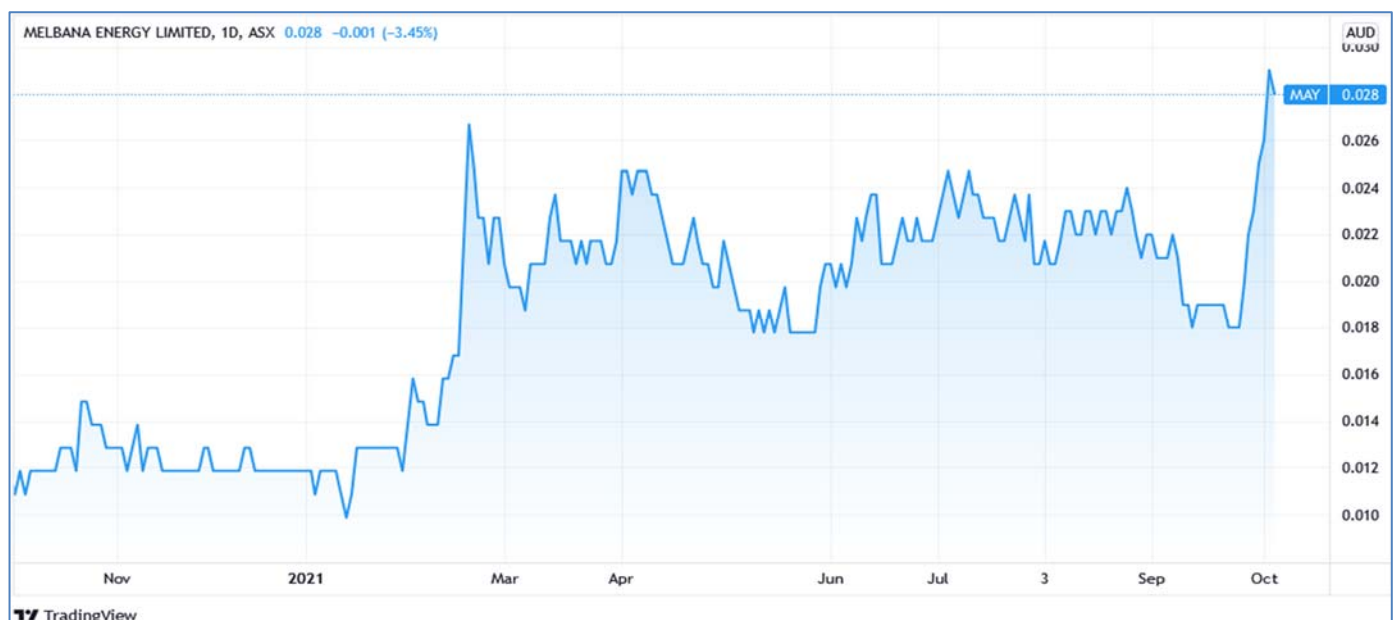


Tuesday 5<sup>th</sup> October, 2021

### Portfolio Stock Developments

**Melbana Energy** - (ASX: MAY, Share Price: \$0.029, Market Cap: \$70m, coverage initiated @ \$0.02 in Sep 2021 – *current gain of 40%*)



### Key Catalyst

***Encouraging update on the progress of the Alameda-1 exploration well in Block 9 PSC, onshore Cuba, where Melbana has a 30% interest in Block 9 and is the operator of the current program.***

MAY is an upstream oil and gas exploration company, with projects located in both Cuba and Australia. We have introduced MAY as a stock to watch, based on some fairly significant recent corporate developments that have seen a restructuring of the company's financial position with the raising of \$7.1 million via a right issue that was fully underwritten, and a rejuvenation of the company's oil exploration program that has seen the commencement of drilling within the Block 9 PSC, onshore Cuba. Block 9 is a large onshore acreage (2.1% of Cuba's total area) located on the north coast of Cuba, 140km east of Havana. The first well in the company's drilling program is the Alameda-1 well, which commenced drilling on 13 September and it will test three separate targets with a combined best estimate prospective resource of 141 million barrels of oil. MAY has a 30% interest in Block 9 and is the drilling operator.

