



24 November 2011

Bowleven plc ('Bowleven' or 'the Company')

### **Further discovery at Sapele-3**

#### Sapele-3 exploration well, Block MLHP-5, Etinde Permit, Offshore Cameroon

Bowleven, the West Africa focused oil and gas exploration group traded on AIM, announces that the Sapele-3 exploration well drilling in the Douala Basin, offshore Cameroon, has been drilled to a total depth (TD) of 4,480 metres. Having successfully extended the previously defined play fairways at the Paleocene and shallower Tertiary intervals, the well is now being suspended for future re-entry, testing and potential use as a development well. With downhole temperatures in the Paleocene exceeding the rating of the available surface equipment, the favoured strategy is to defer testing until an optimal, longer duration test programme can be run across both the Epsilon and Deep Omicron intervals.

#### **Highlights**

- Further 8 metres of net hydrocarbon pay intersected in deeper reservoirs, in addition to 11 metres of net pay within Deep Omicron interval previously announced
- Reservoir package in Paleocene Epsilon Complex in same gross stratigraphic interval encountered in Sapele-1
- Indications from shows and mud log analysis suggest Epsilon reservoir package is oil-bearing
- Significant extension of Epsilon play fairway with potential for better developed sands updip
- Well now being suspended for future re-entry, testing and potential use as a development well
- LOI issued and agreement in principle reached for rig for 2012 Etinde drilling programme

#### **Kevin Hart, Chief Executive of Bowleven plc, commented:**

“Sapele-3 has been a successful well, our fourth consecutive well in the Douala Basin to encounter significant hydrocarbon intervals at multiple levels. The discoveries made in the Epsilon Complex and shallower Tertiary intervals, representing a total of 19 metres of net hydrocarbon bearing pay, have at each level extended considerably the previously defined play fairway boundaries. The extensive data acquired during drilling operations will

contribute significantly to the derisking of appraisal locations and inform future development and exploitation planning. The next key step is to evaluate this well data and plan an optimal test programme for the Deep Omicron and Epsilon intervals.

We are also pleased to have secured a suitable rig for the planned programme on Etinde next year, and look forward to further progress towards our dual asset objectives of converting resources to reserves and continuing to explore the potential of the Douala Basin.”

### **Sapele-3 drilling update**

The Sapele-3 well is located circa 16 kilometres north-west of Sapele-1 and circa thirteen kilometres north-west of the D-1r wells, in water depth of approximately 30 metres.

On 14 October 2011, Bowleven announced that the well had encountered oil and gas condensate in the Deep Omicron and D-1r equivalent intervals respectively and that drilling within the Deep Omicron interval was to continue.

On 1 November 2011, Bowleven announced that MDT sampling and extensive sidewall core programme had been carried out across Deep Omicron and that, subject to final government approval, it planned to drill ahead through the Deep Omicron interval into the Paleocene Epsilon Complex previously intersected by the Sapele-1 well. Analysis of the MDT and sidewall core data over the Deep Omicron interval at Sapele-3 has confirmed the presence of hydrocarbon bearing sands throughout the 11 metre section within the lower part of the interval and appears to support the view that residual hydrocarbons are present in a further 11 metre zone at the top of the interval.

The well has now drilled through the Epsilon Complex and reached the programmed TD of 4,480 metres. Wireline logging was undertaken across the Epsilon interval at TD.

### ***Epsilon Complex***

The well intersected log-evaluated net hydrocarbon pay of approximately 8 metres in the deeper reservoirs, of which 6 metres were located in reservoir sands with good porosity and permeability within the Paleocene Epsilon interval. Gas chromatograph ratio analysis and shows while drilling indicate that the sands are likely to be oil-bearing.

The Epsilon reservoir interval is interpreted as a basal sand reservoir unit in the same gross stratigraphic interval as that encountered in the original Sapele-1 discovery well and located towards the edge of a potentially extensive channelised system. Sapele-1 confirmed the presence of both gas condensate and oil at the Epsilon interval. As with the shallower Tertiary discoveries in Sapele-3, the discovery at the Epsilon interval represents a substantial step-out from Sapele-1 and extends the known play fairway well beyond the previously mapped area. The Sapele-3 well was not selected on the basis of an optimal location at which to intersect the Epsilon Complex, as the original objectives of the well were in shallower Tertiary intervals, and seismic interpretation highlights the potential for better developed

sands updip within the same interval. This potential will be taken into account in the selection of future appraisal locations.

### ***Forward Plan for Testing***

The Sapele-3 well is now being suspended for future re-entry, testing and potential use as a development well. Immediate testing of the Epsilon interval was not possible, as downhole temperatures exceeded the temperature rating of the available surface equipment. Testing of the Deep Omicron interval, although possible at this stage, would have compromised the integrity of the well and added significant complexity and risk to future test operations in Epsilon. In addition a short flow test of Deep Omicron would have provided very limited information in the context of assessing future development potential, and Bowleven intends to use the additional time to design an optimal, longer duration test programme at both intervals. The current intention is to undertake testing during the 2012/13 drilling campaign on Etinde.

Following the completion of suspension operations, the Sapphire Driller jack-up will be released from contract.

Bowleven will now integrate the data from the Sapele-3 well, including the MDT data and sidewall cores acquired over the Deep Omicron interval, within its overall technical evaluation of the Omicron, Epsilon and D-1r equivalent systems across the Douala Basin side of the Etinde Permit. Volumetric updates for Deep Omicron and Epsilon, reflecting the integration of the Sapele-3 data, will follow in due course.

### **Jack-up Rig for 2012 Etinde Drilling Programme**

As previously announced, the Group intends to pursue a 2012 work programme that includes up to three appraisal wells and one exploration well on the Etinde Permit.

To this end, Bowleven has issued an LOI and reached agreement in principle for a jack-up drilling rig to drill a programme of two firm and up to two further option wells on the Etinde Permit in 2012. Bowleven plans to sign the contract by the end of the month, subject only to securing confirmatory government approval of the contract award. The rig is currently expected to commence operations for Bowleven in Q2 2012, in immediate continuation of work for another operator in the region.

### **ENQUIRIES**

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**Notes to Announcement:**

- (1) The technical information in this release has been reviewed by Ed Willett, who is a qualified person for the purposes of the AIM Guidance Note for Mining, Oil and Gas Companies. Ed Willett, Exploration Director of Bowleven plc, is a geologist and geophysicist, a Fellow of the Geological Society (FGS) and a member of the Petroleum Exploration Society of Great Britain (PESGB) with over 25 years' experience in oil and gas exploration and production.
- (2) The information in this release reflects the views and opinions of Bowleven as operator and has not been reviewed in advance by the Etinde Permit joint venture partners.

**GLOSSARY OF TERMS:**

The following are the main terms and abbreviations used in this announcement:

AIM	Alternative Investment Market
Bowleven	Bowleven plc and/or its subsidiaries as appropriate
Etinde Permit	the production sharing contract between the Republic of Cameroon and EurOil Limited (an indirectly wholly owned subsidiary of the Company) dated 22 December 2008 in respect of the area of approximately 2,316 km <sup>2</sup> , comprising former blocks MLHP-5, MLHP-6 and MLHP-7, offshore Cameroon; or, as the context may require, the contract area to which this production sharing contract relates
LOI	letter of intent
MDT	modular formation dynamics tester
TD	total depth