

## United Oil & Gas plc\*

27 November 2017

### BUY

#### Stock Data

Share Price:	4.0p
Market cap.:	£8.0m
Shares in issue:	200.9m
Fully diluted equity:	238.2m

#### Company Profile

Sector:	Oil & Gas
Exchange:	LSE Standard List
Ticker:	UOG

#### Activities

Oil and gas exploration, development and production company with existing assets in the UK and Italy. Management strategy is to expand the current portfolio with value accretive acquisitions focused primarily on stable international jurisdictions.

#### Performance Data



#### Directors

Brian Larkin:	Chief Executive Officer
Jonathan Leather:	Chief Operating Officer
Alberto Cattaruzza:	Non-Exec. Director

\*Optiva Securities acts as broker United Oil & Gas plc

## Farm-in agreement with Tullow Oil in Jamaica

**United has agreed to farm-in to the high potential Tullow operated Walton-Morant licence offshore Jamaica. United's management team has a longstanding relationship with Tullow and we note that United appear to have secured very attractive terms by which to gain entry to an extremely exciting high risk/high reward frontier exploration play with huge resource upside potential.**

Offshore Jamaica represents a frontier exploration play encompassing three distinct geological basins. Although historical exploration drilling has been limited to only 11 wells, all drilled prior to 1982 with only two offshore, all of the wells drilled bar one exhibited hydrocarbon shows and a significant oil seep on the licence provides further evidence of a working petroleum system in place.

Tullow secured the Walton-Morant licence, which covers an area in excess of 32,000km<sup>2</sup>, in late 2014. In addition to securing a large portfolio of legacy 2D seismic data, Tullow also shot a further 3,650km of 2D seismic in 2016 and 2017. Interpretation of the data set has indicated numerous attractive Cretaceous to Tertiary-aged clastic and carbonate reservoir targets and Tullow now intends to conduct a 2,000km<sup>2</sup> 3D seismic survey in H1 2018 focusing on the high-graded Colibri lead.

United's investment will involve paying a 20% share of costs from 1 November 2017. We believe that United has struck an excellent deal with Tullow, primarily given that it is common for farm-inees to offer a 2 for 1 share of early stage exploration costs and fund a pro rata share of operator's past costs. However, United has secured entry to this major frontier basin at close to ground level terms.

The upcoming 3D shoot will focus on Colibri and secondary targets in the surrounding area. Given the mapped areal closure, we believe the Colibri lead could have the potential to hold over 200 mmbbls of mean recoverable resources. Tullow has also identified a large portfolio of secondary targets on its acreage.

