RNS Number: 3703I

UK Oil & Gas Investments PLC

25 March 2015

25 March 2015

### **UK Oil & Gas Investments PLC**

("UKOG" or the "Company")

# **Update on P1916 Offshore Isle of Wight M Prospect**

### **Gross Unrisked Oil in Place Calculated**

London listed UK Oil & Gas Investments PLC (LSE AIM: UKOG) is pleased to announce that the Company's initial subsurface analyses of P1916 confirm the potential for significant unrisked hydrocarbon volumes in the M Prospect, located in the offshore and onshore transition area along the south-west coast of the Isle of Wight ("IoW").

The Company's initial calculations of most likely unrisked gross oil initially in place ("OIIP") for the main prospective Portland Limestone and Triassic Sherwood Sandstone reservoir objectives, the same formation that hosts the giant Wytch Farm oil reserves, are 40 million barrels (MMbbl) and 76.5 MMbbl respectively. A gas only case for the Triassic Sherwood shows a most likely gross gas initially in place ("GIIP") of 197 billion standard cubic feet of gas ("bcf"). Volumetric results are shown in Tables 1 and 2 below.

UKOG is currently working on volumetric estimates for the additional identified reservoir objectives, which include limestones within the Kimmeridge Clay Formation, as encountered in the Company's recent Horse Hill-1 discovery well, and the Corallian Osmington Oolites, which initial electric log analyses indicate are oil saturated in the nearby onshore Arreton-2 well.

The Company hold a 77.5% net attributable interest in the offshore

P1916 licence and is the operator. The Company applied for the mapped onshore extension of the M Prospect in the UK Landward 14<sup>th</sup> Licence Round, with a net participating interest of 65%.

# Stephen Sanderson, UKOG's CEO, commented:

"The Isle of Wight, and particularly the M Prospect, represents an exciting part of UKOG's growing core exploration growth portfolio here in the UK. The M Prospect is well defined, drill-ready and may represent the Weald-Wessex basin's largest undrilled conventional Portland trap and one of the provinces second or third largest undrilled conventional Triassic traps. The Triassic offers potentially high quality and substantial net reservoir thicknesses, not usually associated with the Weald-Wessex basin outside of the giant Wytch Farm field. If successful, the M Prospect has company maker impact for UKOG."

Table 1: UKOG Calculated M Prospect Portland and Triassic Oil Case Unrisked Gross OIIP, MMbbl

	Low		Most Likely		High		Probability
Reservoir Objective	(P90) OIIP		(P50) OIIP		(P10) OIIP		of Success
	MMbbl		MMbbl		MMbbl		("POS")
	Total	P1916	Total	P1916	Total	P1916	%
<b>Portland Limestone</b>	17.6*	15.7*	40*	35.3*	80*	70.2*	35%*
<b>Triassic Sherwood Sst</b>	21.9*	21.7*	76.5*	71.3*	205**	169**	11**-
							20*%

<sup>\* 4-</sup>way dip closure

UKOG has a net attributable interest of 77.5% in P1916

Table 2: UKOG Calculated M Prospect Triassic Gas Case Unrisked Gross GIIP, Bcf

	Low		Most Likely		High		Probability
Reservoir	(P90) GIIP		(P50) GIIP		(P10) GIIP		of Success
Objective	b	bcf		bcf		cf	("POS")
	Total	P1916	Total	P1916	Total	P1916	%
Triassic	57.3*	56.8*	197*	184*	520**	426**	11**-

<sup>\*\*</sup> Dependent upon a combination of 4-way dip closure plus downthrown fault seal

Sherwood				20*%
Sst				

<sup>\* 4-</sup>way dip closure

UKOG has a net attributable interest of 77.5% in P1916

### **M Prospect**

The M Prospect trap is well defined from a closely spaced series of dip orientated 2D seismic lines. It represents an east-west trending hangingwall rollover anticline on the downthrown side of the major Portland-Wight Disturbance fault zone. The trap, created during Alpine compression and inversion from the late Oligocene onwards, contains up to five stacked reservoir objectives, most notably in the Portland Limestone and Triassic Sherwood Sandstone. Depth to the Top Portland and Top Sherwood are 2200 ft tvdss and 9500 ft tvdss, respectively.

The Portland and Triassic most likely volumetric cases exhibit 4-way dip controlled closures. The Triassic Sherwood high case features a combination of 4-way dip and downthrown fault closure, relying on fault seal against upthrown Devonian age basement rocks. Most likely areal closures range from 2,400-2,700 acres (10-11 sq. km) for the Portland and Triassic, respectively. Most likely vertical trap relief and possible hydrocarbon columns are 200-700 ft for the Portland and Triassic, respectively.

The Portland hydrocarbon charge, trap and reservoir are interpreted to be directly analogous to the onshore IoW Arreton-2 well, drilled by British Gas in 1976, on trend 14 km to the east and lies within the Company's 14th Round Application Area. The Company's internal petrophysical analysis together with NUTECH's analysis, show Arreton-2 has a 78 ft thick gross oil saturated Portland reservoir section, a net to gross of 75% and porosities ranging from 16-20%, and is in fact a "missed pay" Portland oil discovery.

Electric logs indicate significant secondary porosity development,

<sup>\*\*</sup> Dependent upon a combination of 4-way dip closure plus downthrown fault seal

possibly related to natural fracturing or dissolution. Hydrocarbon charge is believed to be via vertical fault-related drainage from mature Liassic and Oxford Clay shales in a major source rock kitchen in the Purbeck-Wight trough to the south of the IoW. The main risk element of the M Prospect Portland trap is the presence of similar reservoir parameters as found in the Arreton-2 well.

