

21 October 2015

**UK Oil & Gas Investments PLC  
("UKOG" or the "Company")**

**Nutech Assessment of UKOG Weald Basin Interests and Wider Weald, Onshore UK**

UK Oil & Gas Investments PLC (LSE AIM: UKOG) announces that it has received an oil in place ("OIP") volumetric evaluation that it commissioned Houston based Nutech, a leading specialist in the evaluation of tight oil plays, to conduct over eight of the licence areas in which the Company has an interest in the Weald Basin and also over the wider Weald Basin, located in southern England (the "Report").

**Key Points:**

- A gross best estimate ("P50") OIP of 15.7 billion barrels ("BBO") is calculated to lie within three Jurassic shale and interbedded limestone tight oil plays underlying the 8 licence areas in the Weald Basin in which UKOG has an interest ("Licence Areas", covering 151 sq miles see Table 2).
- Within this gross best estimate, an aggregate net attributable 3.9 BBO P50 OIP is calculated for UKOG's economic interests in the Licence Areas.
- The three Jurassic tight oil plays underlying the wider Weald Basin's 1,261 sq mile area (the Area of Interest "AOI") are calculated to contain a gross best estimate P50 OIP of 124 BBO. **Please note that other than UKOG's eight Licence Areas, in which it is calculated UKOG has a net attributable 3.9 BBO P50 OIP, the Company has no further economic interest in the AOI.**

The gross P50 OIP for the Licence Areas stated above is the aggregate OIP for all eight licences, in which UKOG has varying economic interests. These eight licences represent the Company's total licence interests within the AOI.

The Report's executive summary is available on the Company's website ([www.ukogplc.com](http://www.ukogplc.com)).

**Cautionary Statement**

The Report's OIP numbers should be regarded as Total Petroleum Initially in Place, as defined by the Society of Petroleum Engineer's Petroleum Resource Management System of resource reporting.

As previously stated by the Company, it is emphasised that the above estimated OIP volumes should not be construed as recoverable resources, contingent or prospective resources, or reserves and also should not be construed in any way to reflect potential producibility of hydrocarbons from the formations evaluated prior to any successful flow tests and the assessment of an estimated recovery factor to these OIP volumes.

Until further work is done there can be no current estimate of the recovery rate for the Weald Basin or assurance that oil can be recoverable at all.

**The Report**

The Report's calculated OIP volumes are derived from a 3D geological and petrophysical static model containing analysis of 85 DECC/OGA released wells and one proprietary well over the wider Weald Basin. The Calculated OIP for the Licence Areas and wider Weald are shown in Table 1 below:

**Table 1 – Nutech Calculated Jurassic Tight Oil OIP Under UKOG Licence Areas and Wider Weald Basin (BBO)**

Area	UKOG's Licence Areas <sup>2</sup> (151 sq. miles)	Weald Basin AOI <sup>2</sup> (1,261 sq. miles)
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Confidence level	Gross Aggregate OIP (BBO)			Net Attributable Aggregate OIP (BBO)			Gross OIP (BBO)		
	P90 Low	P50 Best	P10 High	P90 Low	P50 Best	P10 High	P90 Low	P50 Best	P10 High
Jurassic Tight Oil <sup>1</sup>	8.1	15.7	29.4	2.0	3.9	7.2	61.8	124.3	229.9

<sup>1</sup> Jurassic tight oil is defined as the plays contained within the source rock shale sequences and interbedded tight conventional limestones of the Kimmeridge Clay, Oxford Clay and Lias Shale Formations. Conventional reservoirs of the Corallian and Great Oolite and of the overlying Portland section are excluded, as they were not the purpose of the study.  
<sup>2</sup> Volumetric estimates by Nutech.

### Kimmeridge Tight Oil Play OIP

The Report calculates that the most significant portion of the reported OIP lies within the Kimmeridge Clay Formation, with a calculated gross P50 OIP of 10.0 BBO in the Licence Areas (net attributable to UKOG of 2.4 BBO) and a calculated gross P50 OIP of 81.9 BBO within the overall AOI.

Three tight limestones within the Kimmeridge Clay Formation represent the Company's principal near-term tight oil exploration and appraisal focus, and are calculated to contain a gross P50 OIP of 2.1 BBO within the Licence Areas and a gross P50 OIP of 19.5 BBO within the overall AOI.

