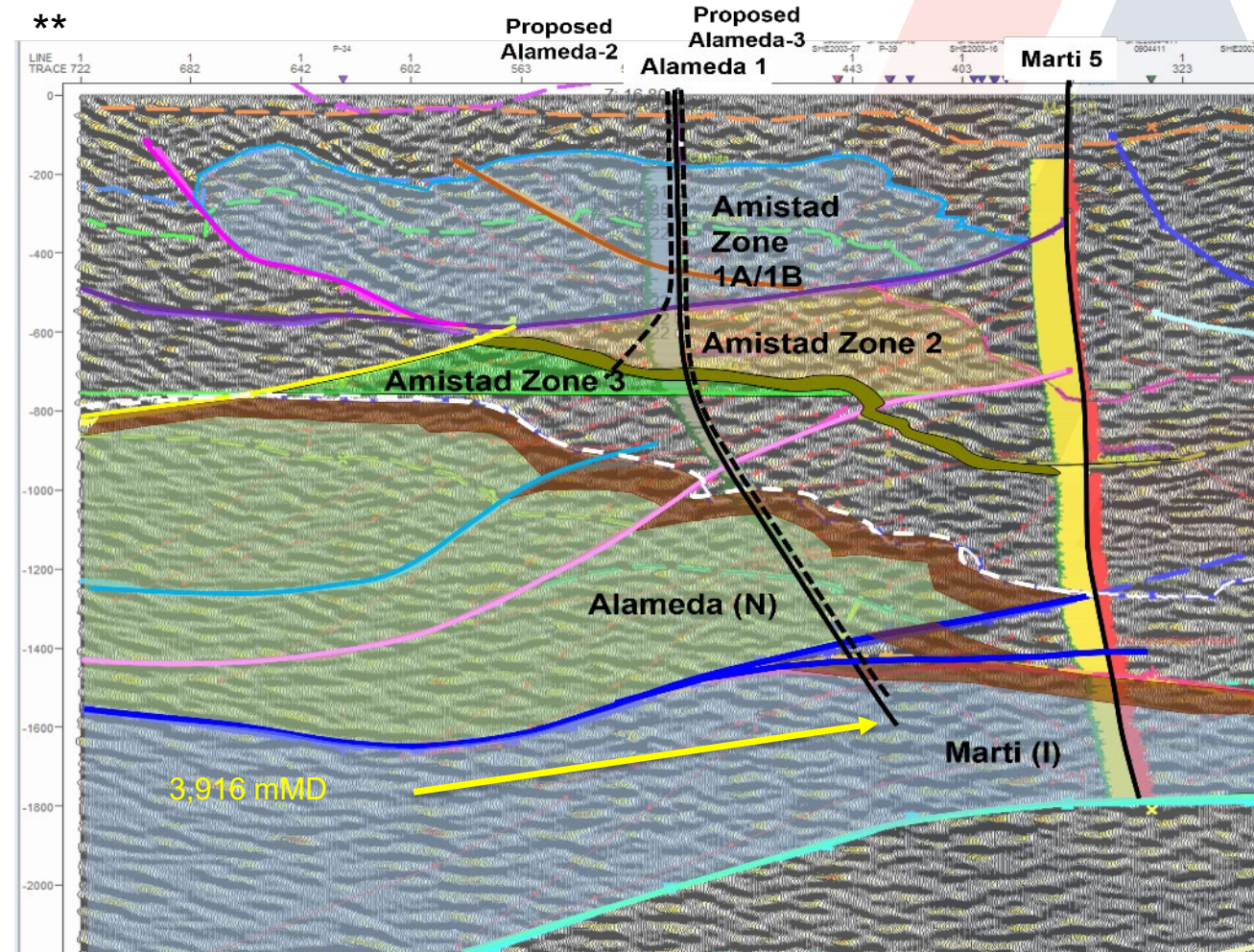
## Second Appraisal Well: Alameda-3

- Drilling to commence following Alameda-2
- Test the Alameda and Marti formations
- 179 million barrels of Prospective Resource\*
  - (gross unrisks best estimate – Melbana 30%)

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

- See PRCS on page 2
- \*\*Axis represents time not depth

*Two wells to be drilled in 2023 to appraise the three oil reservoirs encountered by Alameda-1, any of which can be immediately put on production if successful*