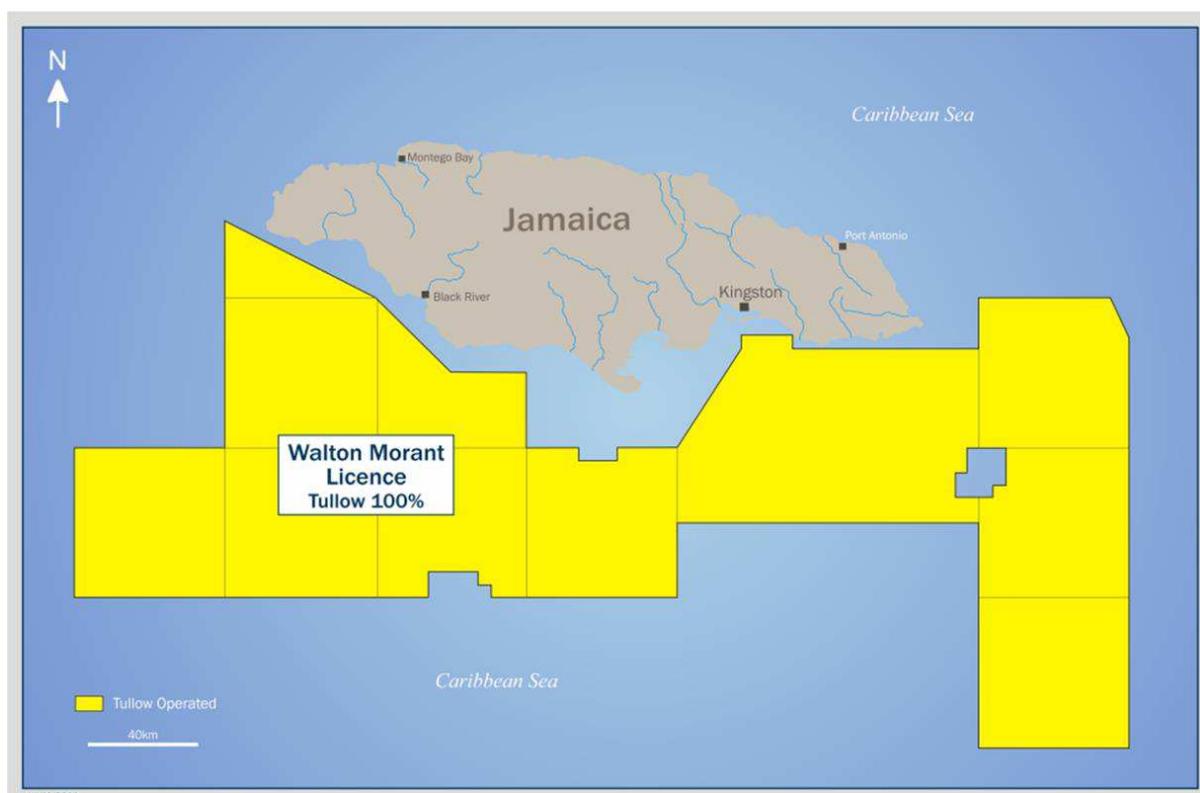
With positive indications from the 3D data, the next stage would be to commit to an exploration well in 2019 with drilling likely to commence in 2020. Given that we would expect an exploration well to cost up to US\$40m, a 20% interest for a junior company such as United is a major undertaking. As such we would expect Tullow and United to farm down its interests as a joint venture partnership to a global major with the intention of acquiring a carried interest on a high impact exploration well.

**Given the early stage nature of this Jamaican offshore play, ascribing a valuation to United's interest would largely reflect guesswork. However, using high-level cost estimates, a notional 200 mmbbls development in this water depth is likely to have a gross NPV in excess of US\$600m. It is important to note that indicative NPVs should not be examined on a standalone basis given that exploration success will de-risk future drilling significantly and has the potential to open up a new multi-billion barrel offshore play in Jamaica. With the current share price already covered by our conservative valuations of United's development projects in the UK and Italy, we believe that the company's exposure to Jamaica represents very exciting long term upside.**

# Farm-in with Tullow agreed in Jamaica

Tullow Oil holds a significant acreage position in the offshore region south of the island of Jamaica. Its core asset is the 32,065km<sup>2</sup> Walton-Morant Licence depicted on the map below which comprises of ten full exploration blocks in water depths ranging from 20 to 2,000 metres. Tullow acquired the licence in November 2014 whereupon the company bought the existing 2D seismic data and accelerated further exploration work to assess the potential of the acreage. Tullow subsequently shot and interpreted a further 3,650km of additional 2D data on the licence and conducted extensive fieldwork to de-risk the petroleum system elements.

## Location of the Walton Morant Licence



Source: Tullow

## Details of the farm-in agreement

Tullow has committed to enter the next stage of exploration on the Walton-Morant Licence which includes the acquisition of 2,000km<sup>2</sup> of 3D seismic data. This programme will be conducted in the first half of 2018 and will be concentrated on the Colibri lead which is estimated to contain over 200 mmbbls of mean recoverable reserves. The 3D programme is expected to further de-risk the structural and reservoir elements of Colibri and also adjacent structures ahead of a proposed drilling programme in 2019.

United has signed an agreement with Tullow to farm-in to the Walton-Morant Licence at a 20% equity interest. This will involve paying a 20% share of costs from 1 November 2017.

### **United has struck a great deal**

Given that it is usual for farm-in partners to offer a 2 for 1 share of initial exploration costs and also pay fees to licence historical seismic data, we believe that this is a very exciting opportunity with United gaining entry to a major frontier basin at practically ground floor level terms.

