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Operations Update - Block 9

Highlights

- **Alameda-3 Appraisal Well**
  - **Wireline logging successfully completed in Alameda Structure. Good quality data obtained. Preliminary analysis encouraging.**
  - **Technical difficulties resulting in a delay to drilling operations now resolved. Drilling operations expected to resume by week's end.**
  - **Total depth of well projected to be reached about two weeks after drilling operations resume. First flow tests to be conducted immediately thereafter.**
- **Amistad Field Development**
  - **Workshops and field trips in Cuba with partner and regulator regarding preparations for commencement of field development successfully undertaken this month.**
  - **Plan remains to initially develop Unit 1B of the Amistad Structure with first oil sales by end 2024.**

Melbana Energy's Executive Chairman, Andrew Purcell, commented: *"It's been a busy month with a lot of my colleagues from Australasia joining me in Cuba to help run successful workshops and field visits for our partner and then again for the Cuban regulator. We appreciated our partner sending a large and senior delegation from Angola to better understand our field development plans and the status of their preparations. There's still a lot to be done to achieve our goal of selling our first barrel of oil in 2024, but this was a big and important step towards achieving that exciting goal.*

Preliminary assessment of the logging results from the Alameda sheet show that we have acquired a suite of high quality data. I am encouraged by the early assessments of our geoscientists.

The technical issue that caused a delay to our drilling operations has now been resolved. The program is expected to be back on track by the end of this week. When I listen to our project management team develop, refine then rank possible solutions to drilling issues when they occur, in this case about three kilometres underground, I am acutely aware of and appreciative of their decades of experience.

It's time to get to the planned bottom of this well so we can start the flow tests."

SYDNEY, AUSTRALIA (22 May 2024)

Melbana Energy Limited (ASX: MAY) (**Melbana** or **Company**), a 30% interest holder in and Operator of Block 9 PSC onshore Cuba, is pleased to provide this operational update.

Alameda Sheet – well logs highlight fractured nature of interval

Logging of the 8.5" hole section of Alameda-3 within the Alameda sheet has been successfully completed, with a suite of good quality results being obtained across the entire 677 mMD interval. Natural fractures are present throughout the entire logged section with zones of well-developed porosity in association with the fractures also present. Preliminary analysis indicates that there are broadly two distinct sections developed in the Alameda sheet. The lower of these two sections is heavily fractured and corresponds with the elevated gas shows and oil over the shakers that were observed at this depth in the Alameda-1 exploration well. Melbana also commissioned a second company to acquire logs over the sheet to compare their results with that of the incumbent contractor.

Drilling operations stymied by stuck tool

After running in the 7" liner, the setting tool was run in on 3-1/2" tubing and 5" drill pipe to 2740mMD. While attempting to inflate an external casing packer the tool appears to have failed and became stuck.

Initial attempts to retrieve the tool were unsuccessful so fishing operations were commenced. Specialist fishing and milling tools and personnel successfully retrieved the fish (see Figure 1). Subsequent casing integrity logs and pressure testing confirmed the integrity of the 7" liner.

Figure 1 - Retrieval of fish

Figure 2 - 10k PSI BOP

Forward plan back on track

The forward program is to drill out the casing shoe of the current section in 6" hole into the Marti sheet. It is planned to take a core in that sheet then continue drilling to total depth (for the section as well as the well) at about 3835 mMD. Wireline logs will then be acquired in the 6" open hole before a 4-1/2" slotted liner is run. Flow testing of the Marti sheet will then commence, following which it will be isolated so flow testing of the Alameda sheet may follow.

The drilling programme and related safety and processing equipment has been designed to handle the high-pressure conditions known to exist in the Alameda and Marti sheets due to data gained from the Alameda-1 exploration well. A significantly more robust 10k PSI BOP was commissioned and installed for this well (see Figure 2), as was a high-pressure gas separator which is similarly now installed on site and ready for commencement of flow testing of these two deeper reservoirs (see Figure 3).