## Current Activity

### **Alameda-1 Well Update**

MAY has provided an update with regard to the progress of its Alameda-1 well, which is located within PSC Block 9 in onshore Cuba. We introduces MAY as a Stock to Watch last Monday 27 September, based on the potential of the prospects within Block 9, including the Alameda prospect.

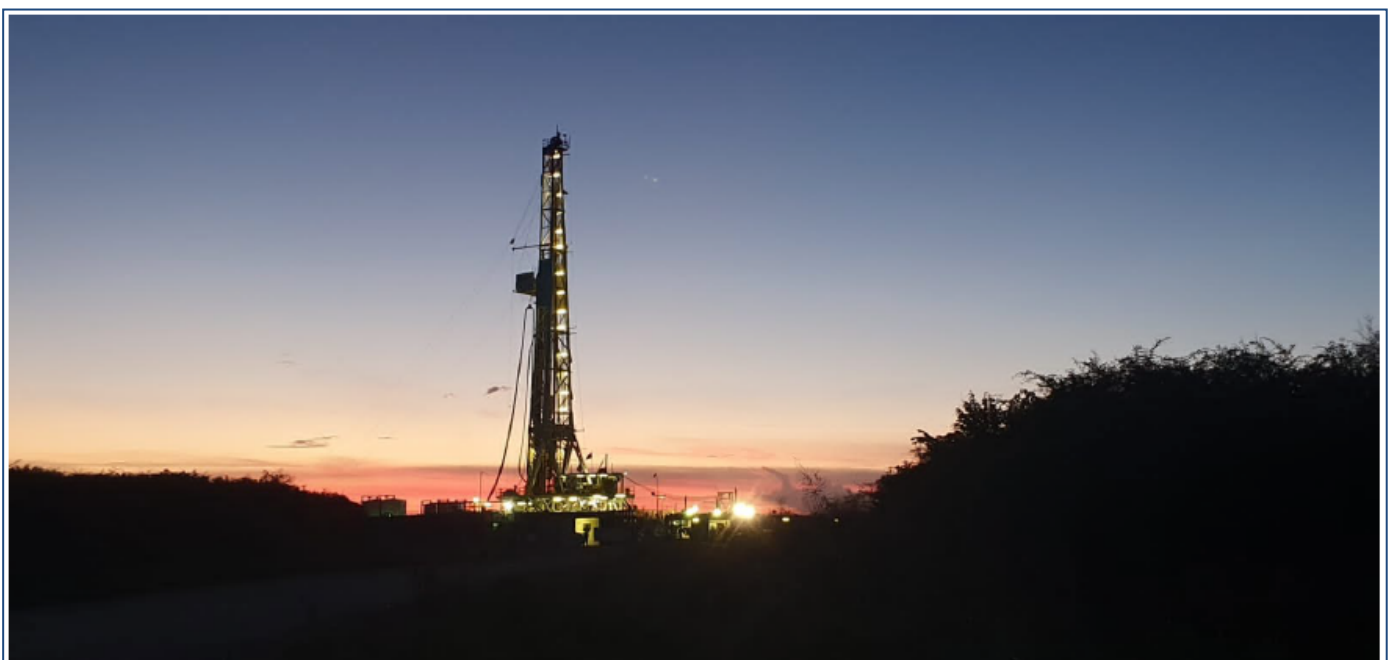
### Overview

As of 4:00PM Monday, 4 October (Cuban time), the Alameda-1 well was drilling ahead at 1,820 metres in limestone and clastic sediments within the Upper Thrust Sheet.

Encouraging hydrocarbon shows (described as good by MAY's personnel on site) were encountered just below the first casing point at 454 metres, when moveable oil was reported at surface within the mud and cuttings samples. The oil, which appears to be lighter than that normally seen at this depth, was accompanied by elevated gas readings.