As outlined in our initiation research dated 30 May 2017, United's management team are former senior employees of Tullow and we believe that the signing of this deal is testament to United's excellent relationship with the Tullow team which has enabled the management to secure access to this exciting and rejuvenated exploration play.

## **A working hydrocarbon system in evidence**

Offshore Jamaica is a very early-stage high-impact exploration opportunity with a high risk/high reward profile. Although the region is an early stage frontier basin, there is already compelling evidence of a working petroleum system.

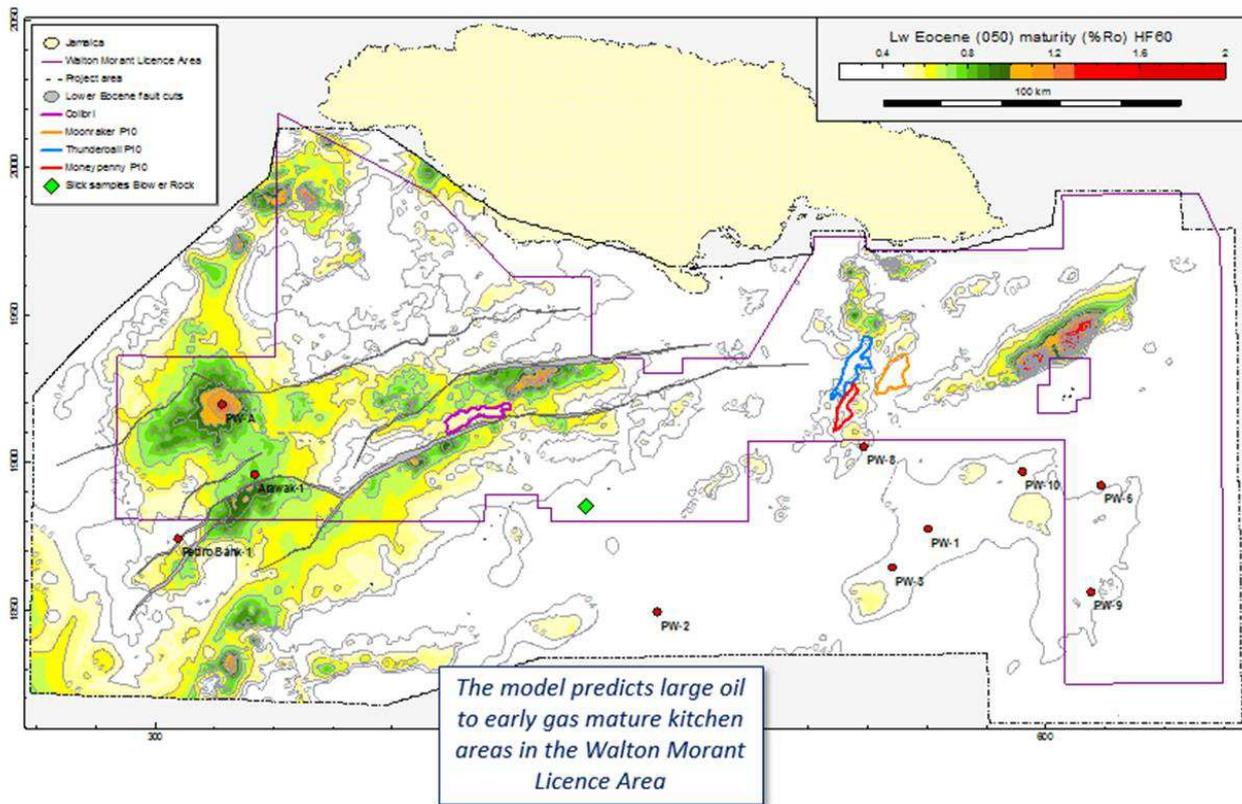
To date, 11 wells have been drilled in Jamaica, of which nine were onshore and two were offshore. The most recent well was drilled in 1982 and although none of the wells tested a recognised structure, all of the wells bar only one exhibited hydrocarbon shows. In addition, Tullow has recognised an active thermogenically derived offshore oil seep (Blower Rock seep) on the south central part of its licence adding further credence to evidence of a working petroleum system.

