

## Cuba Update: Block 9 farmout

### Highlights:

- Letter of Intent (LOI) for farmout of Block 9 signed with Anhui Guangda Mining Investment Co. Ltd., (“AGMI”) a Chinese company providing oilfield services and equipment both in China and internationally
- LOI key terms
  - Melbana’s top three high impact exploration wells (Alameda, Zapato, Piedra) to be drilled by July 2020, with at least two of these wells to be drilled in 2019
  - AGMI to replace Melbana cash backed bank guarantee
  - Melbana back-costs recouped in event of development
  - Melbana to retain 12.5% of profit oil under the Block 9 Production Sharing Contract
  - Melbana fully carried for 100% of all activities and costs for remainder of term of Block 9 PSC (20+ years) while AGMI remains a participant in Block 9
- Cuban regulatory approval obtained to execute LOI, targeting execution of binding agreement before end of 2018
- AGMI considering using the April 2018 drilling slot offered to Melbana by a local operator in addition to other options available at their disposal.
- Block 9 recently independently assessed<sup>1</sup> to have 15.7 billion barrels of oil in place (best estimate) and recoverable Prospective Resources of 718 million barrels.
- LOI with program of three firm exploration wells provides multiple opportunities for a significant discovery in underexplored Block 9 onshore acreage

MELBOURNE, AUSTRALIA (8 October 2018)

Melbana Energy Limited (ASX: **MAY**) (“**Melbana**”) is pleased to advise it has signed a non-binding Letter of Intent (LOI) with Anhui Guangda Mining Investment Co Ltd (“**AGMI**”) with respect to its Block 9 Production Sharing Contract (“**Block 9 PSC**”) in Cuba.

The terms of the LOI state that AGMI will:

1. Fully fund the drilling of a minimum of three exploration wells in Block 9, one on each of Melbana’s three highest ranked and high impact targets (Alameda, Zapato and Piedra) prior to July 2020, with two exploration wells to be drilled prior to November 2019;

2. Replace the current cash backed bank guarantee for US\$2.275Million provided by Melbana for the benefit of Cupet with an equivalent bank guarantee using its own banking facilities;
3. Fully fund 100% of all exploration, appraisal, development and production activity and costs and provide any required bank guarantees for Block 9 while AGMI remains a participant in the Block 9 PSC (20+ years remaining);
4. At its election, assume operatorship of Block 9.

In the event of a successful development, Melbana would recover its back costs of ~US\$3.5million from the authorized cost recovery pool as well as 12.5% of the profit oil.

Melbana and AGMI are targeting to complete a binding definitive agreement by 1 December 2018 with AGMI considering using the April 2018 drilling slot made available to Melbana by a local operator in addition to the other options available at their disposal.

The farmout follows from the recently released prospective resource assessment of Block 9 by independent expert McDaniel & Associates Consultants, who have significant Cuban experience certifying reserves for TSX listed Sherritt International. Their independent assessment identified a best estimate Oil in Place of 15.7 billion barrels<sup>1</sup> and Prospective Resources of 718 million barrels<sup>1</sup> of oil equivalent from three prospects and 16 leads. The assessment included a best estimate prospective resources of 270 million barrels<sup>1</sup> of oil in the five targeted objectives contained within Melbana's preferred high impact exploration prospects Alameda (3 objectives in well), Zapato and Piedra.

An extract from the McDaniels & Associates report<sup>1</sup> is attached.

**Melbana Energy's CEO, Robert Zammit, said:**

*"We are very pleased to have agreed LOI terms for the Block 9 farmout with AGMI where the minimum commitment to fully fund the drilling of our three preferred high impact prospects occurs at no further cost to Melbana shareholders. As AGMI proceeds with further activity in the block, Melbana will also be fully carried for all further activity and costs, including any appraisal, development, production costs and bank guarantee obligations while earning a 12.5% share of the profit oil under the Block 9 PSC and recovering its back costs of approximately US\$3.5Million in the event of a commercial development."*

*AGMI is prepared to commit significant resources to complete a drilling and development program in Cuba and has substantial experience operating onshore in multiple jurisdictions. We have a mutual understanding of the opportunity that Block 9 provides for significant oil discoveries and we look forward to finalizing a binding agreement late in the current quarter."*

**About Anhui Guangda Mining Investment Co. Ltd.**

Anhui Guangda Mining Investment Co. Ltd. reports its assets as in excess of US\$1 billion, oil production of 6,000 barrels/day and over 1000 employees. It operates through its subsidiaries over 13 exploration and exploitation blocks in Kyrgyzstan and other areas of the Americas. It owns 20 onshore drilling rigs of varying capacity allowing for the drilling of wells in excess of 7000 meters. It is expanding its exploration and production business to other countries and regions including Africa and the Middle East. It has developed strategic business relationships with major state-owned Chinese companies such as CNPC, Sinopec, and CNOOC.