Drilling continued through the shallow limestones and minor clastic sediments, with similar shows persisting over a gross interval of about 670 metres. This includes the interval of the anticipated "U1" secondary objective, through which excellent hydrocarbon shows were reported. Variable oil shows have continued to be encountered below this interval to the current depth of the well.

At this stage, the significance of these very encouraging shows is uncertain, but they will be evaluated when logs become available at the conclusion of the current hole section. Any further evaluation of deliverability and lateral extent of this new potential oil zone will be determined after the conclusion of drilling of the Alameda-1 well.



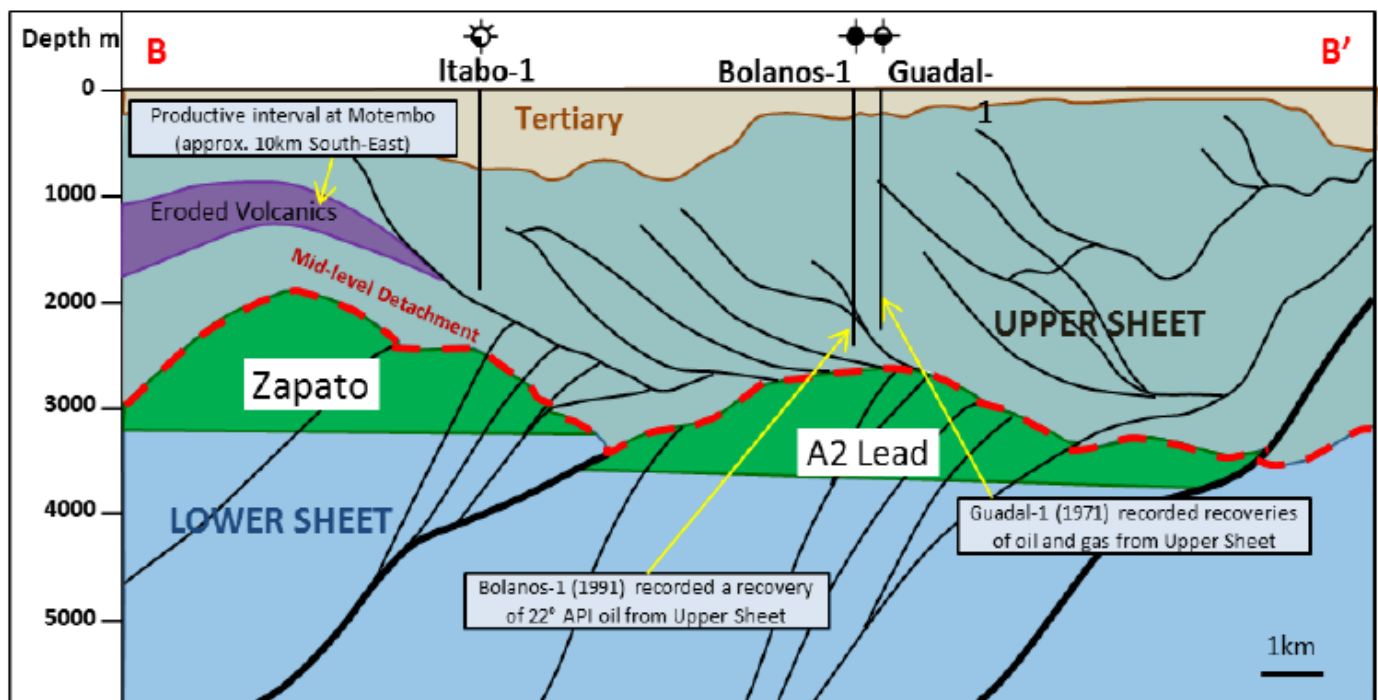
**Figure 1:** Sunrise at the drilling camp

## Technical Significance

Encountering oil shows over such a significant interval of 670 metres in the Alameda-1 well is very encouraging indeed – and this is reflected in MAY’s solid share price appreciation since we initiated coverage @ \$0.02 a little over a week ago.

