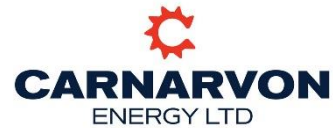


Rig mobilised for Buffalo-10

22 December 2021



- Valaris JU-107 jack-up drilling rig is being mobilised to the Buffalo-10 location
- Buffalo-10 focused on confirming sufficient hydrocarbons to support an economic development
- The well is estimated to take around 35 days to complete

Carnarvon Energy Limited (“Carnarvon”) (ASX:CVN) is pleased to announce that the Valaris JU-107 jack-up drilling rig is currently en-route to the Buffalo-10 location. Drilling is expected to commence within a week.

Drilling Plan

Buffalo-10 is to be drilled offshore Timor-Leste within the TL-SO-T 19-14 Production Sharing Contract (PSC) in around 30 metre water depth (see Figure 1).

The well is being drilled to test for the presence of commercial quantities of hydrocarbons (oil) that could ultimately result in a re-development of the field.

The Valaris JU-107 jack-up mobile offshore drilling unit (MODU) has been contracted to undertake the Buffalo-10 drilling campaign.

The estimated time to drill and complete the well is around 35 days (success case, trouble free).

The base case well design is:

- drill 36” x 26” hole and set 30” x 20” Conductor at around 120 metres;
- drill 17 ½” hole and set 13 ⅜” Surface Casing at around 800 metres;
- drill 12 ¼” hole and set 9 ⅝” Intermediate Casing at around 2,800 metres; and
- drill 8 ½” hole and set 7” Production Liner to approximately 3,500 metres (success case).

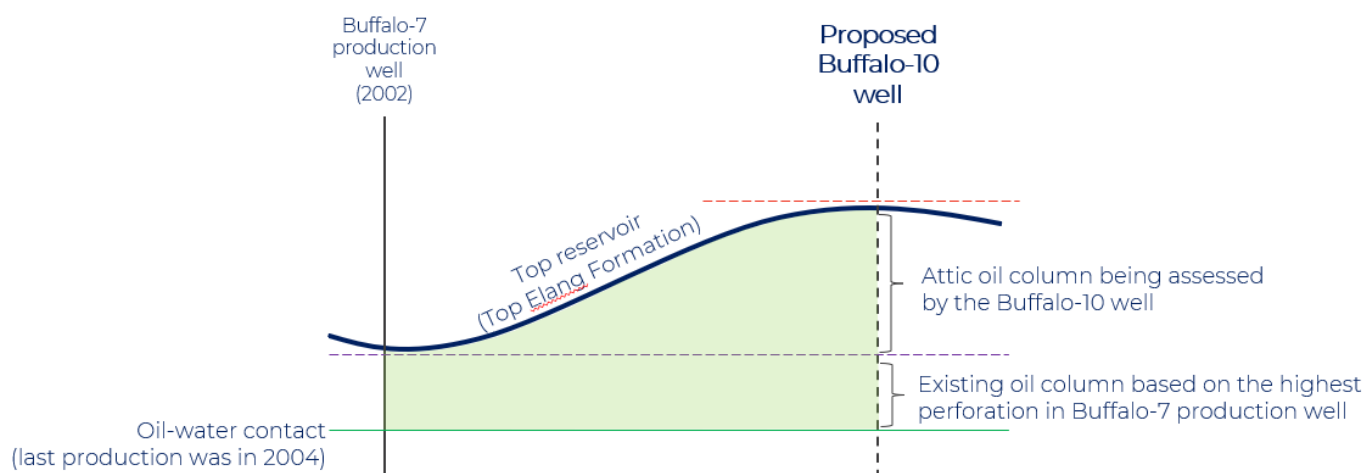
In the success case, the Buffalo-10 well will be suspended with an unperforated liner, cemented across the reservoir in order for the well to be re-entered and completed for production at a future date.

