

# Roc South-1 drilling commenced

18 June 2019



## Highlights

- Roc South-1 is targeting similar structure and hydrocarbons to Dorado
- Operations have been completed on the Dorado-2 appraisal well
- Noble Tom Prosser rig has mobilised to the Roc South-1 location and has drilled the surface hole
- Current operations involve installation of surface casing

Carnarvon Petroleum Limited ("Carnarvon") (ASX:CVN) is pleased to provide the following update on the commencement of drilling of the Roc South-1 well.

## Progress

Since completing operations at the Dorado-2 well, the Noble Tom Prosser jack-up drilling rig has arrived at the Roc South-1 location, approximately 15 km northeast of the Dorado-1 location, and has drilled the surface hole down to around 195 metres Measured Depth ("MD") in preparation for installation of surface casing.

## Forward Plan

After installing the surface casing, the rig will drill the 17 1/2" hole to the planned section depth of approximately 1,200 metres Measured Depth ("MD") followed by setting the 13-3/8" casing.

## Well Objective

Roc South-1 is an exploration well with primary objectives in the Caley, Baxter, Crespin and Milne Members of the Lower Keraudren Formation (refer ASX announcement released 29 January 2019).

This well will test the Caley play in a sub-crop trapping geometry that is analogous to the Dorado field, which was discovered in August 2018 and successfully appraised in June 2019. The Baxter, Crespin and Milne objectives are also set up by a sub-crop trapping geometry (see Figure 2).

Dorado-1 discovered hydrocarbon bearing reservoirs in the Caley, Baxter, Crespin and Milne Members of the Lower Keraudren Formation.

The Roc South-1 well is located approximately 15km northeast of Dorado-1 and 160km north-northeast of Port Hedland in the Bedout Sub-basin. Drilling is in approximately 95 metres water depth (see Figure 1).

Refer to the Technical Appendix for further details on the Roc South-1 well.

Following the Roc South-1 well, the rig is scheduled to drill the Dorado-3 appraisal well.

Dorado and Roc South reside in WA-437-P in which Carnarvon holds a 20% interest.

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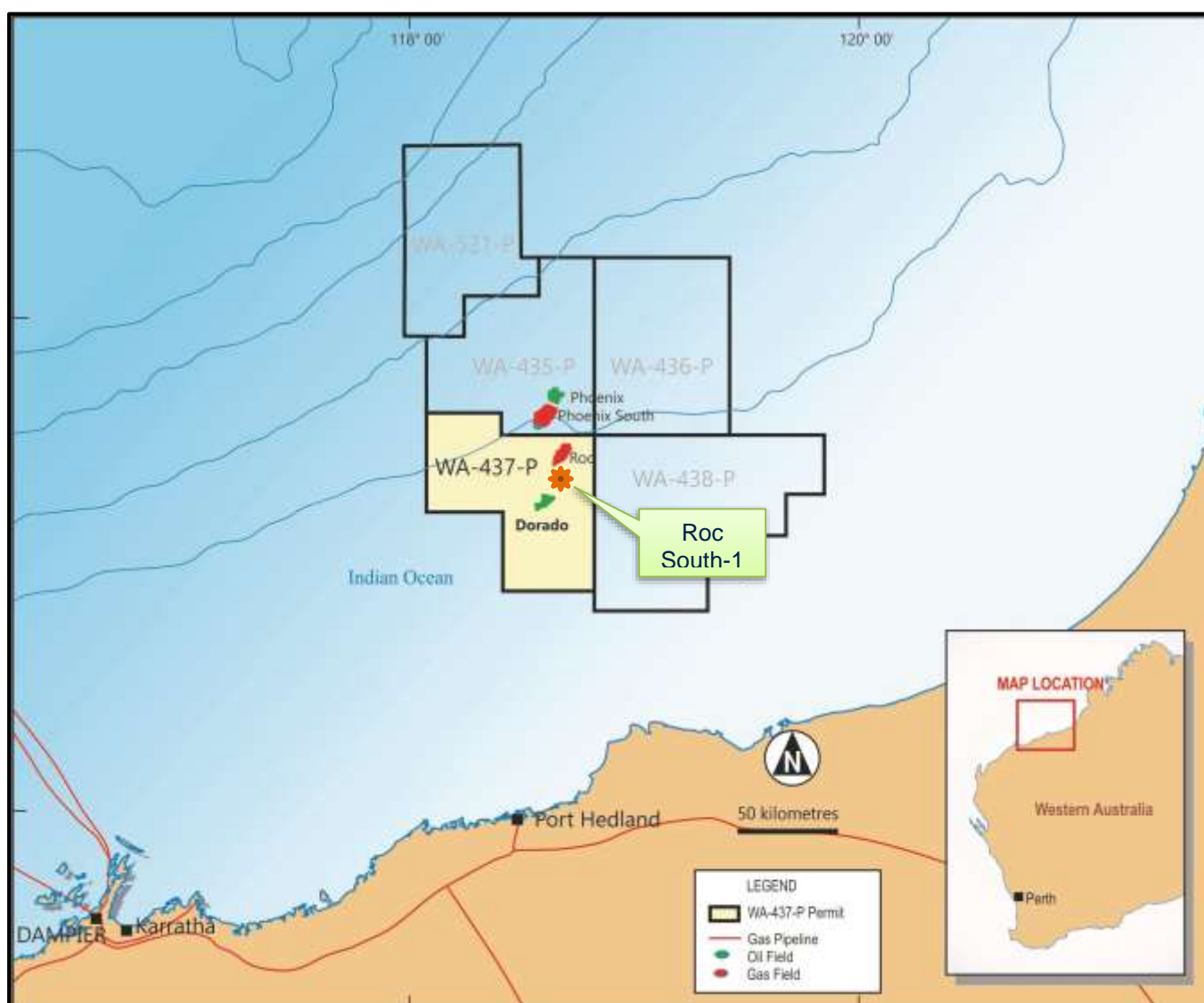


