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UK Oil & Gas Investments PLC

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UK Oil & Gas Investments PLC ("UKOG" or the "Company")
Horse Hill-1 Oil Discovery Update

Upgrade on Portland Discovered Oil in Place Volumes and Conventional Upper Jurassic Limestone Oil Play, Weald Basin UK

UKOG today announces that, as a result of the analysis and integration of subsurface data from the Horse Hill-1 ("HH-1") discovery well, in which it holds a net attributable interest of 14.56%, the calculated estimates of the discovered most likely gross oil initially in place ("OIIP") within the overall Upper Portland sandstone conventional reservoir in the HH-1 and Collendean Farm-1 ("CF-1") structure have increased by over 250% from the 3.1 million barrels ("mmbbls") reported on 24 October 2014, to a current most likely OIIP of 8.2 mmbbls. Similarly, calculated estimates of low case (P90) discovered OIIP has increased by nearly 400% to 5.7 mmbbls and high case (P10) OIIP volumes show a 250% increase to 12.1 mmbbls.

In addition, the results of electric log analysis in the HH-1, CF-1 and other regional wells to the south of PEDL 137 ("Licence"), combined with ongoing geochemical analysis of HH-1 samples, indicate that the key elements of a conventional Upper Jurassic Limestone oil play have been demonstrated to extend into the southern part of the Licence. The HH-1 well demonstrates the presence of

limestone porosity adjacent to, both overlying and underlying, thermally mature super-saturated world-class oil source rocks within a 1,496-foot gross interval of the Upper Jurassic Kimmeridgian Clay ("KC") Formation between 2,224 feet and 3,720 feet TVDss. Samples from the KC show total organic carbon ("TOC") of up to 9.4%, generative potentials of between 45-103 kg of hydrocarbons per tonne and with measured vitrinite reflectance ("Ro") exceeding 0.81% at the base of the formation.

Further conventional oil potential within the Middle Jurassic Kellaways Beds sandstones in HH-1 is currently under investigation.

Work is underway to obtain the necessary permissions to conduct a production flow test from the HH-1 Upper Portland conventional oil pool in 2015.

The current OIIP estimates are set out in Table 1 below.

The full results of the HH-1 well are complex by their nature. The operator's post-well evaluation has therefore taken longer than expected and is still continuing, as described below.

Portland Sandstone Discovery

Integration of the Vertical Seismic Profile ("VSP") data from the HH-1 well has enabled a revised interpretation of available 2D seismic data to be made over the geological structure containing the HH-1 discovery. The current seismic interpretation is strongly indicative that the Upper Portland oil pool, discovered by HH-1, is most likely part of a larger geological structure containing the CF-1 well to the north drilled by Esso in 1964.

New electric log analysis of the CF-1 well demonstrates that a near identical Upper Portland reservoir section to that seen in HH-1 exists with a gross 97-foot oil saturated "missed oil pay" section and average porosities of 16%. The Company reported on 24 October 2014 that HH-1 contained a gross oil saturated Upper Portland section of 102 feet with 16% average porosity. Oil saturations exist

to the base of the Upper Portland sand reservoir in both HH-1 and CF-1, indicating that the oil water contact lies deeper within the structure. The Company currently interprets that the proven lowest oil at 1,900 feet TVDss found in the HH-1 well now demonstrates that a most likely 140 feet hydrocarbon column has been discovered, 38 feet greater than the 102-foot oil column previously reported. The mapped spill point (and possible oil water contact) of the combined HH-1 and CF-1 Upper Portland oil pool demonstrates that a possible 240-foot maximum hydrocarbon column could exist within a structural closure of approximately 3,400 acres (14 square kilometres).

The Operator's analyses of the Brockham-1 well logs demonstrate that the oil producing Upper Portland reservoir thickness and overall quality in the nearby Brockham field are very similar to HH-1 and CF-1 and provide a direct producing reservoir analogue. However, the Operator's calculated most likely (P50) OIIP of 8.2 mmbbl for the HH-1 and CF-1 discovery is significantly larger than the Brockham field's most likely (P50) Upper Portland OIIP of 3.62 mmbbl, certified by RPS Energy at end 2013.

Work is ongoing to submit an application to the Department of Energy and Climate Change ("DECC"), the Environment Agency and Surrey County Council for permission to carry out a flow test on the Upper Portland Sandstone in HH-1. The planned flow test will likely include a pressure transient test to examine the reservoir connectivity within the overall geological structure.

Subject to this HH-1 flow test, a future submission is planned to DECC of a Field Development Plan for the HH-1 and CF-1 discovery. The presence of two wells containing oil saturations down to base reservoir within the same mapped structural closure, and with similar reservoir quality to the Brockham oil field but larger OIIP, significantly increases the Company's confidence that the Upper Portland discovery can be developed as a commercial oil field.

