



10 January 2023

Orcadian Energy plc
("Orcadian Energy", "Orcadian" or the "Company")

Pilot Technical Resource Upgrade

Highlights

- Management has completed an update of their estimate of technically recoverable resources for the Pilot field
- Technically recoverable resources have increased 18% to 97 MMbbl for a P50 case based upon a polymer flood development scheme
- Comprehensive geophysical interpretation and geological and dynamic reservoir modelling work completed with support from Axis and TRACS
- Upside resource estimate for Pilot alone is now 131 MMbbl.

Summary

Orcadian's estimate of Pilot field resources was audited in a CPR by Sproule in 2021 and was included in the Company's Admission Document. Sproule assigned 78.8 MMbbl of 2P reserves to the project, 1P reserves were 58.5 MMbbl and 3P reserves were 110.5 MMbbl.

Since listing Orcadian has licensed and, with support from Axis, interpreted newly reprocessed seismic data over Pilot, which resulted in an uplift to the developed area oil-in-place. TRACS then constructed a range of geological realisations and the Orcadian team ran multiple dynamic reservoir simulations to establish a new range of technically recoverable resources.

The multiple geological models were designed to incorporate the full range of heterogeneity that we see as possible across the Pilot field, and the new full-field reservoir models were then calibrated to the results of our polymer core flood experimental results. These models have been tested with a range of possibilities for multiple parameters and from that work the team have derived a statistical range of developed area recovery factors which is highly consistent with the range of recovery factors adopted by Sproule in the CPR. This convergence provides great confidence in the latest range of resource estimates as the estimates of recovery factor have been arrived at from two entirely different routes: a stochastic reservoir simulation approach (Orcadian management) and by comparison with analogue fields (Sproule).

The table below outlines the Management updated estimate of technically recoverable resources for the Pilot field:

Technically recoverable resources (i.e. before an economic cut-off) MMbbl	Sproule CPR Table 2	Orcadian management estimates	Uplift
Proven or P90	61.5	65.3	6.2%
Proven plus probable or P50	82.0	97.1	18.4%
Proven, probable plus possible			

Proven, probable plus possible or P10	112.8	131.0	16.1%
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These new estimates incorporate the impact of optimised polymer dosages and can be directly compared with the technical recoverable resources noted in Table 2 of the Sproule CPR (see page 159 of the Company's Admission Document, available on the Company's website).

For clarity, these are management estimates, represent gross production from the field, and have not been audited by Orcadian's Competent Person. This resource update is SPE PRMS 2018 system compliant. The figures quoted are technically recoverable resources before the application of an economic cut-off which is required for the classification of these resources as reserves.

Steve Brown, Orcadian's CEO, commented:

"We are very pleased with the results of this updated resource estimate. This is the culmination of eighteen months of work, which started with the interpretation of the newly reprocessed seismic from TGS. Since then, working with TRACS, we have constructed multiple geological realisations and tested our development plan taking into account both downside scenarios as well as the exciting upside possibilities."

"A thorough understanding of the reservoir and how it will perform is the foundation of any sound development plan. We are confident that this work has not only given us that understanding, but will also provide an excellent basis for potential farm-in partners to evaluate the Pilot development in the coming months."

For further information on the Company please visit the Company's website: <https://orcadian.energy>

Qualified Person's Statement

Pursuant to the requirements of the AIM Rules and in particular, the AIM Note for Mining and Oil and Gas Companies, Maurice Bamford has reviewed and approved the technical information and resource reporting contained in this announcement. Maurice has more than 33 years' experience in the oil & gas industry and 3 years in academia. He holds a BSc in Geology from Queens University Belfast and a PhD in Geology from the National University of Ireland. Maurice is a Fellow of the Geological Society, London, and a member of the Petroleum Exploration Society of Great Britain. He is Exploration and Geoscience Manager at Orcadian Energy.

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About Orcadian Energy

Orcadian is a North Sea focused, low emissions, oil and gas development company. In planning its Pilot development, Orcadian has selected wind power to transform oil production into a cleaner and greener process. The Pilot project is moving towards approval and will be amongst the lowest carbon emitting oil production facilities in the world, despite being a viscous crude. Orcadian may be a small operator, but it is also nimble, and the Directors believe it has grasped opportunities that have eluded some of the much bigger companies. As we strike a balance between Net Zero and a sustainable energy supply, Orcadian intends to play its part to minimise the cost of Net Zero and to deliver reliable organic energy.

Orcadian Energy (CNS) Ltd ("CNS"), Orcadian's operating subsidiary, was founded in 2014 and is the sole licensee of P2244, which contains 78.8 MMbbl of 2P Reserves in the Pilot discovery, and of P2320 and P2482, which contain a further 77.8 MMbbl of 2C Contingent Resources in the Elke, Narwhal and Blakeney discoveries

(as audited by Sproule, see the CPR in the Company's Admission Document for more details). Within these licences there are also 191 MMbbl of unrisked Prospective Resources. These licences are in blocks 21/27, 21/28, 28/2 and 28/3, and lie 150 kms due East of Aberdeen. The Company also has a 50% working interest in P2516, which contains the Fynn discoveries. P2516 is administered by the Parkmead Group and covers blocks 14/20g and 15/16g, which lie midway between the Piper and Claymore fields, 180 kms due East of Wick.

Pilot, which is the largest oilfield in Orcadian's portfolio, was discovered by Fina in 1989 and has been well appraised. In total five wells and two sidetracks were drilled on Pilot, including a relatively short horizontal well which produced over 1,800 bbls/day on test. Orcadian's proposed low emissions, field development plan for Pilot is based upon a Floating Production Storage and Offloading vessel (FPSO), with over thirty wells to be drilled by a Jack-up rig through a pair of well head platforms and provision of power from a floating wind turbine.

Emissions per barrel produced are expected to be about a tenth of the 2021 North Sea average, and less than half of the lowest emitting oil facility currently operating on the UKCS. On a global basis this places the Pilot field emissions at the low end of the lowest 5% of global oil production.

Glossary

1P	Proven reserves
2P	Proven plus probable reserves
3P	Proven, probable and possible reserves
bbls/day	Barrels per day
2C	Mid case estimate of contingent resources
CPR	Competent Person's Report
FPSO	Floating Production, Storage and Offloading vessel
MMbbl	Million barrels
P10	10% probability of being exceeded, determined using probabilistic methods
P50	50% probability of being exceeded, determined using probabilistic methods
P90	90% probability of being exceeded, determined using probabilistic methods
PRMS	Petroleum Resources Management System
SPE	Society of Petroleum Engineers
UKCS	United Kingdom Continental Shelf

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