Drilling is now continuing to the planned intermediate casing point at about 2,200 metres, which should be achieved in the week ahead, following which a wireline logging program will be undertaken to further evaluate the current open-hole section, including the interval with the oil shows. This work will provide the company’s geoscientists with more data to assist them in their assessment of what has been encountered.

The Alameda Prospect that’s currently being drill-tested contains three targets, U1, N and Amistad, which can all be tapped from just one slightly-deviated well. The most exciting prospect is the lower sheet target, Alameda, which is in a similar structural setting as the Veradero fields.



**Figure 2:** Schematic cross-section of the Alameda-1 well

The three targets are independently assessed to contain a prospective resource of 141 million barrels of oil. The Alameda-1 well is estimated to take a total of around 80 days to drill (it commenced on 13 September), suggesting completion around the end of November. The chance of success for the 3 prospects is estimated to be 32% (high by industry standards) due to the supportive data from the previous exploration wells, Marti-2 and Marti-5. The Marti-5 well, drilled nearly 30 years ago, recovered 44bbl of 24° API oil (high value light oil) and had numerous oil shows extending over a 850m Lower Sheet section (where the Alameda prospect is located). The U1 target is the structure that has been identified as the up-dip of the tested oil recoveries in the Marti-2 well.

<b>Alameda Prospective Resources (100%, MMstb)**</b>					
<b>Objective</b>	<b>CoS*</b>	<b>Low</b>	<b>Best</b>	<b>High</b>	<b>Mean</b>
U1	15%	24	60	132	71
N	23%	4	9	20	11
Alameda	32%	39	72	128	79

It must be emphasised that the oil shows encountered at shallow depths in the Alameda-1 well have enhanced the prospectivity of other “Upper sheet” structures within the Block 9 PSC. We are encouraged for the company’s chances of finding oil deeper in the well and will follow MAY’s drilling progress closely as it progresses towards its deeper primary objectives.

### **Project Overview**

Block 9 is a large onshore PSC acreage (2.1% of Cuba's total area) located on the northern coast of Cuba, 140km east of Havana. Block 9 has an already-proven hydrocarbon system, with previous historic exploration wells indicating the presence of hydrocarbons. The block is also supported by being along the trend line from the multi-billion barrel Varadero oil field, located just 35km away. A key feature of the Varadero field is the major fold and thrust belt structures that fracture and fold carbonate units, which is interpreted to extend into Block 9.

Block 9 has been independently assessed to house 15.7 billion barrels of oil (nearly a trillion dollars’ worth), with prospective resources of 718 million barrels. These estimates are based upon pre-existing seismic, gravity, magnetic and surface data sets. There is the potential for MAY to expand its resource estimates as the company is expected to shoot new seismic lines on the additional 19 structural leads identified.

Block 9 consists largely of low-lying farm land with sealed roads that connect Block 9 all the way to Havana. Extensive oil and gas infrastructure surrounds Block 9, with a deep-water port housing an oil terminal located 75km away and the second largest international airport within 40km.

### **Block 9 Agreements**

During 2019, MAY entered into a farm-out agreement with Sonangol, Africa’s second-largest oil producer, for Sonangol to acquire a 70% interest in Block 9. Based on the agreement, Sonangol will fund 85% of the two-well drilling programs, with MAY funding 15% of the well costs and remaining the operator until the completion of both drills.

MAY has additionally signed an offtake agreement with CUPET, Cuba’s national oil company, that allows CUPET to purchase discovered oil at international prices. The agreement also allows MAY to sell the oil on the international markets. Cuba has multiple modern land drilling rigs currently operating in Cuba and MAY has selected Sherritt International as the drilling contractor.