From earlier reports, the Kimmeridge limestones are interpreted by Nutech and by Schlumberger to contain hydrocarbons within the Company's Horse Hill-1 well, in which the Company has a 20.358% per cent economic interest, and are known to have flowed oil from the nearby Balcombe-1 well (in which the Company has no interest).

### Possible Oil Producing Analogues

The Report also states that the Kimmeridge limestones are analogous to the oil productive Austin Chalk and Eagle Ford formations of the US. Furthermore, the analysed Kimmeridge section is possibly analogous to the known oil productive tight oil sections of the Bakken of the US Williston Basin, the Wolfcamp, Bone Springs, Clearfork, Spraberry, and Dean Formations in the US Permian Basin. These US analogues have estimated recovery factors of between 3% and 8% and in a few cases up to 15% of contacted OIP per well. These recovery factors are achieved with the use of well stimulation techniques.

**Until further work is done there can be no current estimate of the recovery rate for the Weald Basin or assurance that any Oil in Place can be recovered at all.**

It should be noted that Nutech's report and estimates contain judgements and assumptions that may differ from other prior studies. For example a prior study on the wider Weald basin by the British Geological Survey ("BGS") differs with Nutech's analysis largely as a result of differing judgements regarding the likely presence of oil in the Kimmeridge section as a result of different assumptions on the thermal maturity of the Kimmeridge section derived from the findings of the Horse Hill well."

### Future Plans

As well as pursuing the appraisal and development of the separate Horse Hill Portland sandstone oil discovery, the Company will also focus on the appraisal of the Kimmeridge limestones at Horse Hill, which it believes present the most viable near-term objective for potential tight oil production in the basin, and which could potentially be produced utilising conventional limestone stimulation methods.

The planned Horse Hill-1 flow test, specifically designed to test the Kimmeridge limestones along with the Portland sandstone, is planned to be the next significant milestone in the Company's Kimmeridge "proof of concept" process. The Company expects these flow tests to be conducted within the next few months.

Following the expected approval of the Company's farm-in to the PEDL143 Holmwood licence (originally announced on 29 June 2015), the Company will participate in the drilling of the Holmwood-1 exploration well, which UKOG believe will provide a further Kimmeridge limestone proof of concept step alongside testing the conventional Portland and Corallian targets. This is planned for 2016 or 2017.

**Stephen Sanderson, UKOG's Executive Chairman, commented:**

"The first step in evaluating any tight oil play is to calculate the overall OIP using all available data. Nutech's study has based its OIP conclusions on its established well-by-well methodology that also fully incorporates geological insights gained from the Horse Hill-1 well.

These findings should now serve to give the market the Company's up to date and science-based view of the estimated quantity of OIP within UKOG's Licence Areas and in the wider Weald Basin.

The Company believes that the Report illuminates the wider Weald Basin's significant potential and demonstrates how the Company's interests fit within the overall geological picture. The calculated OIP volumes provide us with the necessary encouragement to proceed with our plans to prove the concept that oil may flow and possibly be recovered in commercial quantities from these tight oil plays. The planned activities in Horse Hill and Holmwood will therefore be key steps.

Although we are only in the early stages of this proof of concept process, the findings of our recently published Weald tight oil conceptual development studies, demonstrate that, in the success case, oil could be produced with sensitivity to the Weald locality. This is a fundamental aspect of the company's business philosophy."

**Allen D Howard, Nutech's Chief Commercial Officer, commented:**

"This was a very rigorous study analysing the oil in place measured in 86 wells calibrated by our own in-house core and cuttings analyses, geochemical and legacy data. This, coupled with the experience and knowledge Nutech brings from the majority of proven producing tight oil and gas plays in the USA, gives us confidence in the specific potential of the Weald's tight oil plays and the Kimmeridge limestone play in particular."

**Qualified Person's Statement:**

Stephen Sanderson, UKOG's Executive Chairman, who has over 30 years of relevant experience in the oil and gas 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.