### **Historical drilling reveals wet gas shows**

Of the two offshore wells drilled in Jamaica, Arawak-1 is of particular interest in that it is located within Tullow's licence area. Arawak-1 was one of the last wells drilled in Jamaica by Union Texas in 1982 and exhibited wet gas shows at the time. The well was intended to probe a Cretaceous carbonate target in a four way dip closed anticline structure although this interval was not reached ultimately and the well was plugged and abandoned at a depth of 4,488 metres.

The map below depicts a number of key characteristics of the Walton-Morant licence including the location of key wells drilled in the onshore sector (Arawak-1 and Pedro Bank-1), several key fault zones which represent important potential hydrocarbon trapping mechanisms, the Blower Rock oil seep and several key leads as identified by existing 2D seismic data. These include the large Colibri lead outlined in purple in the Walton Basin and a cluster of three additional major leads outlined within the Morant Basin region of the licence.

## Key characteristics of the Walton-Morant Licence offshore Jamaica



Source: Tullow

## Activity on the Walton-Morant Licence

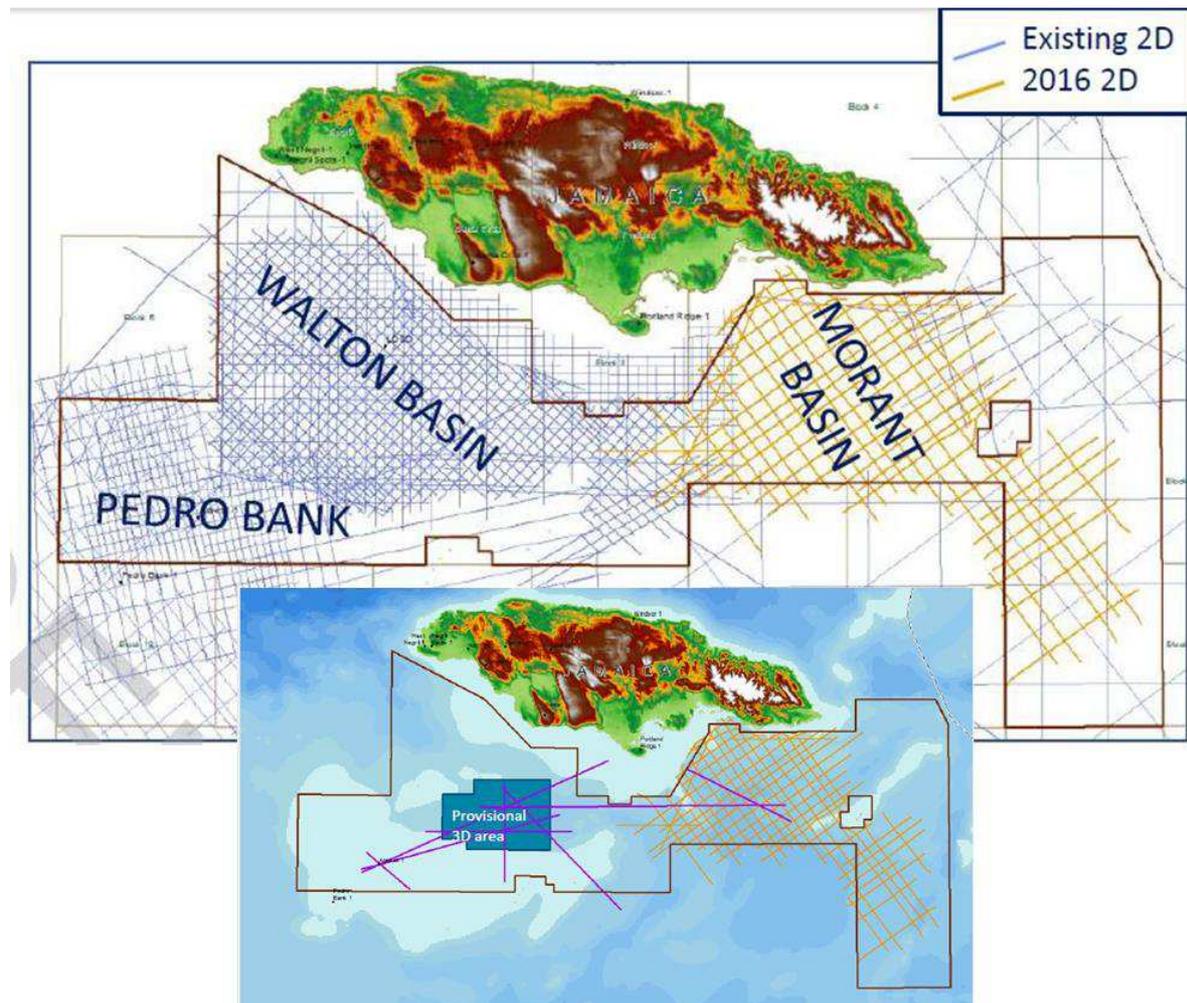
As outlined previously, Tullow acquired the licence along with the legacy 2D seismic data in 2014. Over the course of 2015 to the current year, Tullow shot a further 3,650km of 2D seismic in two tranches: 3,000km in 2016 and 650km in 2017. This was combined with extensive fieldwork aimed at de-risking the various petroleum system elements in preparation for the proposed 3D survey scheduled for H1 2018. The map overleaf depicts very clearly the comprehensive 2D seismic coverage across Tullow's licence area with the more recent 2D survey focusing on the Morant Basin located in the eastern section of the licence.