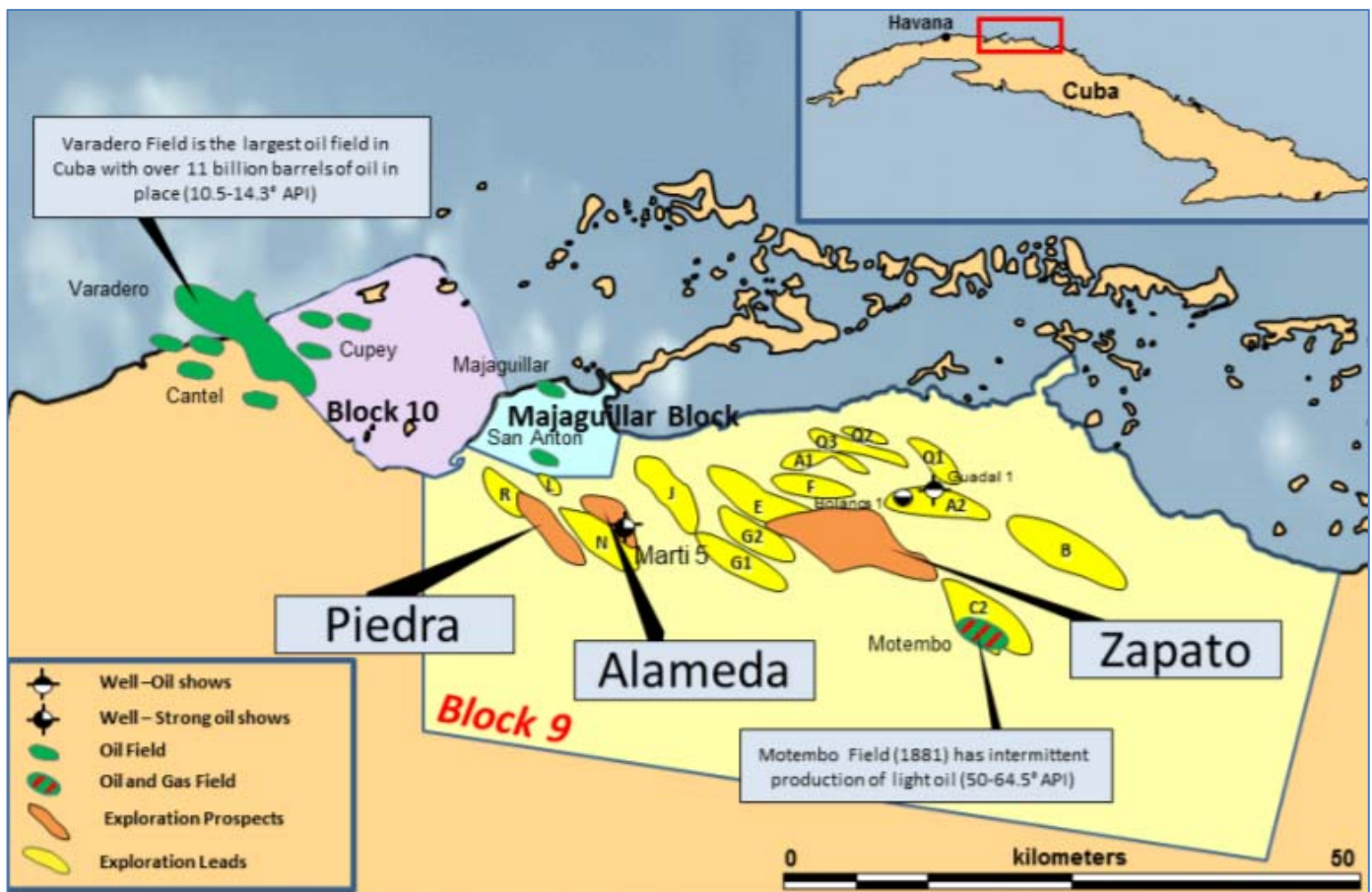


Figure 3: Location of MAY's drilling prospects within PSC Block 9, Cuba

## Zapato Prospect

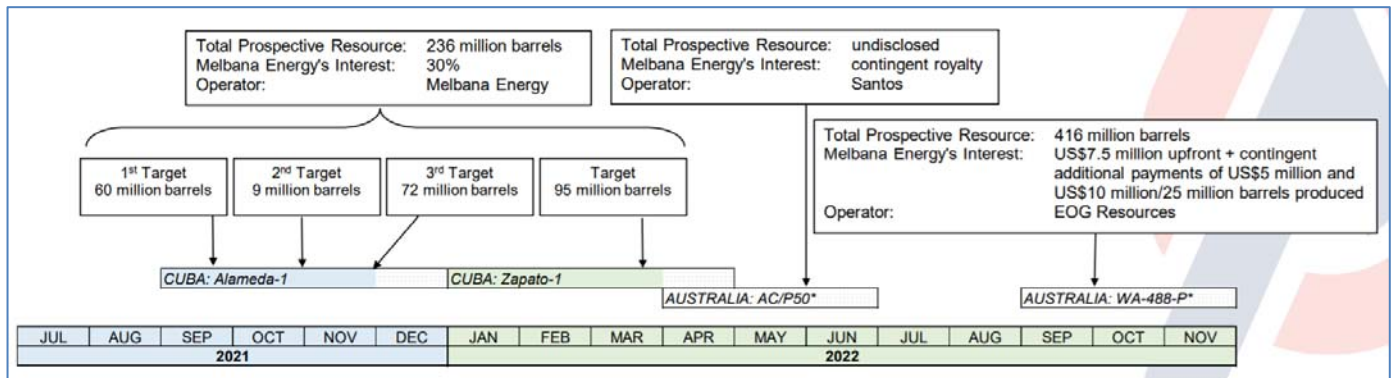
The Zapato prospect is being drilled immediately after the Alameda prospect, with construction of the well-pad currently underway and drilling commencement likely by the end of December. The prospect is independently assessed to contain 95 million barrels of oil and the chance of success is estimated at 23%.

The Zapato field is believed to be the source of the highly-productive Motembo oil field, which historically produced high-quality light oil. Studies have indicated there is a strong gravity and magnetic alignment of the structure, which is further supported by seismic and surface data. Carbonate duplex structures such as Zapato are being targeted due to their potential to contain Varadero style oil accumulations. The Zapato structural feature has a crest at approximately 2,000m, with a vertical relief of 1,000m.

Zapato Prospective Resource (100%, MMstb) **					
	CoS*	Low	Best	High	Mean
Zapato	23%	38	95	214	114

## Timelines

The graphic below outlines the timing with respect to both of the company's exploration wells, Alameda-1 and Zapato-1, with activity from September 2021 through to March 2022.



## Cuba Overview

Cuba is located in the Southern region of the Gulf of Mexico, which is currently one of the world's largest under-explored petroleum mega provinces. Cuba has been lightly explored with modern-day exploration technologies however the country does have a rich exploration history. The principal zone of exploration has occurred along the narrow belt in the north coast (where Block 9 sits) and in the regions immediately offshore where tectonically thickened Jurassic-Cretaceous carbonate sources and reservoir sections have formed a supercharged hydrocarbon system.