The Sherwood sandstone is present and exhibits reservoir quality in the adjacent 98/13-1 well and Chessel-1 well. It is a direct reservoir analogue of the giant Wytch Farm field's reservoir sequence. The 98/13-1 well and Chessel-1 well show a 321-448 ft thick gross reservoir section with a net to gross ranging from 22-51% and average porosities ranging from 8.3-13%.

Electric log interpretation shows that the uppermost Sherwood section of the 98/13-1 well has residual oil saturations that correspond to oil stains extracted and geochemically typed to a Liassic source rock. It is also possible that the M Prospect could have been charged by wet gas from a deeply buried Liassic source rock kitchen to the SW of the IoW in an analogous situation to the 98/11-2 gas condensate discovery located on trend 15 km to the west. The trap at 98/11-2 is interpreted to be of a similar age and genesis to the M Prospect. Possible pre-Triassic source rocks, as postulated in the company's Horse Hill prospect, could provide a further gas charge to the M prospect. The key risk element for the M Prospect's Triassic prospectivity lies in the as yet unproven juxtaposition of Jurassic source rocks to Triassic age sediments.

Further reservoir potential exists within the Corallian Osmington Oolites, Great and Inferior Oolites, and within the Kimmeridge Clay Formation micrites and shales.

# **Recovery factors**

Publicly available data from BP and DECC indicate that the oil recovery factor in the analogous Triassic fluvial sandstones of the Wytch Farm field currently stands at 54%. For the M Prospect's gas case, analogous Triassic fluvial Sherwood sandstone gas reservoirs in the Hamilton and Hamilton North gas fields are stated to have

97% and 91% recoveries, respectively (Yaliz & Taylor, 2003). The age equivalent Triassic fluvial sand reservoirs of the Triassic Bunter in the Hewett and Leman fields have gas recovery factors of 96% and 91%, respectively (Cooke-Yarborough, 1991 and Hillier, 2003).

Within the Jurassic limestone reservoirs of the Weald basin, publicly available information shows a broad range of oil recovery factors to date, including Horndean 6% (IGas Energy CPR 2014), Humbly Grove 13.8% (Trueman, 2003) and Palmers Wood 26% (Trueman, 2003).

### **UKOG's interest in P1916**

As per UKOG's RNSs of 2 February 2015, 3 February 2015 and 12 March 2015, following the recent acquisitions for nominal considerations from Egdon (E&P) Limited and Montrose Industries Limited, UKOG's interest in offshore Isle of Wight licence P1916 is 77.5%. UKOG is operator. Magellan Petroleum (UK) Limited owns the remaining 22.5% interest.

In addition, as per UKOG's RNS of 29 October 2014, UKOG also applied in the UK 14th Landward Licence Round for a 200 sq. km area covering the southern part of onshore Isle of Wight. UKOG's interest in this application is 65%. Angus Energy Limited has an interest of 5% (operator) and Solo Oil Plc has an interest of 30%. UKOG is a 6% shareholder of Angus Energy Limited

### **Qualified Person's Statement**

Stephen Sanderson, UKOG's CEO, who has over 30 years of relevant experience in the oil industry, has approved the information contained in this announcement. Mr Sanderson is a Fellow of the Geological Society of London and is an active member of the American Association of Petroleum Geologists.

Tel: 020 7440 0640

# For further information please contact:

UK Oil & Gas Investments PLC David Lenigas / Donald Strang

WH Ireland (Nominated Adviser and Broker)

Square 1 Consulting (Public Relations)
David Bick / Mark Longson

# Glossary

DECC	The department of Environment and Climate Change
discovery	a discovery is a petroleum accumulation for which one or several exploratory wells have established through testing, sampling and/or logging the existence of a significant quantity of potentially moveable hydrocarbons
electric logs	tools used within the wellbore to measure the rock and fluid properties of surrounding rock formations
gas initially in place	the quantity of natural gas that is estimated to exist originally in naturally occurring accumulations before any extraction or production
micrite	a sedimentary rock formed of very fine grained calcareous particles ranging in diameter from 0.06 to 2 mm, often referred to as lime mudstone
missed oil pay	Oil pay that has been identified by more sophisticated analysis of the electric logs and was previously overlooked
MMbbl	millions of barrels
pay	A reservoir or portion of a reservoir that contains economically producible hydrocarbons. The term derives from the fact that it is capable of "paying" an income. The overall interval in which pay sections occur is the gross pay; the smaller portions of the gross pay that meet local criteria for pay (such as minimum porosity, permeability and hydrocarbon saturation) are net pay.

Tel: 020 7220 1666

Tel: 020 7929 5599

oil initially in place	the quantity of oil or petroleum that is estimated to exist originally in naturally occurring accumulations before any extraction or production
oil saturation	the amount of the pore space within a reservoir containing oil
P10	a 10% probability that a stated volume will be equalled or exceeded
P50	a 50% probability that a stated volume will be equalled or exceeded
P90	a 90% probability that a stated volume will be equalled or exceeded
porosity	the percentage of void space in a rock formation, where the void may contain, for example, water or petroleum
reservoir	a subsurface rock formation containing an individual natural accumulation of moveable petroleum that is confined by impermeable rock/formations
2D Seismic	seismic data collected using the two-dimensional common depth point method
source rock	a rock rich in organic matter which, if subjected to sufficient heat and pressure over geological time, will generate oil or gas. Typical source rocks, usually shale or limestone, contain above an initial 1% organic matter by weight
thermally mature	a term applied to source rocks which have received sufficient temperature and pressure
	over geological time to generate hydrocarbons
tvdss	true vertical depth below a subsea datum

This information is provided by RNS
The company news service from the London Stock Exchange

**END**