## McDaniel & Associates Report – Extract<sup>1,2</sup>

Melbana Energy Ltd. Cuba and Australia Resources Summary of Prospective Resources Estimates - Property Gross Values Effective April 30, 2018								Table 1c
Prospective Resources - Total BOE(6)			Prospective Resources - Unrisked (1) (2)				Chance of Discovery %	Risky Resources Mean (2) MMboe
Prospect/Lead	Working Interest Maturity	Low (P90) MMboe	P50 MMboe	Mean MMboe	High (P10) MMboe			
<b>Cuba</b>								
Alameda	Prospect	39	72	79	128	32%	25	
A1	Lead	4	11	13	23	12%	2	
A2	Lead	21	50	60	112	12%	7	
B	Lead	52	126	148	270	12%	18	
Zapato	Prospect	38	95	114	214	23%	26	
C2	Lead	29	70	84	153	16%	14	
E	Lead	7	16	19	35	16%	3	
F	Lead	14	34	41	76	15%	6	
G1	Lead	11	28	31	58	16%	5	
G2	Lead	9	22	26	49	16%	4	
J	Lead	19	45	54	100	23%	12	
L	Lead	1	3	3	6	23%	1	
N	Lead	4	9	10	19	23%	2	
Piedra	Prospect	14	34	40	76	23%	9	
Q1	Lead	6	15	18	33	12%	2	
Q2	Lead	1	3	4	8	12%	0	
Q3	Lead	4	9	11	20	12%	1	
R	Lead	8	18	22	42	23%	5	
U1	Lead	24	60	71	132	15%	11	
<b>Sub-Total</b>		<b>305</b>	<b>718</b>	<b>848</b>	<b>1,553</b>		<b>153</b>	
<b>Australia</b>								
Beehive	Prospect	91	388	704	1,645	20%	142	
<b>Sub-Total</b>		<b>91</b>	<b>388</b>	<b>704</b>	<b>1,645</b>		<b>142</b>	
<b>Total</b>		<b>397</b>	<b>1,105</b>	<b>1,551</b>	<b>3,199</b>		<b>295</b>	

(1) There is no certainty that any portion of the prospective resources will be discovered. If discovered, there is no certainty that it will be economically viable or technically feasible to produce any portion of the resources.

(2) The risky resources are partially risky prospective resources that been risky for chance of discovery, but have not been risky for the chance of development.

(3) Sub-Total and Total based on the probabilistic aggregation of zones within a prospect and arithmetic aggregation of the individual prospects to the Sub-Total and Total level.

(4) The Unrisky Total is not representative of the Portfolio Unrisky Total and is provided to give an indication of the resource range assuming all the prospects are successful.

(5) Volumes listed are full life volumes, prior to any cutoffs due to economics.

(6) Based on a Mcf to BOE conversion of 6 to 1. A BOE conversion of 6 to 1 is based on an energy equivalency conversion primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.

<sup>1</sup>Independent Expert McDaniel & Associates Competent Persons Report June 30, 2018

<sup>2</sup>Prospective Resources Cautionary Statement: 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.

## Overview of Block 9 PSC, Onshore Cuba

Block 9 PSC (Block 9) covers 2,380km<sup>2</sup> onshore of the north coast of Cuba. It is in a proven hydrocarbon system with multiple producing fields within close proximity, including the Majaguillar and San Anton fields immediately adjacent to it and the multi-billion barrel Varadero oil field further west (see figure 1). Block 9 contains the Motembo field, the first oil field discovered in Cuba. Melbana is prequalified as an onshore and shallow water operator in Cuba and was awarded Block 9 on 3 September, 2015. Melbana’s established position in Cuba provides it with a strong early mover advantage.