### Drilling commitment in 2019

A 'Drill or Drop' decision for an exploration well on the licence is required by end-2019 and we would anticipate that drilling could commence in H2 2020. A successful result from an initial well is likely to instigate a second exploration well, possibly in 2022. We anticipate that a single exploration well in the region would cost approximately US\$35-40m on a gross basis.

As even a 20% interest in such a programme is a major undertaking for a junior oil and gas explorer such as United, we believe that Tullow and United may look to farm down their interests together as a joint venture partnership prior to exploration drilling. At this stage, we would anticipate that United could hold a 10% carried interest in the first exploration well providing the company with huge potential upside in relation to its comparatively modest initial investment.

## Extensive 2D seismic coverage in Jamaica and the provisional location of a 3D seismic survey



Source: Tullow Oil

## Walton-Morant basin analysis

### Primary focus on the Walton Basin

As the map above clearly indicates there are three major geological provinces offshore Jamaica. In addition to the Pedro Bank carbonate platform to the southwest of the licence which is currently not the primary focus of United's ongoing exploration activity, there are two main basins identified in the offshore region south of Jamaica; the Walton and the Morant basins.

As the inset map depicts, Tullow's 3D seismic survey (represented by the area coloured blue) will focus on the Walton Basin which contains the primary exploration target: the Colibri fault block, in addition to secondary structures of interest.

At this early stage, the Walton Basin is the favoured location for exploration activity given that it is believed to contain siliciclastic reservoirs (clastic non-carbonate sedimentary rocks that are almost exclusively silica-bearing, either as forms of quartz or other silicate minerals) trapped in structures adjacent to a thermally mature kitchen area. The primary area of interest is also located close to the Blower Rock oil seep outlined earlier. The Walton Basin is characterised by the presence of large tilted fault blocks and basement highs in addition to stratigraphic traps and sandstone and limestone exploration plays.