Figure 1 – Map of WA-437-P showing the approximate location of Roc South-1

## Technical Appendix – Roc South-1 well objectives and well plan

### Reservoir Targets

The Roc South structure is northeast and on trend with the Dorado structure. In map view (see Figure 2) the structure covers an area of approximately 20 km<sup>2</sup> with a potential hydrocarbon closure height of around 200 metres from the crest to the spill point. The closure is setup with the southern flank defined by the Dorado canyon, a trapping mechanism proven with the hydrocarbon discovery at Dorado, and the northern flank gently dipping towards the central Phoenix basin.

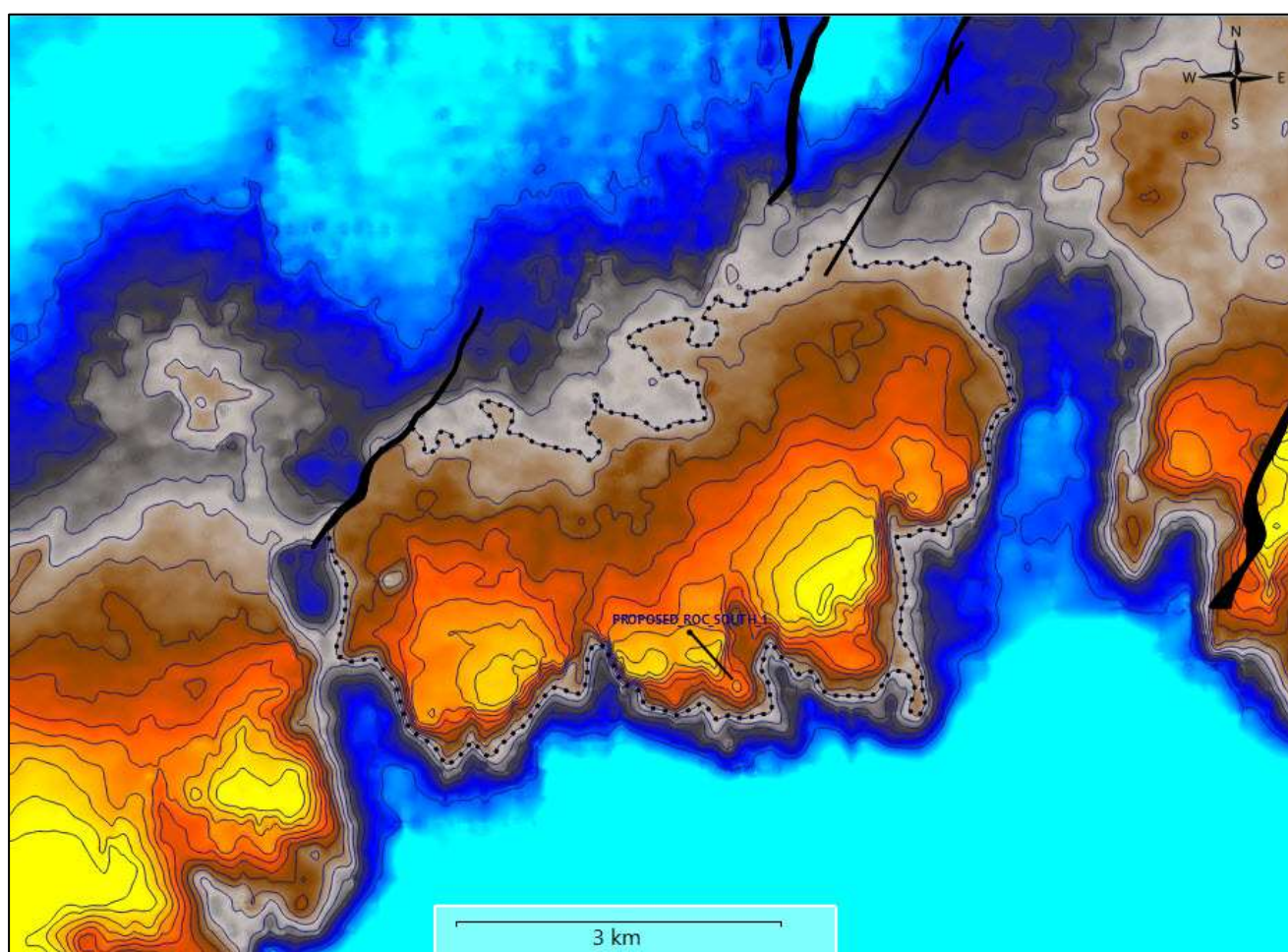


Figure 2 – Caley objective depth structure map

The reservoirs that are being targeted by the Roc South-1 well are the Caley, Baxter, Crespin and Milne Members. Oil and gas-condensate discoveries in the Dorado, Roc, and Phoenix South wells have proven the petroleum system. The predicted reservoir intersections are depicted in Figure 3.

In the main Caley target, similar reservoir to that intersected in Dorado and Roc is expected to be present. Average reservoir properties in Dorado-1 for the Caley Member was 20% porosity and 100's mD permeability. The Roc field intersected somewhat reduced reservoir quality in the Caley however a drill-stem test ("DST") in Roc-2 proved excellent deliverability from the reservoir with equipment constrained rates of 55 MM scf/day and 3,000 barrels per day of condensate oil being flow tested. While Roc South is both geographically closer to and of similar depth to the Roc discovery (10km to North and 150 metres shallower) compared to the

Dorado discovery (15 km to the southwest, 350 metres deeper), seismic interpretation strongly suggests the Caley reservoir will be more similar to Dorado than Roc.