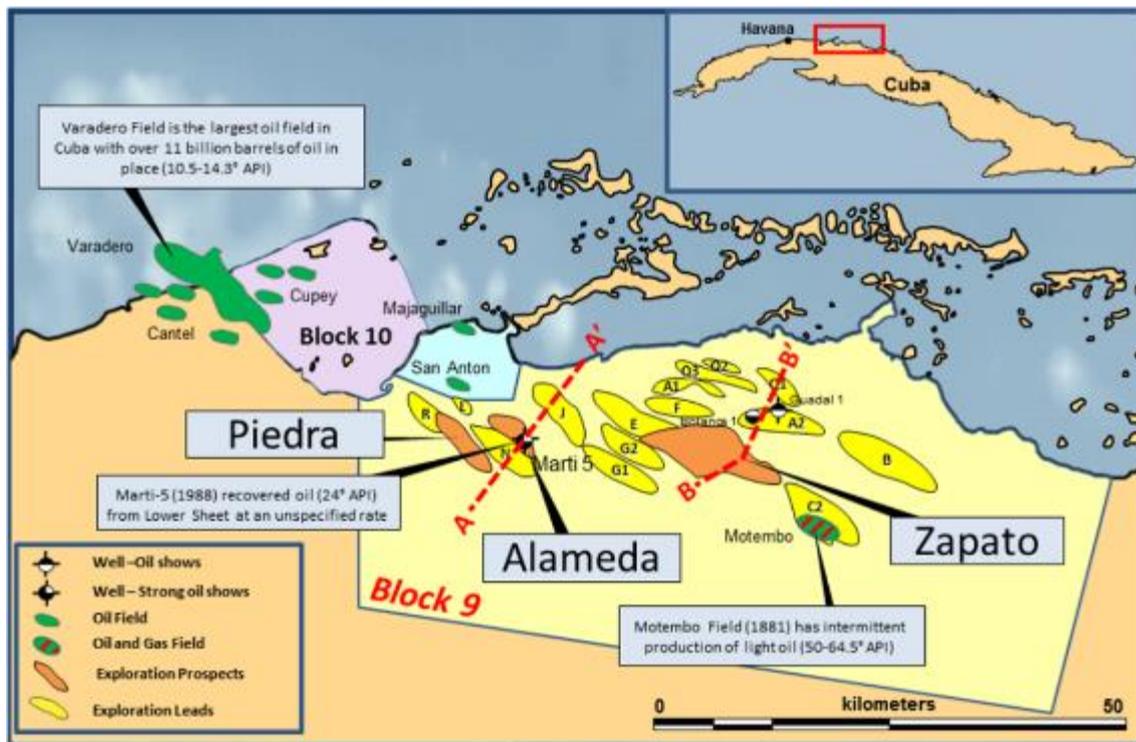


Figure 1 – Block 9 map showing location of key drilling targets

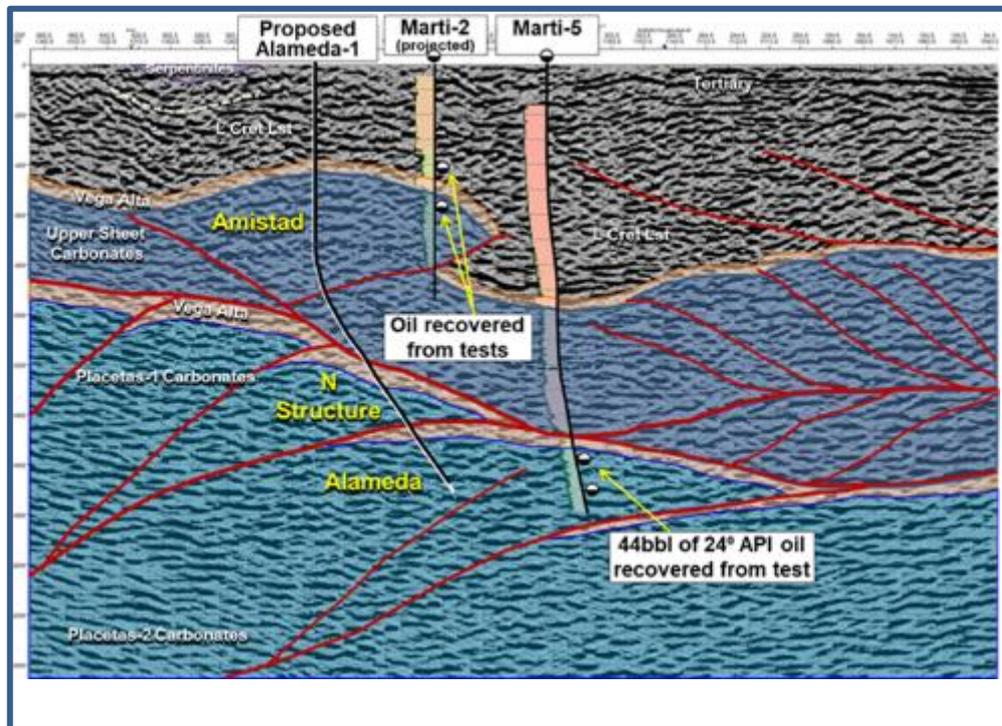
## Background

### Alameda Prospect - highest ranked prospect in Block 9

The Alameda Prospect is currently the highest ranked exploration target in Block 9 PSC. Alameda is a large structure located in the western part of Block 9 and is in a similar structural position to the Varadero field, the largest oil field in Cuba, approximately 35km away.

The proposed Alameda-1 well which will test a combined exploration potential of over 2.5 billion barrels Oil-in-Place and 140 million barrels of recoverable oil of recoverable oil on a 100% unrisks, best estimate basis and 279 million recoverable barrels aggregate high side potential (Table 1).

The primary objective at Alameda ranges in depth from approximately 3,000 to 3,700 meters. The presence of oil in the Alameda structure is supported by the Marti-5 well drilled within the prospect closure in a down flank position nearly 30 years ago and which recovered 24° API oil and had numerous oil shows extending over a 850 metre gross interval from the Lower Sheet section (see Figure 1).



**Figure 1: Alameda-1 trajectory tests three objectives**

This exploration well has been designed as a mildly deviated well, with a total measured depth of 4,000m to enable the well to penetrate three independent exploration objectives; the primary Alameda objective as well as the shallower N and Amistad (formerly U1) objectives.

While characterised as an exploration well, the chance of success at Alameda-1 benefits from two old wells, Marti-2 and Marti-5, both of which recovered oil from Amistad/ U1 and Alameda objectives respectively. The Amistad/U1 objective is a structure indicated on seismic as being updip of the tested oil recoveries in the Marti-2 well. Alameda-1 is estimated to take approximately 80 days to drill. In the event of a discovery at Alameda there would be significant follow up potential, with a number of additional leads in close proximity.