## The Morant Basin

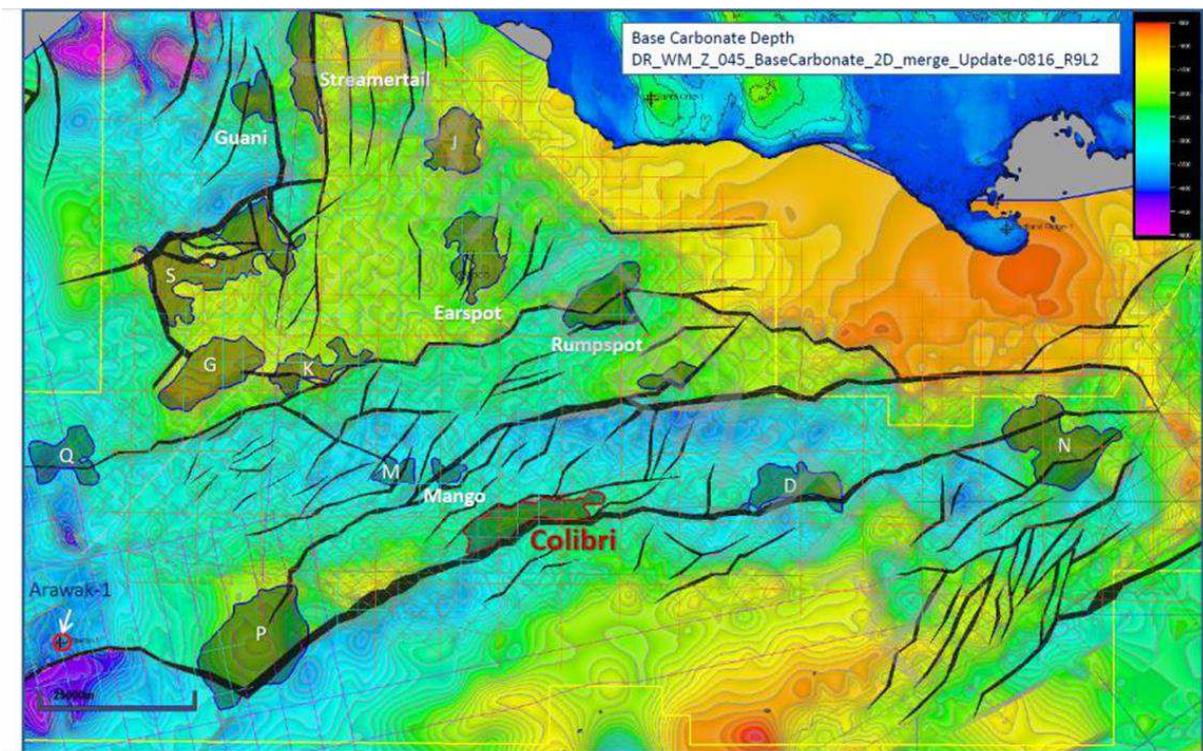
The Morant Basin represents a secondary exploration focus for Tullow and United. The more recently acquired 2D data from 2016 which focused exclusively on the Morant Basin revealed a significant tilted fault block play in this offshore region. The recent survey also indicates the presence of several stratigraphic plays and onlap formations (the termination of shallowly dipping, younger rocks against more steeply dipping, older rock strata) and pinch out traps (the thinning or tapering out of a reservoir against a nonporous sealing rock creating a favourable geometry to trap oil and gas) which have the potential to be hydrocarbon bearing.

## The Colibri lead

The Colibri lead is located in the Walton Basin south off Jamaica in water depth of approximately 750 metres. It is a well-defined fault-bounded structure with onlap characteristics and Tullow surmises that the lead has received charge from surrounding Eocene or Cretaceous aged kitchens.

Although it is at an early stage and estimates are likely to change once the 3D data has been acquired, given the apparent areal closure on the Colibri structure of up to 80km<sup>2</sup>, we estimate mean recoverable resources of approximately 200 mmbbls. At this comparatively early stage, prior to the completion of the 3D survey next year, the lead is likely to have a chance of drilling success of less than 15%. We would expect that this CoS will be enhanced considerably upon interpretation of the 3D data ahead of exploration drilling.