**For further information please contact:**

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**Glossary:**

contingent resources	contingent resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations, but the applied project(s) are not yet considered mature enough for commercial development due to one or more contingencies. Contingent resources may include, for example, projects for which there are currently no viable markets, or where commercial recovery is dependent on technology under development, or where evaluation of the accumulation is insufficient to clearly assess commerciality. Contingent resources are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterised by their economic status
core	a continuous cylindrical sample of rock from the wellbore normally taken in 30 ft sections
cuttings	small rock fragments of less than a few millimetres diameter removed from a borehole drilled by rotary drilling and conveyed to the surface in drilling mud
DECC	UK Government Department of Energy and Climate Change
electric logs	tools used within the wellbore to measure the rock and fluid properties of surrounding rock formations
flow test	a flow test or well test involves testing a well by flowing hydrocarbons to surface, typically through a test separator. Key measured parameters are oil and gas flow rates, downhole pressure and surface pressure. The overall objective is to identify the well's capacity to produce hydrocarbons at a commercial flow rate
gross oil in place	100% of oil in place, without taking into account the Company's ownership interest
Jurassic Tight Oil	the three plays, or petroleum systems, contained within the source rock shale sequences and interbedded tight limestones of the Kimmeridge Clay, Oxford Clay and Lias Formations
moveable oil	oil that can flow and potentially be extracted via wells
limestone	a sedimentary rock predominantly composed of calcite (a crystalline mineral form of calcium carbonate) of organic, chemical or detrital origin. Minor amounts of dolomite, chert and clay are common in limestones. Chalk is a form of fine-grained limestone
net oil in place	the Company's economic interest in oil in place, taking account of the Company's ownership interest in each of the eight licences located in the AOI
OGA	UK Oil & Gas Authority
oil in place or stock tank oil in place	the quantity of oil or petroleum that is estimated to exist originally in naturally occurring accumulations before any extraction or production
P10 ("high estimate")	a 10% probability that a stated volume will be equalled or exceeded
P50 ("best estimate")	a 50% probability that a stated volume will be equalled or exceeded
P90 ("low estimate")	a 90% probability that a stated volume will be equalled or exceeded
play	a set of known or postulated oil and or gas accumulations sharing similar geologic, geographic, and temporal properties, such as source rock, migration pathways, timing, trapping mechanism, and hydrocarbon type
petrophysics	the study of physical and chemical rock properties and their interactions with fluids utilising electric logs, physical rock and fluid measurements
prospective resources	those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective resources have both an associated chance of discovery and chance of development
recoverable resources	those quantities of petroleum (oil in this case) estimated, as of a given date, to be potentially recoverable from known accumulations
reserves	those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions; reserves must further satisfy four criteria: they must be discovered, recoverable, commercial and remaining (as of the evaluation date) based on the development project(s) applied; reserves are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or

	characterised by development and production status
reservoir	a subsurface rock formation containing an individual natural accumulation of moveable petroleum
shale	a laminated and fissile very fine-grained sedimentary rock, consisting of compacted silt and clay-size mineral particles. Can contain high proportions of organic material, which if subjected to heat and pressure over geological time can generate petroleum (a petroleum source rock)
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
stochastic	an analysis of a dataset that uses a large number of randomly determined observations, each of which conforms to the overall probability distribution of the dataset
tight reservoir or tight rock	a term normally applied to reservoirs, either sandstones, limestones, shales or mudstones, with a measured average permeability of less than 1 milliDarcy
tight oil	oil found or expected to be present within a reservoir with low permeability, i.e. a tight reservoir. The term, in the case of the Weald Tight Oil Plays, is applied to a play where trapped petroleum accumulations are expected to be pervasive throughout a large area and that are not significantly affected by hydrodynamic influences (also called “continuous-type deposits”)
Thermal maturity	Measure of the combined effects of heating (generally due to burial) and geological time, and which controls the conversion of organic matter in a source rock into oil and/or gas
Total Petroleum Initially In Place	the quantity of petroleum which is estimated to exist originally in naturally occurring accumulations. Therefore, the quantity of petroleum that is estimated, on a given date, to be contained in known accumulations, plus those quantities already produced from those accumulations, plus those estimated quantities in accumulations yet to be discovered
total organic carbon (TOC)	the weight percent amount of organic carbon within the rock which is a commonly used measure of hydrocarbon source rock richness
well stimulation	a well intervention performed on an oil or gas well to increase production by improving the flow of hydrocarbons from the drainage area into the well bore.