Objective	Chance of Success	Recoverable Prospective Resource (MMstb) <sup>1,2</sup>			
	%	Low	Best	High	Mean
<b>Amistad/U1</b>	15%	24	60	132	71
<b>N</b>	23%	4	9	19	10
<b>Alameda</b>	32%	39	72	128	79

**Table 1: Exploration Prospective Recoverable Resource estimates for objectives of Alameda-1 well**

<sup>1</sup>Independent Expert McDaniel & Associates Competent Persons Report June 30, 2018

<sup>2</sup>**Prospective Resources Cautionary Statement:** 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.

## Zapato Prospect

The proposed Zapato-1 well location is in the central portion of Block 9 and is designed to test a Lower Sheet closure in close proximity to the shallower Motembo oil field, which has historically produced a high quality light oil. The Zapato feature has a crest at approximately 2,000 metres and is a robust structure with nearly 1,000 metres of vertical relief.

Recently completed gravity and magnetic study commissioned by Melbana and undertaken by Cuba's specialist technical laboratory CEINPET over the Zapato prospect has indicated a strong gravity and magnetic alignment with the structural interpretation Melbana's technical team derived from seismic and surface data. This result is supportive of Melbana's assessment of the prospectivity of Zapato as a large carbonate duplex structure along strike from the Motembo discovery which produced light 56°API oil.

Block 9 has high quality detailed pre-existing gravity and magnetic data sets. In the type of geology present in Cuba it is common to use a combination of seismic, magnetic and gravity data sets to define prospectivity.

Carbonate duplex structures such as Zapato are being targeted by Melbana due to their potential to contain Varadero style oil accumulations and are able to be identified using this technique by their combined gravity and magnetic response which differentiates them from low prospectivity intervals.

