RNS Number: 4973Q

UK Oil & Gas Investments PLC

18 June 2015

18 June 2015

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

#### **Independent Assessment of Horse Hill Licences**

Further to the report provided to the Company by Nutech in relation to its Horse Hill-1 ("HH-1") well in the Weald basin, previously announced in April 2015, UK Oil & Gas Investments PLC (London AIM: UKOG) now announces that Nutech has provided the Company with an independent report of the oil initially in place ("OIP") contained within 55 square miles covered by the Horse Hill licences (PEDL137 and PEDL246) near Gatwick Airport, south of London, in which the Company has a net attributable interest of 20.358%. This evaluation does not include the OIP for the Portland Sandstones, which has already been evaluated and reported on.

The study calculates that the total Jurassic shale plus tight conventional reservoir section of UKOG's licences contain a Best Estimate, or P50, OIP of 9,245 million barrels ("MMBO"). The most significant OIP within the Jurassic section is contained within the shales and tight conventional reservoir limestone sequences of the Kimmeridge, with a calculated Best Estimate, or P50, total Kimmeridge OIP of 5,230 MMBO.

As the Company has stated in relation to previous announcements, the calculated OIP figures should not be construed as contingent resources, prospective resources or reserves.

As detailed in the report on the Horse Hill-1 well, Nutech considers that the analysed Kimmeridge zones are possibly analogous to the known oil productive hybrid reservoir benches of the Bakken of the US Williston Basin, and of the Wolfcamp, Bone Springs, Clearfork, Spraberry, and Dean Formations in the US Permian Basin. Nutech's

proprietary database indicates that these US analogues have estimated recovery factors of between 3% and 15% of contacted OIP per well, again as we have reported previously. Further work will be required to determine the likely recovery factor for the Horse Hill licence areas.

The study also identifies possible significant OIP within the Middle Jurassic Oolite limestone section that could be analogous to the Mississippian Limestone Play of Oklahoma. Further work will be carried out to establish the economics of the oil saturations in this section.

Table 1: Summary of OIP for PEDL137 and PEDL246

	OIP, MMBO			
		P50		
	P90 Low	Best	P10 High	Mean
Zone KIMMERIDGE				
TOTAL	1,949	5,230	8,881	5,355
Zone CORALLIAN	122	556	1,384	687
Zone OXFORD_CLAY	188	495	908	530
Zone OOLITE	410	1,544	3,352	1,769
Zone LIAS_CLAY	462	1,420	2,994	1,625
TOTAL*	3,131	9,245	17,519	9,965

<sup>\*</sup> Arithmetic sum

The above table states the estimated gross OIP. The Company's net attributable interest in the licence areas is 20.358%.

The Nutech OIP study presents the results of a 3D geological and petrophysical static model used to calculate the range of possible OIP over UKOG's 55 square mile PEDL137 and PEDL246 licenses in the UK Weald Basin. The study utilises new 2015 analyses of the HH-1 and Collendean Farm-1 wells and the 8 closest wells to the licenses, together with NUTECH's existing 2014 regional 3D Weald basin framework of 114 wells.

The ranges of calculated geological and petrophysical parameters in each well's NULOOK and NULIST interpretation were used to run a stochastic simulation of OIP over the license areas for key prospective tight Jurassic shale and limestone benches or reservoir units.

#### Stephen Sanderson, UKOG's CEO commented:

"Nutech's latest report is a significant step towards understanding the resource potential of our Weald licences, being the first independent semi-regional quantification of OIP over the area that incorporates the findings from the Company's HH-1 well.

The results, utilising over 114 wells in the basin, confirm the likely presence of significant and potentially extensive hydrocarbon volumes within the licence areas and thus provides a further valuable step towards "proof of concept" for the identified Jurassic resource plays.

We now look forward to receiving Nutech's advice on the proposed HH-1 flow test objectives and the integration of the report's wider basin implications to help evaluate the potential of our interests in our other UK licences."

#### **UKOG's interest in Horse Hill:**

The Horse Hill-1 well is located within onshore exploration Licence PEDL137, on the northern side of the Weald Basin near Gatwick Airport. UKOG owns a 30% direct interest in Horse Hill Developments Ltd ("HHDL") and a 1.32% interest in HHDL via its 6% interest in Angus Energy Limited. HHDL is a special purpose company that owns 65% participating interests and is the operator of licence PEDL137 and the adjacent licence PEDL246 in the UK Weald Basin. The remaining 35% participating interests in the PEDL137 and PEDL246 licenses are held by Magellan Petroleum Corporation.

#### **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.

### For further information please contact:

**UK Oil & Gas Investments PLC** 

David Lenigas Tel: 020 7440 0640

WH Ireland (Nominated Adviser and Broker)

James Joyce / Mark Leonard Tel: 020 7220 1666

Square 1 Consulting (Public Relations)

David Bick / Mark Longson Tel: 020 7929 5599

#### **About Nutech:**

Nutech (<u>www.nutechenergy.com</u>) is a global oil services company specialising in reservoir evaluation and optimisation at all stages of the exploration and production life-cycle.

### **Glossary**

3D	three dimensional
benches	Individual reservoir units contained within a
	resource play sequence
contingent resources	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
conventional reservoir	a reservoir normally with an average permeability exceeding 1 milliDarcy.
hybrid reservoir	a conventional reservoir that sits within a generative source rock sequence comprised of shales.
limestone	a carbonate sedimentary rock predominantly composed of calcite 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
mean	or expected value, is the probability-weighted average of all possible values and is a measure of the central tendency either of a probability distribution or of the random variable characterized by that distribution
ММВО	millions of barrels of oil
NULIST	NULIST is a proprietary tool of Nutech; it provides petrophysical reservoir parameters in tabular form and additional calculations such as OIP
NULOOK	NULOOK is a proprietary tool of Nutech; it is an enhanced petrophysical analysis which utilises conventional open hole electric logs
oil initially in place (OIP)	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
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 oil saturation) are net pay
permeability	the capability of a porous rock or sediment to permit the flow of fluids through its pore spaces
petrophysics	the study of physical and chemical rock properties and their interactions with fluids
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
porosity	the percentage of void space in a rock formation, where the void may contain, for example, water or petroleum
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 a chance of development; prospective resources are further sub-divided in accordance with the level of certainty associated with recoverable estimates assuming their discovery and development and may be sub-classified based on project maturity
recovery factor	those quantities of petroleum, as a proportion of OIP anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under

	defined conditions
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 that is confined by impermeable rock/formations
resource play	a play where oil is found or expected to be present within a reservoir with low permeability i.e. a tight reservoir. The term in the case of HH-1, 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").
sandstone	a clastic sedimentary rock whose grains are predominantly sand-sized. The term is commonly used to imply consolidated sand or a rock made of predominantly quartz sand
stochastic simulation	a simulation that traces the evolution of variables that can change stochastically (randomly) with certain probabilities. A stochastic model creates a projection which is based on a set of random values
tight reservoir	a reservoir with low permeability, usually below 1 millidarcy

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

END