Geological Plan

Carnarvon acquired the permit containing the Buffalo field in 2016, and immediately set about reviewing the potential in the Buffalo field using technology that was not available at the time of the previous development.

Reprocessing of the 3D seismic dataset using modern full waveform inversion (FWI) technology supports an interpretation of a significant attic oil accumulation remaining after the original development.

The extent of this attic accumulation will be tested when the well is drilling through the Elang reservoir in the 8 ½” hole section, where it is prognosed to penetrate both the existing oil column and assess the extent of the attic column, as illustrated in the figure below:



Reservoir modelling utilised the updated structural interpretation of the field which was based on modern reprocessed seismic data. The model then incorporated extensive history-matching, involving calibrating model / well performance to historical production rates and water-cut development (governed by strong aquifer drive) observed during the original production period. This work led Carnarvon to estimate contingent resources in the Buffalo oil field of 31.1 million barrels (2C), with low estimates of 15.3 million barrels (1C) and high estimates of 47.8 million barrels (3C).

Ascertaining the volume of oil remaining will require an assessment of both the height of the attic as well as reservoir and fluid properties. This information is expected to be acquired during the drilling of the Buffalo-10 well and be assessed once the drilling operations have been completed.

With the minimum economic field size estimated to be significantly lower than the mid case estimate, there is a strong likelihood the Buffalo-10 well will confirm an economic project. Accordingly, Carnarvon's drilling plans provide for the Buffalo-10 well to be retained as the first production well in the redevelopment program.

Field History

The Buffalo field was discovered in 1996 by BHP and produced from 1999 to 2004, with the last well, Buffalo-9, being drilled in 2002. In 2005 the lease on the FPSO ended, and coupled with declining production rates, increasing water cut and decreasing gas availability for gas-lift, the field was abandoned. All wells were plugged and abandoned, and the infrastructure removed.

The Buffalo field resides in Timor-Leste in the TL-SO-T 19-14 PSC in which Carnarvon holds a 50% interest.

Approved by:



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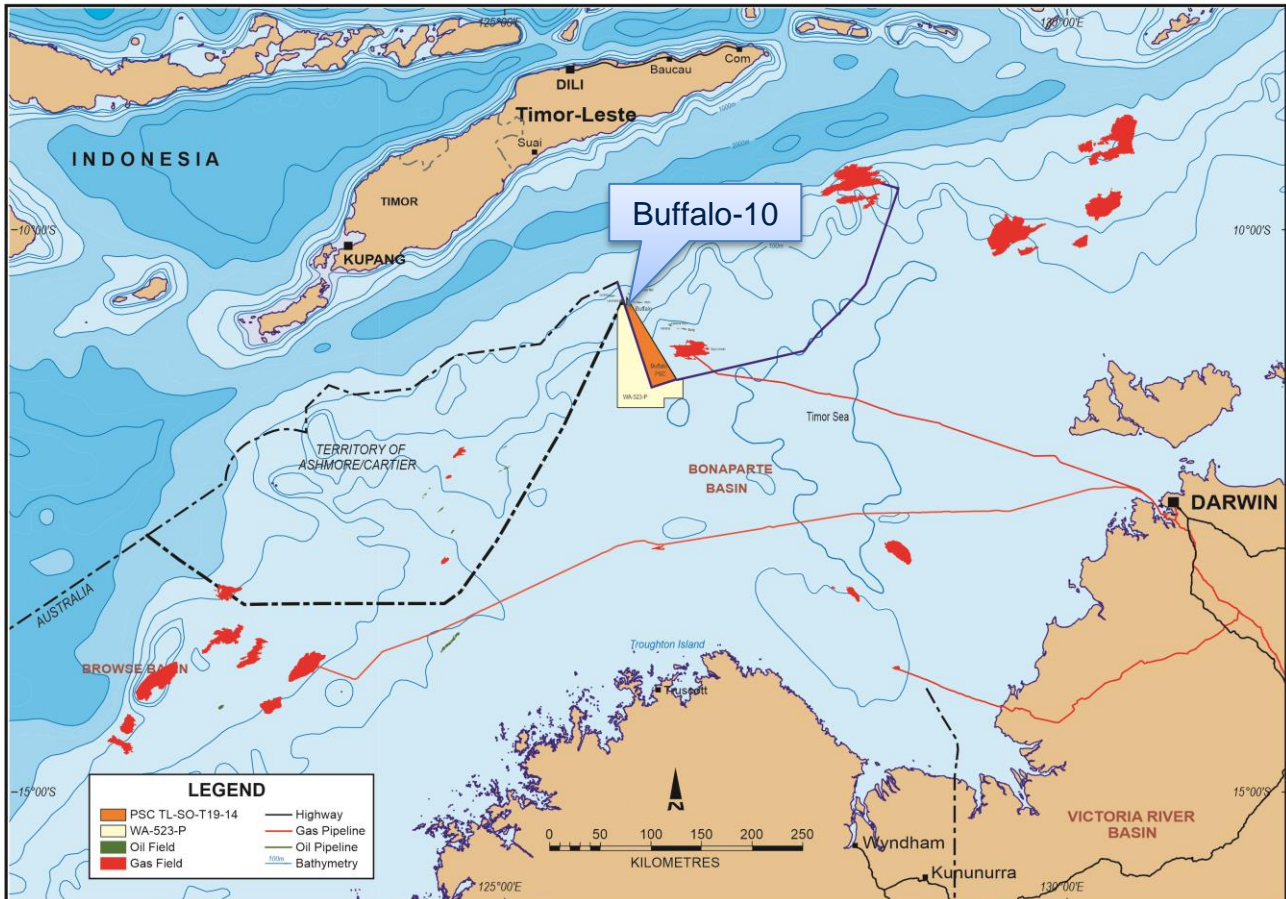