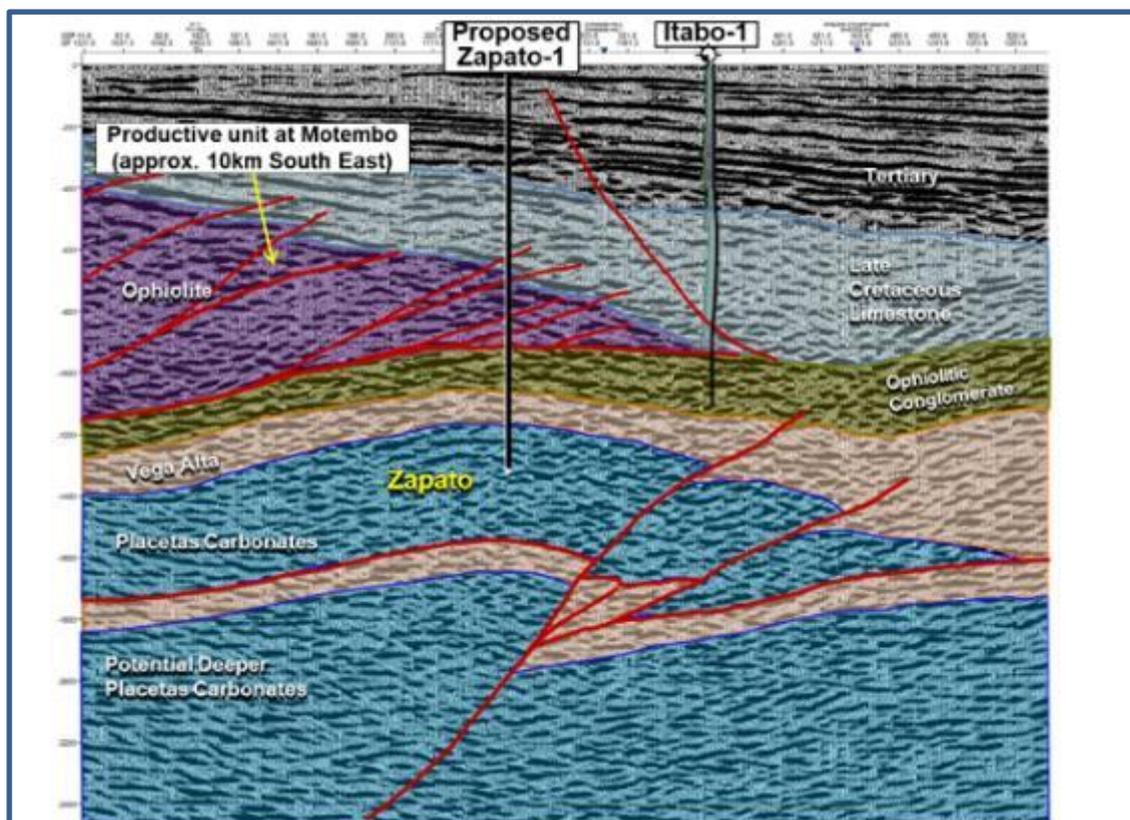


Figure 2 – Zapato Prospect Seismic Profile and Well Path

	Chance of Success	Recoverable Prospective Resource (MMstb) <sup>1,2</sup>			
	%	Low	Best	High	Mean
<b>Zapato</b>	23%	38	95	214	114