Figure 3 - High pressure test separator ready for testing to commence

Once flow testing of these two reservoirs is complete and the gathered data analysed, if warranted the more productive of the two would be completed so it is available as a production well. Together with the completion run in Unit 1B of the Amistad sheet, that would deliver two production wells from two different reservoirs.

With regards to the Unit 1B production well, Melbana is developing remediation strategies that may restore the higher flow rates originally observed in that well during the original DST prior to it being killed and shut in for an extended period. Laboratory analysis of the fluids recovered from this unit, reservoir modelling and Cuban experience of successfully remediating reservoirs that have behaved similarly in the past have been useful inputs to the selection of the preferred strategy.

Field development plans firming up

The initial field development place for based on Unit 1B of the Amistad sheet was presented to the Company's partner then to the Cuban regulator in a series of workshops and field trips held in Cuba this month.

Figure 4 - Melbana's Chief Geoscientist presenting to some members of the Sonangol delegation

Figure 5 - Melbana's Executive Chairman and Chief Representative, Cuba, presenting to the delegation from the Cuban regulator

The initial field development plan (see Figure 6) is to rapidly bring the Alameda field to production by drilling wells on existing 2D seismic lines. This would also continue to appraise and de-risk the contingent and prospective resources estimated by the Company's independent reserves and resources certifier.

The proposed phased development plan is for new Unit 1B production wells based on existing 2D seismic to develop the 1C resource (16 million barrels[1]) whilst simultaneously acquiring 3D seismic to more accurately locate subsequent development wells to more efficiently develop the entire recoverable volume.

The goal remains to achieve the first commercial sale of oil before the end of 2024.