### Location of Colibri and associated leads in the Walton Basin



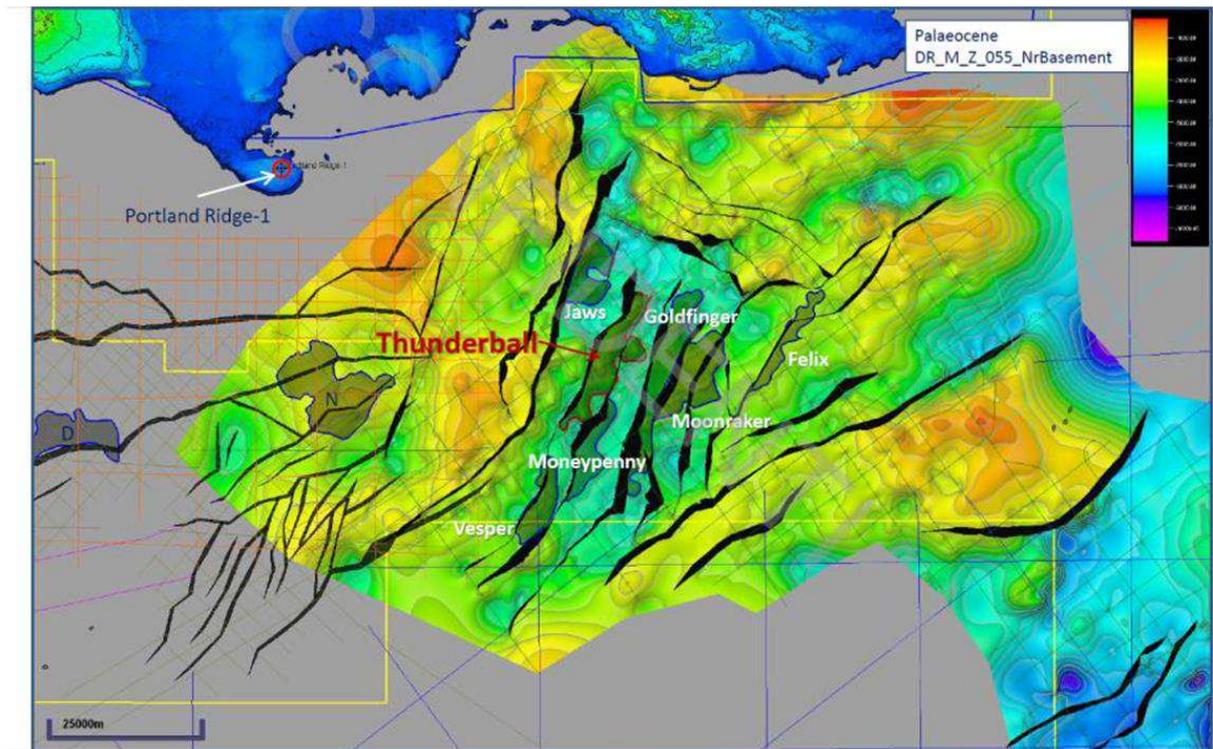
Source: Tullow Oil

## Numerous additional leads indicate a major hydrocarbon play

It is very important to note that the first exploration well in Jamaica since 1982 is highly momentous as a successful result has the potential to open up a new multi-billion barrel hydrocarbon play and would also serve to de-risk considerably any follow-on structures that Tullow opts to drill.

With this in mind, it is important to note that Tullow has identified a range of additional Lower Eocene targets on its acreage including numerous leads in the Morant Basin as depicted on the map below.