# ...and Australia?

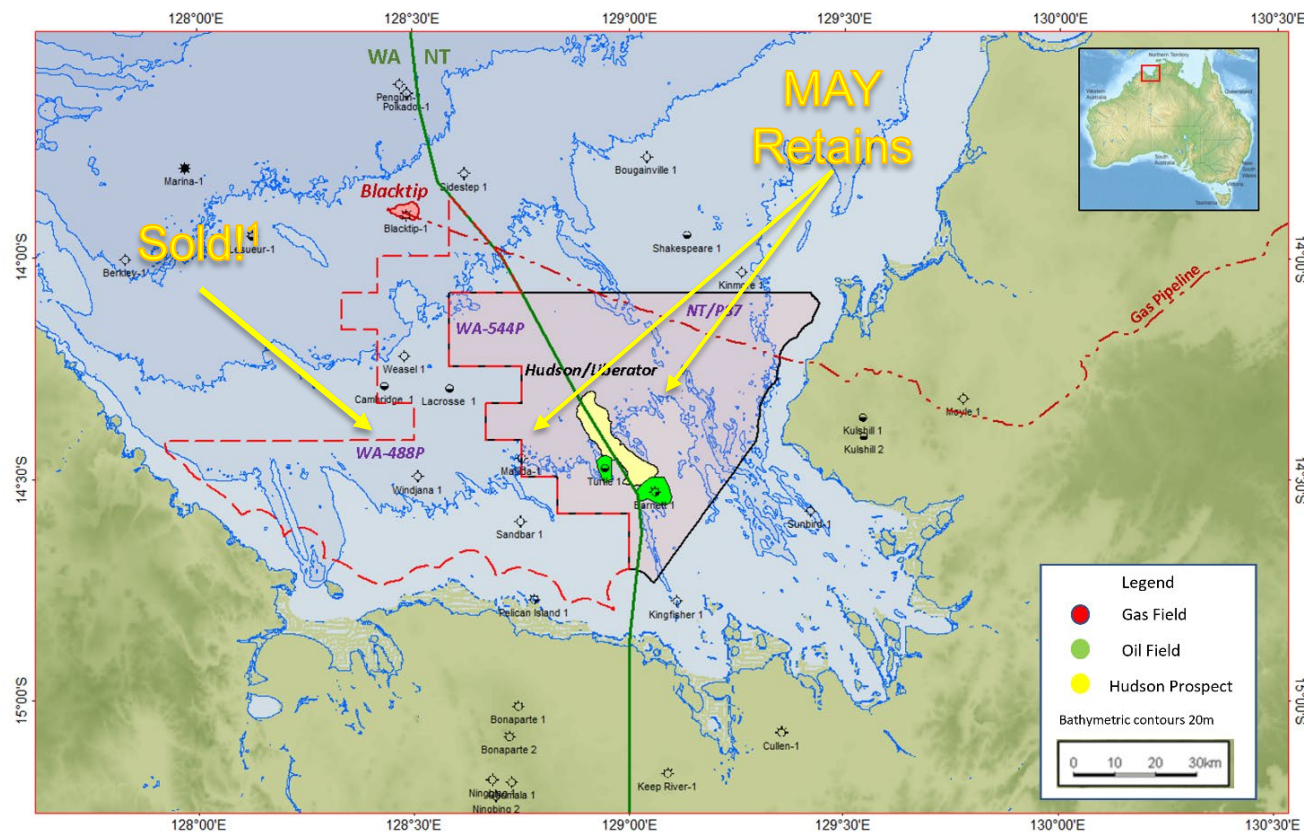
## Exploration well to be drilled by late 2024

- Melbana sold its permit WA-488-P in late 2021 to a US\$80 billion market cap Houston based Fortune 500 oil and gas company that is making a country entry to drill this well
- Consideration:
  - upfront payment of US\$7.5 million and
  - future contingent cash payments of US\$5.0m plus
  - payments of US\$10 million per each 25 mmbœ 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 | <b>1,573</b> | 4,845  |
| Recoverable      | 2   | 90  | <b>395</b>   | 1,184  |
| Gas Only (bcf)   | P90 | P50 | Mean         | P10    |
| GIIF             | 16  | 700 | <b>3,070</b> | 10,097 |
| Recoverable      | 11  | 466 | <b>2,034</b> | 6,741  |

*Melbana has no liability to the drilling of this exploration well and would receive significant cash payments should it be successful*



\* See PRCS on page 2

<sup>1</sup> Melbana sold the Beehive Project in late 2021, drilling expected in mid 2024

# Funding Position and Corporate Initiatives

- Melbana has a 30% interest in Block 9 and is the operator of Block 9
- As at 31 March 2023 Melbana had available cash of \$37.5 million
- Adequately funded for its share of the 2023 appraisal drilling program in Cuba
- Company is growing!
  - New Exploration Manager appointed Q3 2022 to leverage the abilities of Melbana's first class geoscience team
  - New General Counsel appointed Q4 2022 to manage contractor relations, regulatory compliance and partner communications
  - New Chief Commercial Officer appointed Q2 2023 to build government, community and industry relationships, commercialise projects and look for deals

*Melbana is fully funded for its share of its 2023 work program*



Flaring operations whilst drilling Alameda-1 - Block 9, Cuba

# Summary

- 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.
- Fully funded in Cuba and has no financial commitments to upcoming Australia well.
- 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.
- If the oil Alameda-1 encountered proves to be lighter and/or more greatly charged then this number could be higher.
- 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 400 mmbbl\*\*\* or 2,034 bcf\*\*\*
- Melbana is well placed for a transformative 2023



Yorlany, Laura, Osvaldo and Reynaldo  
Melbana Energy - Cuba

\* McDaniel & Associates

\*\* See PRCS on page 2

\*\*\* Melbana internal assessment see PRCS on page 2



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