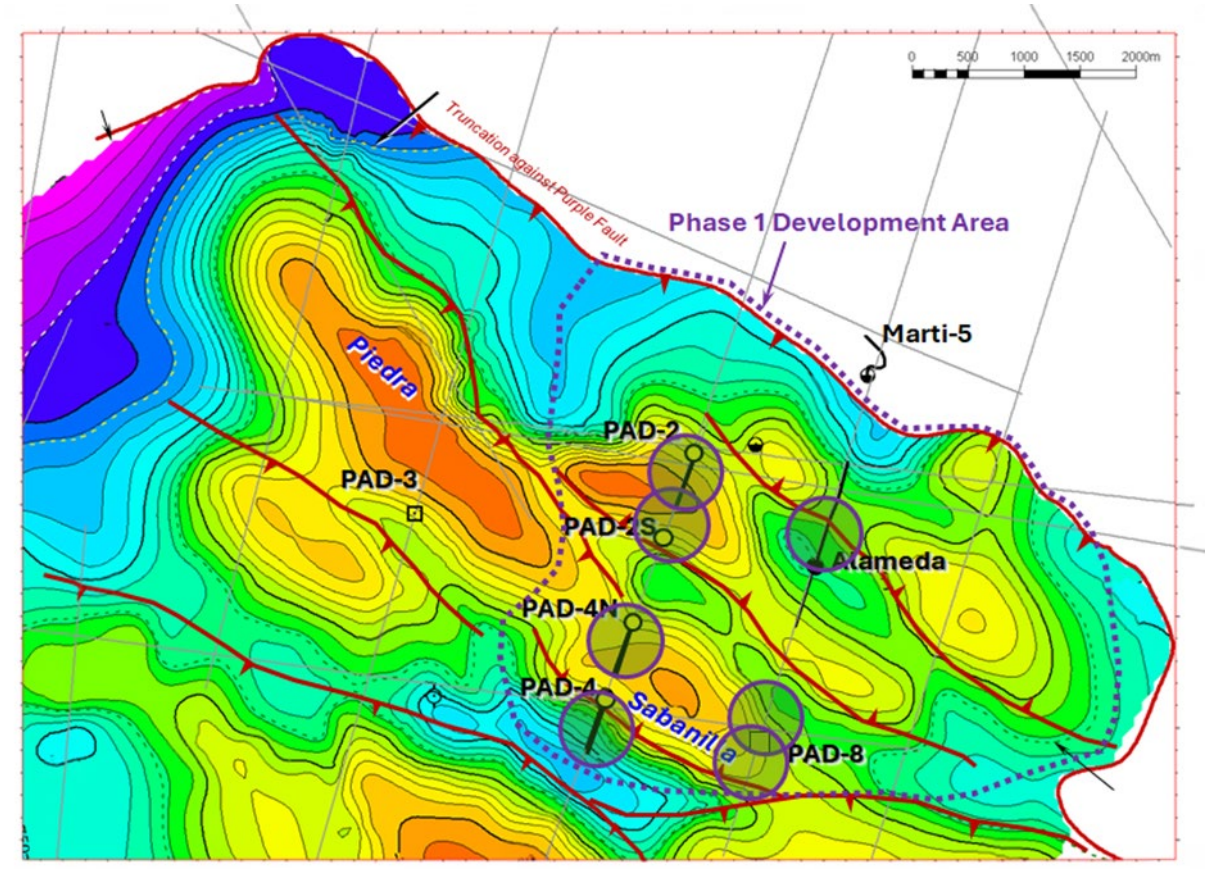

Figure 6 - Planned Unit 1B wells targeting 1C resource in eastern part of Amistad field

Oil suitable for refining, export route options being explored

A full assay of Unit 1B oil has been received from specialist laboratories, which has confirmed that Unit 1B oil from the Amistad sheet is suitable for refining and has API gravity of 19.8° and sulphur content of 2.7%.

Meetings are being held with potential purchasers who have indicated that the crude has a relatively high share of the higher value components in the distillation range of 65° to 350°C, which broadly corresponds with the production of gasoline, jet/kerosene and diesel. The share in this range is ~40% compared with <30% typical for crudes of similar API.

The assay results indicate that the crude is marketable to refineries that specialise in such crudes.

Melbana's engineering team continue to optimise their plans for the delivery of oil produced in Block 9 (see Figure 7), including to the nearby Varadero Tank Battery (see Figure 8) and/or

[1] See ASX announcement dated 25 March 2024

the Matanzas Supertanker port (see Figure 9 and Figure 10), both located a short distance from Block 9.