Table 1: Estimated gross in place discovered Upper Portland Sandstone oil volumes

HH-1 and CF-1	Low (P90)	Medium (P50)	High (P10)
Structure			
Discovered OIIP, mmbbls	5.7	8.2	12.1
Increase from	+380%	+260%	+250%
24.10.14			

UKOG has a net attributable interest of 14.56% in the discovery.

It should be noted that the OIIP numbers in Table 1, above, represent the management's current viewpoint. For the avoidance of doubt OIIP numbers should not be construed as resource or reserve estimates as a significant proportion will not be recovered during any future production regime.

Volumes have been estimated by the Operator using methodologies and standards published by the Society of Petroleum Engineers.

Conventional Upper Jurassic Limestone Oil Potential

The HH-1 well penetrated an unexpectedly thick 1,496-foot gross interval of the Upper Jurassic Kimmeridge Clay ("KC") Formation between 2,224 feet and 3,720 feet TVDss. The sequence contains predominantly organically rich high gamma-ray hot shale, interwith two regionally correlatable bedded limestone Preliminary examination of cuttings indicates the limestones are coccolithic argillaceous micrites. The mud log showed elevated gas readings above the upper limestone (KC Micrite 1) and weak oil shows were reported within the limestone. The KC Micrite 1 encountered at 2,510.4 feet TVDss has a gross thickness of 113 feet and electric log analysis indicates the development of 37 feet of net porosity greater than 5%. A continuous oil saturated zone of approximately 20 feet below 2,550 feet TVDss is calculated. Average total porosity within the hydrocarbon zone is calculated at 6.4% and is dominated by secondary porosity.

The gamma-ray log through the KC Micrite 1 shows a near identical pattern and formation thickness to the equivalent micrite found in the Balcombe-1 well, drilled by Conoco in 1986 approximately 15 kilometres to the south. The Operator's analysis also demonstrates that the top of the oil saturated porous zone in HH-1 occurs at an identical stratigraphic and gamma-ray point to the top of the proven tested oil pay zone in Balcombe-1. Total porosities of 8% are calculated within the Balcombe pay section and are thus similar to HH-1.

The lower limestone (KC Micrite 2) has a gross thickness of 83 feet and shows 28.6 feet of net porosity development with an average porosity of 7%. No shows or elevated gas readings were reported, although minor thin oil saturated zones are calculated from logs.

The Company reported on 5 November 2014 that multiple oil shows and elevated gas readings were encountered within the KC Formation and that preliminary geochemical analysis showed oil source rock potential to likely be higher than expected. Subsequent analysis of a further eight KC shale samples, from 2,715 to 3,345 feet TVDss encasing the KC micrites, show TOCs of 4.64 to 9.4% and generative potentials of between 45 and 103 kg hydrocarbon/tonne of rock. Corresponding calculated hydrogen indices (HI) are extremely high, ranging from 759-1098, indicating a very oil-prone source rock. These initial sample results gives management confidence that the KC within the south of PEDL 137 has the potential to be a world-class source rock of equivalence to the proven conventional oil source rocks of the KC within the Viking Graben and Central Graben of the North Sea.

Thermal maturation data obtained from well cuttings samples shows that the pre-Oligocene and Jurassic section of the HH-1 well has achieved greater than expected maximum burial depths. Measured vitrinite reflectance ("Ro") between the top and base of the KC ranges from 0.62-0.81%, demonstrating that the KC lies within the early to peak oil generation window. The Lower Liassic shale and limestone sequence shows a measured Ro of up to 0.98%, indicating the late peak oil to early wet-gas condensate

generation window.

The 2014 Weald Shale Report by the British Geological Survey models the top of the oil window within the Weald Basin to represent a burial depth of 7,000 to 8,000 feet (i.e. an Ro of 0.5-0.6%). Consequently, the top of the oil window, interpreted to be at circa 2,300 feet TVDss in the HH-1 well, indicates the well was likely to have been uplifted by approximately 4,500 to 5,500 feet during the post-Oligocene inversion period. The southern part of PEDL 137 during KC deposition would thus have been in a more basin-centred location than at present day and could lie within a high TOC KC basinal sweet-spot.

The Operator has concluded that the most likely source of oil saturations found within the KC Micrite 1 is thus from the adjacent underlying and overlying hot shale of the KC in direct proximity to the HH-1 well.

The Operator concludes that the presence of thermally mature KC source rocks, together with porosity within the KC Micrites and log derived micrite oil saturations, strongly indicate that an Upper Jurassic limestone conventional play exists within the southern area of PEDL 137.

Further detailed integrated geochemical and petrophysical studies are ongoing to help establish possible OIIP volumes in the KC Micrite 1. The Operator is also currently evaluating the feasibility of a short flow test in the KC Micrite 1 after the planned Upper Portland flow test.