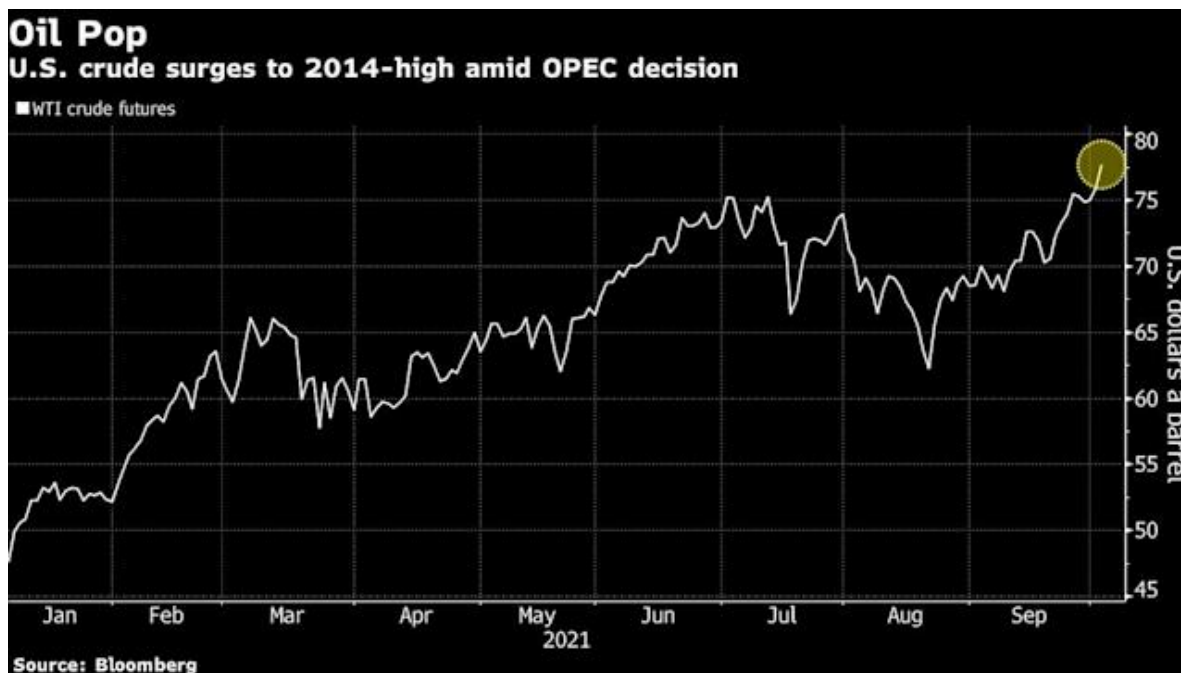
Current US trade embargos are only imposed on American citizens, which limits their US engagements and operations in Cuba. Non-US international companies have been operating in Cuba with the most prominent being the Canadian company, Sherritt International, which has a rich 30-year oil and gas exploration and production history in Cuba, with blocks including the Varadero oil fields that is located next door to MAY's Block 9.

In 2019, Cuba produced just 45,000 barrels of oil equivalent per day which only covered 50% of the nation's demand. This significant deficit has led Cuba to import most of its oil supply from Venezuela. Yet due to the economic and political instability in Venezuela over recent years, importation amounts have slowly been declining, placing a greater strain on the Cuban economy.

To attract more foreign investment into the country, the Cuban government during 2014 passed the Foreign Investment Act, which reduced tax rates and provided tax holidays for the first eight years of operations. As one of the first movers after the Act in 2015, MAY gained numerous advantages by securing the most attractive exploration blocks as well as establishing highly supportive relationships with the Cuban government and CUPET.

## Oil Price Overview

Oil is now trading at its highest level since 2014, as the OPEC+ group at their Monday meeting elected to maintain a managed and gradual increase in oil supply, despite booming demand and supply problems. OPEC+ ministers have ratified the previously-agreed 400,000 barrel-a-day output increase scheduled for November (as opposed to a consensus expectation of 800,000 barrels-a-day). At the same time, a global natural-gas shortage has boosted crude consumption by 500,000 barrels a day. With winter ahead in the northern hemisphere, there is a very strong prospect of significant price upside from here, especially with US shale production not coming to market as it has done in the past when prices have spiked. In all, crude inventories are close to a 10-year low. OPEC+ ministers will meet again on November 4.



## Summary

***As we stated in our coverage initiation last week, MAY is worth following, based on the prospectivity of its current two-well oil drilling program in Block 9, Cuba. Block 9 has an already-proven hydrocarbon system, with previous historic exploration wells indicating the presence of hydrocarbons, and the results so far from Alameda-1 are very encouraging. Bear in mind too that the oil shows in the well so far are from the shallower zones, with the primary targets yet to be encountered. MAY will remain part of our coverage Portfolio as we follow its drilling and appraisal progress through until March 2022.***

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