

Range committed to growth in Trinidad by energynow.tt

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March 14, 2016

Range Resources Limited plans to commence one of the largest waterflood projects ever seen in Trinidad during this year. Despite the challenging price environment, Range has confirmed that it will be making significant investments over the coming years, in the hope of establishing itself as one of the most prominent independent operators in Trinidad. Range is a small public oil and gas company listed jointly on the AIM in London and the ASX in Sydney. Its operations are focused on Trinidad and Tobago.

The company holds interest in the largest private onshore acreage – three blocks with the Petroleum Company of Trinidad and Tobago (Petrotrin), and two blocks with the Ministry of Energy and Energy Industries (MEEI) and Petrotrin as its Joint Venture partners.

In 2014, Range entered into a strategic partnership with Beijing-based LandOcean, an emerging international energy service company. LandOcean acquired Range's drilling business in Trinidad and added four brand new drilling rigs to the fleet, ranging in drilling capabilities of 1,000 to 4,000 metres. These rigs are currently undergoing certification and once certified, will provide the company with significant drilling capacity.

Last year, Range secured US\$30 million in equity financing and is currently working to close a trade financing for a further US\$50 million. Range believes that this funding will ensure significant capital to implement the company's growth strategy and increase oil production in Trinidad.

Given the current challenging oil price environment, Range has had to reevaluate its 2016 work programme. As a result, the company will focus on implementing enhanced oil recovery programmes (waterflood) on its two onshore licences: the Beach Marcelle (Incremental Production Service Contract) and the Morne Diablo (Farm-out Agreement), both held in partnership with Petrotrin.

The use of water to increase oil production is known as secondary recovery and typically follows primary production, which uses the reservoir's natural energy to produce oil. The principal reason for waterflooding an oil reservoir is to increase the oil production rate and, ultimately, the oil recovery factor by accessing low-risk proven oil reserves. This is accomplished by injecting water to increase the reservoir pressure to its initial level and maintain it near that pressure. The water from injection wells physically sweeps the displaced oil to adjacent production wells.

This method of oil recovery, whilst not new to Trinidad oilfields, has not been practised by an independent onshore operator in decades. Texaco used this technique successfully in parts of the Beach Marcelle field in the 1950s/1960s. Range is the first operator to re-introduce this method onshore Trinidad.

The Range waterflood project will use produced water from existing oil wells as its water source in order to minimise environmental impacts. As reservoirs mature, the volume of water produced along with hydrocarbons tends to increase. Typically, produced water is treated before being released into the environment. Reinjection of produced water is considered an environmentally friendly solution, as it significantly reduces the quantities of produced water being discharged into the ocean and waterways.

Beach Marcelle Project

The Beach Marcelle waterflood project received government and regulatory approvals in December 2015. It is the largest scale waterflood project to be undertaken in recent times in Trinidad and is expected to be a major contributor to the company's production growth. The majority of Range's reserve base is found in the Beach Marcelle block (14.7 mmbbls of 1P reserves).

The Beach Marcelle waterflood has been split into a number of individual "projects" and the company plans to kick off its programme with water injection of the South East block. The initial limited injection plan comprises of six injector wells, three observation wells and five water source wells. At the start of the injection, the wells will remain shut-in to allow re-pressurisation of the reservoir and will be monitored via observation wells, which will then be converted to production wells. Production is expected after six months of injection and is forecasted to reach up to 2,500 bopd at its peak, currently estimated during the second half of 2017.

Morne Diablo Expansion Project

The Morne Diablo expansion waterflood project, also approved in December 2015, is an extension of the existing pilot waterflood implemented on the company's Morne Diablo block. The pilot waterflood was put together to help gather data and test operational and reservoir parameters to aid in the planning of the larger expansion model. Given the success of the pilot scheme, the larger scale expansion is now underway.

The expansion waterflood project involves the use of 14 injector and 14 producer wells. Water injection of three wells has already commenced. Nine further wells have been approved for conversion to water injectors.

Currently Range's volume of produced water is far less than the injection volumes required over the entire planned waterflood for this area, so Range is in discussion with Petrotrin about using Petrotrin's produced water from existing operations. Discussions to date have been positive though commercial arrangements and other plans are yet to be formally finalised by both parties.