### Location of leads in the Morant Basin



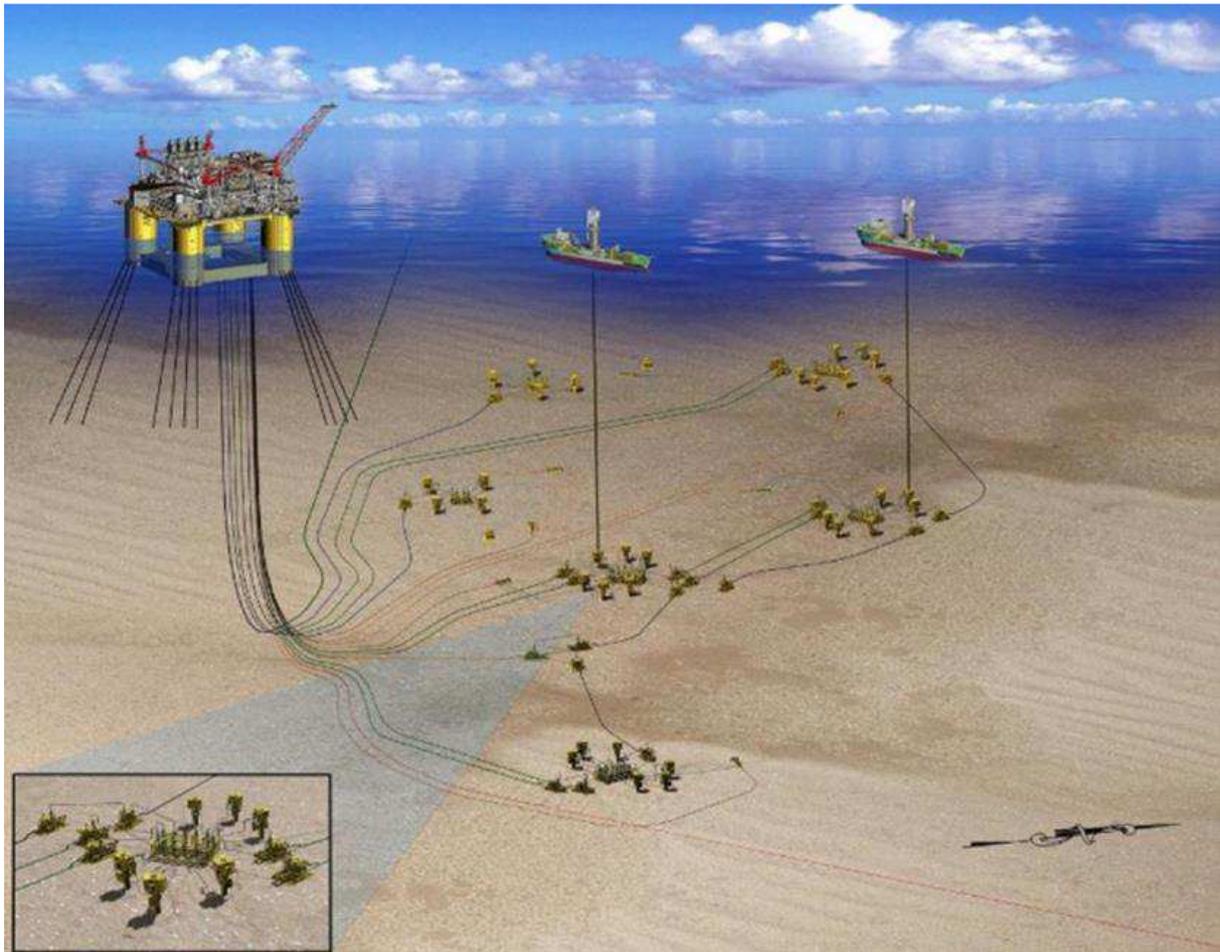
Source: Tullow

## Development concepts

Although it is very early to begin discussions of potential development concepts prior to any commercial discoveries in the region, we believe that a tension leg platform (TLP) development would be appropriate for the commercialisation of discoveries in water depths of approximately 750 metres where Colibri is located.

The TLP development concept has the inherent advantage of being able to tie in multiple step-out wells targeting associated hydrocarbon accumulations up to 4km away from the main platform. With a permanently moored FSO (Floating storage and offloading) vessel located near the TLP, produced oil could be stored and exported on a continuous basis.

## Conceptual TLP development



Source: Royal Dutch Shell

### Indicative NPV underplays the potential

While we have ascribed a gross NPV of over US\$600m to a notional 200 mmbbls offshore development based on a long-term average oil price of US\$65 per barrel, the reality is that NPVs should not be examined on a standalone basis given that the de-risking of adjacent follow up structures implies the opening up of multi-billion barrel potential in the area and the development of multiple structures at a time as depicted by the development concept above.

This will have the effect of enhancing potential NPVs from an indicative base unit level of US\$3.00 per barrel as the play opens up and subsequent discoveries can be tied into nearby infrastructure at a fraction of the cost of a standalone development.

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