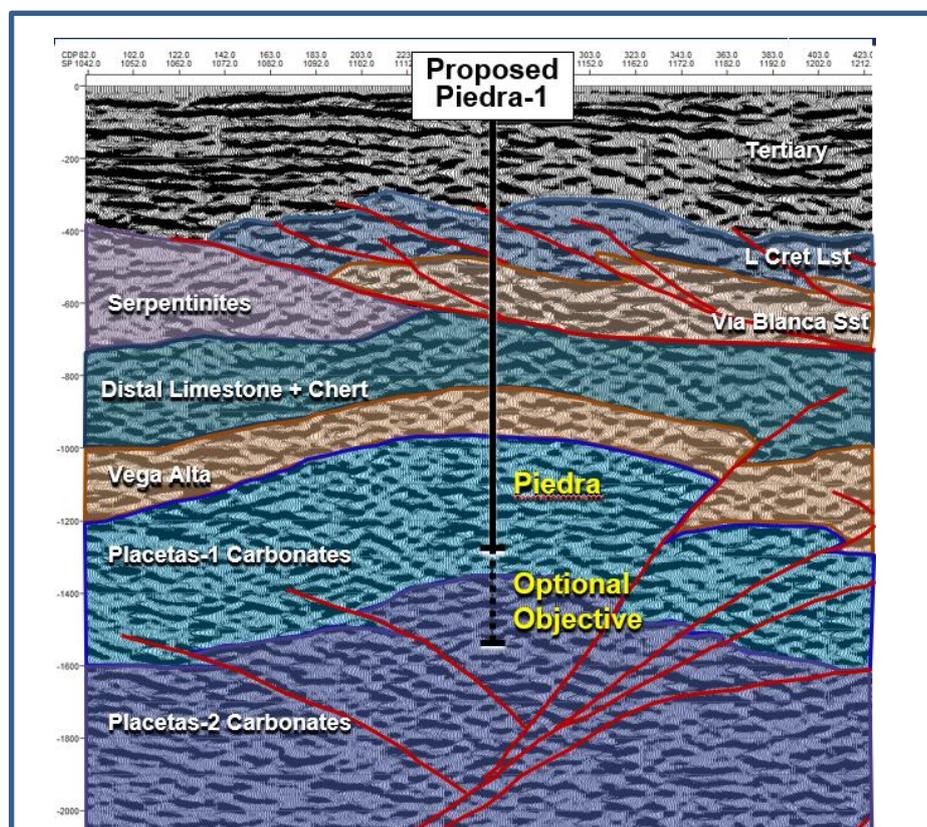
**Table 2: Exploration Prospective Recoverable Resource estimates for Zapato**

<sup>1</sup>Independent Expert McDaniel & Associates Competent Persons Report June 30, 2018

<sup>2</sup>**Prospective Resources Cautionary Statement:** 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.

## Piedra Prospect

The Piedra prospect is a large robust structure targeting fractured carbonate objective, adjacent to the San Anton oil discovery. It is a seismically mapped structure that coincides with a large closed gravity high, which were successfully drilled in past (eg Varadero). The San Anton oil field recovered 19.5° API oil from shallow section and at Piedra a lighter more mature can be expected at its depth. The crest of Piedra is at approximately 1,700 metres with nearly 1,400 metres vertical relief.



**Figure 3 – Piedra Prospect Seismic Profile and Well Path**

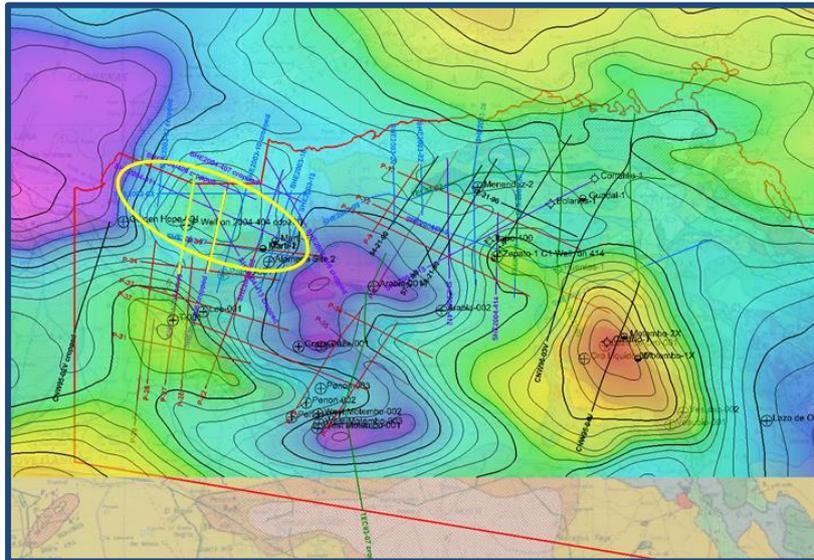


Figure 4 – Gravity high over Piedra Prospect

	Chance of Success	Recoverable Prospective Resource (MMstb) <sup>1,2</sup>			
	%	Low	Best	High	Mean
<b>Piedra</b>	23%	14	34	76	40

Table 3: Exploration Prospective Recoverable Resource estimates for Piedra

<sup>1</sup>Independent Expert McDaniel & Associates Competent Persons Report June 30, 2018

<sup>2</sup>**Prospective Resources Cautionary Statement:** 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.