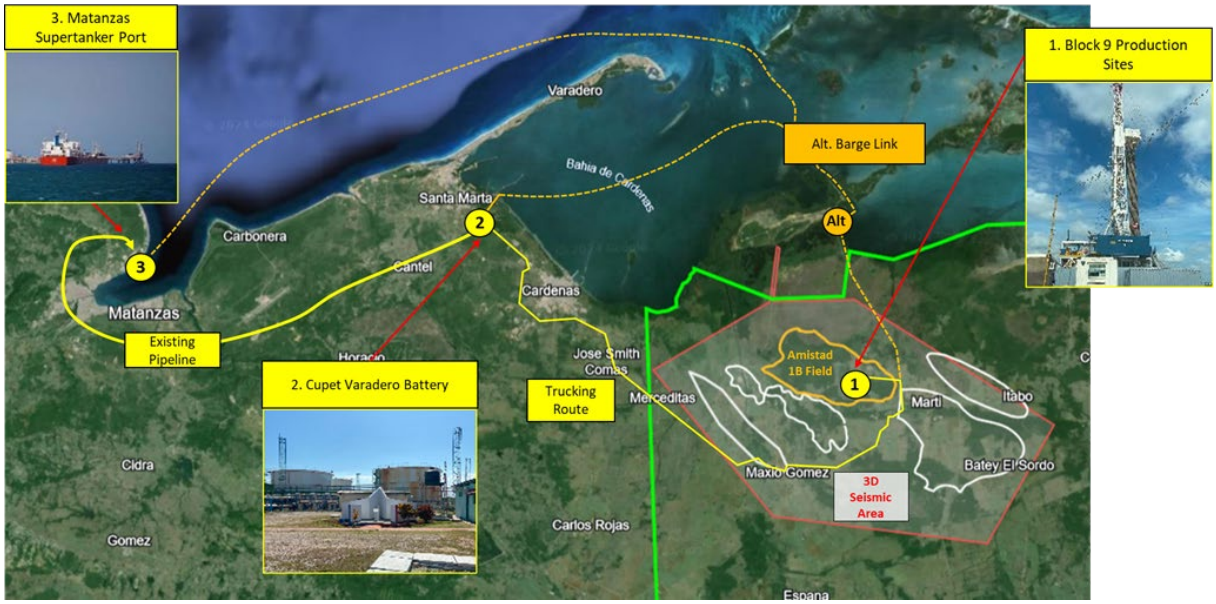

Figure 7 - Multiple delivery routes for Block 9 oil

Figure 8 - Oil unloading at Varadero Tank Battery

Figure 9 - External view of Matanzas Supertanker Port

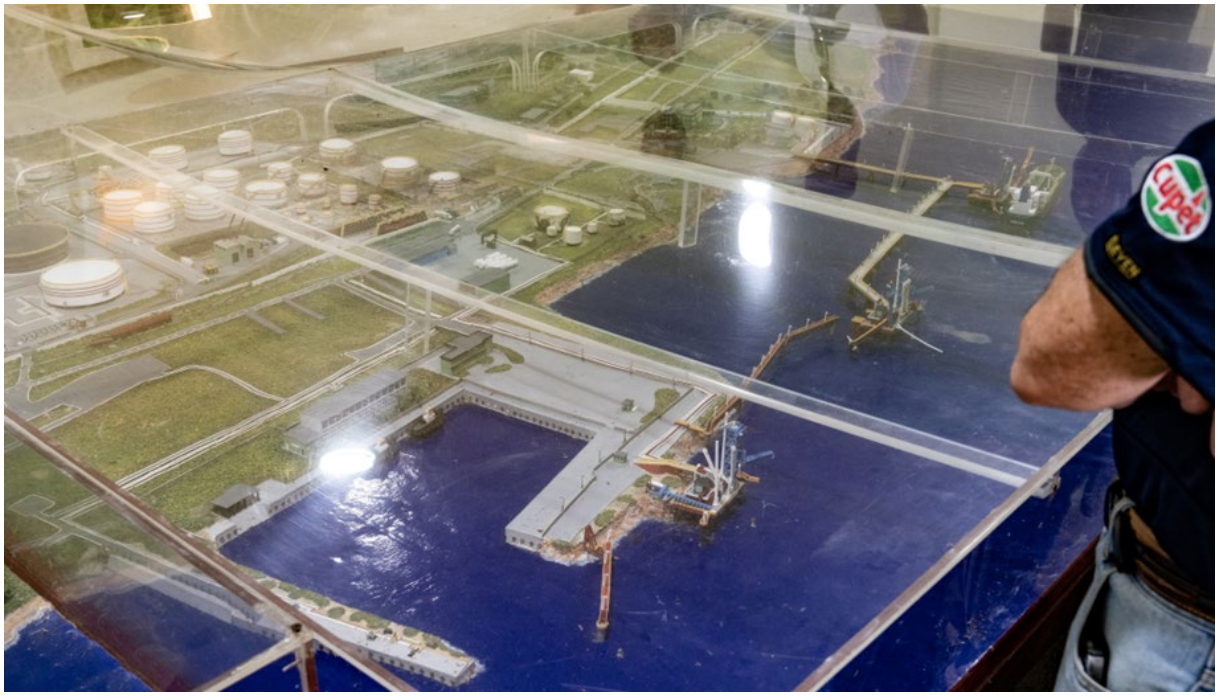

Figure 10 - Inspecting a model of the Matanzas Supertanker Port

ENDS.

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