Conventional Middle Jurassic Kellaways Beds Oil Potential

Re-examination of the HH-1 mud log shows that gas levels increase significantly 60 feet above the Kellaways Sandstone, continue throughout the 47-foot gross sand interval and immediately drop off within the underlying Great Oolite limestone. No observed oil shows were recorded within the Kellaways Sandstone. Geochemical analyses of samples from the Oxford Clay

demonstrate that the section directly above the Kellaways Beds is thermally mature for oil generation (Ro of greater than 0.81%) and contains potential generative oil source rocks with TOCs of 1.9 to 2.9%. Electric logs are now being evaluated in more detail, to determine whether potential oil saturations lie within the Kellaways Sandstone.

UKOG's interest in Horse Hill

The Horse Hill-1 well is located within onshore exploration license PEDL 137, on the northern side of the Weald Basin near Gatwick Airport. UKOG owns a 20% direct interest in Horse Hill Developments Ltd ("HHDL") and an additional 2.4% interest in HHDL by virtue of its 6% ownership in Angus Energy Limited ("Angus Energy"). Angus Energy owns 40% of HHDL and is the operator of the licence. HHDL is a special purpose company that owns a 65% participating interest and operatorship of licence PEDL 137 and the adjacent licence PEDL 246 in the UK Weald Basin. The participants in the Horse Hill-1 well are HHDL with a 65% working interest and Magellan Petroleum Corporation with a 35% interest. UKOG's net attributable interest in PEDL 137 and 246 is therefore 14.56%.

UKOG's Interest in Brockham

Angus Energy owns 60% and is operator of the Brockham oil field (PL 235). UKOG net attributable interest in Brockham is therefore 3.6%.

Qualified Person's Statement

The information contained in this announcement has been reviewed and approved by Stephen Sanderson, Exploration and Technical Adviser to UKOG, who has over 33 years of relevant experience in the oil industry. Mr Sanderson is a Fellow of the Geological Society of London and is an active member of the American Association of Petroleum Geologists.

Glossary:

2D seismic	seismic data collected using the two-dimensional common depth point method
argillaceous	a rock containing a significant proportion of clay minerals
coccolithic	containing coccoliths which are the skeletal remains of calcareous algae/plankton as found ubiquitously in the Chalk of NW Europe
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
gamma-ray log	an electric log which measures natural background radioactivity emitted mainly by potassium, uranium and thorium isotopes used as a sedimentary lithology discriminator
generative potential (S2)	the amount of hydrocarbons that can be generated from a unit volume of source rock established via the S2 peak from rock-eval pyrolysis, normally expressed in milligrammes of hydrocarbon per gramme of rock (or kilogramme per tonne)
hot shale	a shale rock displaying average initial TOCs normally exceeding 2% and represented by a high gamma ray electric log reading
hydrogen index (HI)	the amount of hydrogen relative to the amount of organic carbon in a sample, normally expressed in milligrammes of hydrogen per gramme of TOC. The higher the amount of hydrogen the more oil prone the source rock when subjected to time temperature and pressure; an initial HI over 450 normally indicates

	an oil prone source rock		
kerogen	the fraction of organic material in a sedimentary		
	rocks that is insoluble in the usual organic		
	solvents being composed of a variety of organic		
	materials, including algae, pollen, wood, vitrinite,		
	and amorphous material. Over time and		
	subjected temperature and pressure kerogen		
	converts to hydrocarbons		
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		
mmbbls	millions of barrels		
oil down to	the deepest level where oil saturation is		
	measured at the base of a porous reservoir		
	where it directly overlies rock of very low		
	porosity and permeability where no reliable oil		
	water contact can be established		
oil initially in	the quantity of oil or petroleum that is estimated		
place	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		
oil water	a bounding surface in a reservoir above which		
contact	predominantly oil occurs and below which		
	predominantly water occurs.		
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		
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	
reservoir	a subsurface rock formation containing an	
	individual natural accumulation of moveable	
	petroleum that is confined by impermeable	
	rock/formations	
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	
spill point	the structurally lowest point in a hydrocarbon	
	trap that can retain hydrocarbons, normally	
	coincides with a hydrocarbon water contact	
sweet spot	the area within a shale source rock unit showing	
	highest TOC and generative potential normally	
	associated with basin centred deposition	
thermally	a term applied to source rocks which have	
mature	received sufficient temperature and pressure	
	over geological time to generate hydrocarbons	
TOC	total organic carbon - the weight percent amount	
	of organic carbon within the rock which is a	
	commonly used measure of hydrocarbon source	
	rock richness	
TVDss	true vertical depth below a subsea datum	
vitrinite	a measure of the percentage of incident light	
reflectance (Ro)	reflected from the surface of vitrinite particles in	
	a sedimentary rock. It is referred to as % Ro and	
	is a measure of the thermal maturity of a rock.	
	Top of the oil window is dependent on source	
	rock type, but is widely recognized to be at an Ro	
	equivalent of between 0.5-0.7%	
VSP	vertical seismic profile, recording of seismic	
	waves directly at the borehole to enable seismic	
	two way travel time reflectors to be accurately	

correlated with formation depths encountered by the well

[Consider including other highlighted technical terms in the glossary.]

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