Figure 1: Buffalo-10 location

Resource Information

The estimates of contingent resources included in this report have been prepared in accordance with the definitions and guidelines set forth in the SPE-PRMS. Refer to Carnarvon Energy's ASX announcement on 28 August 2017 for more information

A combination of deterministic and probabilistic methods were used to prepare the estimates of these contingent resources.

The resource estimates outlined in this report were compiled by the Company's Chief Operating Officer, Mr Philip Huizenga, who is a full-time employee of the Company. Mr Huizenga has over 25 years' experience in petroleum exploration and engineering. Mr Huizenga holds a Bachelor Degree in Engineering and a Masters Degree in Petroleum Engineering. Mr Huizenga is qualified in accordance with ASX Listing Rules and has consented to the form and context in which this statement appears.

Carnarvon is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the estimates in this Presentation continue to apply and have not materially changed.

Cautionary Statement

This document may contain forward-looking information. Forward-looking information is generally identifiable by the terminology used, such as "expect", "believe", "estimate", "should", "anticipate" and "potential" or other similar wording. Forward-looking information in this document includes, but is not limited to, references to: well drilling programs and drilling plans, estimates of reserves and potentially recoverable resources, and information on future production and project start-ups. By their very nature, the forward-looking statements contained in this news release require Carnarvon and its management to make assumptions that may not materialize or that may not be accurate. The forward-looking information contained in this news release is subject to known and unknown risks and uncertainties and other factors, which could cause actual results, expectations, achievements or performance to differ materially, including without limitation: imprecision of reserve estimates and estimates of recoverable quantities of oil, changes in project schedules, operating and reservoir performance, the effects of weather and climate change, the results of exploration and development drilling and related activities, demand for oil and gas, commercial negotiations, other technical and economic factors or revisions and other factors, many of which are beyond the control of Carnarvon. Although Carnarvon believes that the expectations reflected in its forward-looking statements are reasonable, it can give no assurances that the expectations of any forward-looking statements will prove to be correct.