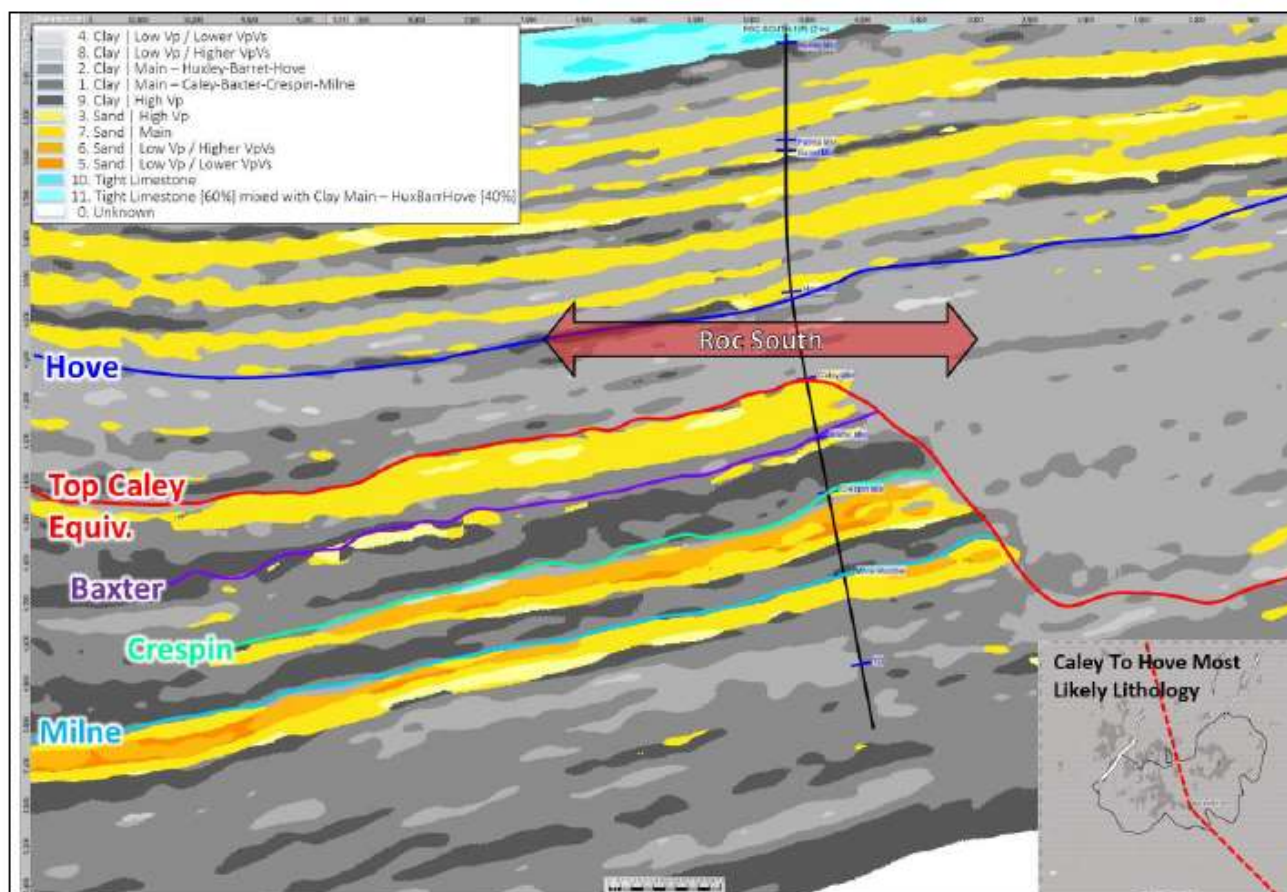


Figure 3 – Predicted lithology from 2018 inversion

The deeper objectives in the Baxter, Crespin and Milne appear to be present at the Roc South location and from seismic analysis of amplitude response appear to be thicker and better developed compared to Dorado, albeit the depth may have a slight impact on reservoir quality.

The discovery of hydrocarbons in the Dorado-1 and Dorado-2 wells has proven that the sealing mechanisms are adequate in this type of environment and de-risks the likely presence of hydrocarbons in the targeted formations in the Roc South-1 well.

## Well Plan

It will take approximately three weeks to drill and set surface and immediate casing to the point just above the main Caley reservoir.

The main Caley and Baxter Members will then be drilled in 8-1/2" hole before wireline logging will be run to confirm the presence and nature of any hydrocarbons encountered as well as the quality of the reservoirs intersected. This is expected to take around 8 to 10 days.

The well will then be drilled through to the final total depth of approximately 5,000 metres, drilling through the final well objectives of the Crespin and Milne Members. Additional wireline logging will be required to determine the quality of these reservoirs and the presence of hydrocarbons. Including the requirement to set a liner prior to the drilling of this final hole section, the time required for drilling and wireline is expected to be around two weeks.

At the conclusion of this well the rig will move to the Dorado-3 well for further appraisal of the Dorado oil and gas-condensate field. The Dorado-3 well will include further coring and drill stem testing for flowing of wellbore fluids to surface across multiple reservoirs.