## Notes to Editors:

### About Nutech

Nutech, one of the world’s leading companies in petrophysical analysis and reservoir intelligence, has played a major role in guiding the development of the United States unconventional resource revolution observed in the past 16 years. Nutech has extensive experience in US tight oil and gas plays and many key basins globally. Nutech are one of only four companies approved by the UK Government (OGA) to handle the sale, release and further analysis of the UK’s onshore well database. Nutech’s client base includes the governments of Mexico, Bahrain, Pakistan, The Netherlands, Poland, and Colombia, as well as oil and gas majors and large independents, which include Petronas, Chevron, Repsol, ConocoPhillips, BP, GDF, Devon, and SandRidge. Further information is available at [www.nutechenery.com](http://www.nutechenery.com).

### UKOG’s Licence Interests

The Company’s UK licence interests are shown below in Table 2. The three licences outside the AOI are Lidsey, Offshore Isle of Wight and Onshore Isle of Wight (pending OGA award).

**Table 2 – UKOG’s Licence Interests**

Asset	Licence	UKOG's Interest	Licence Holder	Operator	Area (km <sup>2</sup> )	Status	Current Licence Period Expiry
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Licences in the AOI							
Avington <sup>1</sup>	PEDL070	5%	UKOG (GB) Limited	IGas Energy Plc	18.3	Field in stable production.	31 December 2017
Baxters Copse <sup>2</sup>	PEDL233	50%	UKOG Weald Limited	IGas Energy Plc	89.6	Reviewing economics of appraisal/development well.	30 June 2016
Brockham <sup>1</sup>	PL234	3.6%	Angus Energy <sup>5</sup>	Angus Energy <sup>5</sup>	8.9	Drilling of sidetrack well being considered.	27 October 2017
Holmwood <sup>3</sup>	PEDL143	20%	UKOG	Europa Oil & Gas (Holdings) plc	91.8	Awaiting OGA consent to farm-in, exploration well planned.	30 September 2016
Horndean <sup>1</sup>	PL211	10%	UKOG (GB) Limited	IGas Energy Plc	27.3	Field in stable production.	31 December 2015
Horse Hill <sup>4</sup>	PEDL137	20.358%	Horse Hill Developments Ltd <sup>6</sup>	Horse Hill Developments Ltd <sup>6</sup>	99.3	Flow testing of HH-1 planned, awaiting regulatory approvals.	30 September 2016
Horse Hill <sup>4</sup>	PEDL246	20.358%	Horse Hill Developments Ltd <sup>6</sup>	Horse Hill Developments Ltd <sup>6</sup>	43.6	Flow testing of HH-1 planned, awaiting regulatory approvals.	30 June 2019
Markwells Wood <sup>2</sup>	PEDL126	100%	UKOG (GB) Limited	UKOG (GB) Limited	11.2	Compiling Field Development Plan.	30 September 2016
Licences Outside the AOI							
Isle of Wight (Offshore) <sup>3,7</sup>	P1916	77.5%	UKOG Solent Limited	UKOG Solent Limited	46.7	Awaiting 14th Round, UKOG adjacent onshore acreage.	31 January 2017
Isle of Wight (Onshore) <sup>3,7</sup>	14th Round	TBA	TBA	TBA	200.0	Subject to 14th Round awards.	TBA
Lidsey <sup>1,7</sup>	PL241	4.2%	Angus Energy <sup>5</sup>	Angus Energy <sup>5</sup>	5.3	Drilling of infill well being considered.	1 December 2017

**Notes:**

1. Oil field currently in production.
2. Oil discovery pending development and/or appraisal drilling.
3. Exploration asset with drillable prospects and leads.
4. Oil discovery pending flow testing.
5. UKOG has a 6% interest in Angus Energy, which has a 70% interest in

Lidsey and a 60% interest in Brockham.

6. UKOG has a direct 30% interest in HHDL, plus an indirect 1.32% interest via Angus Energy. HHDL has a 65% interest in PEDL137 and PEDL246.

7. The Lidsey, Offshore Isle of Wight (P1916) and Onshore Isle of Wight licences were not i Nutech study as they are located outside the AOI.