INVESTOR PRESENTATION December 2022





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Why invest in Orcadian?

- Substantial audited Proven & Probable Reserve base with significant exploration and appraisal upside
- Pilot project well advanced and will deliver on the NSTA's Net Zero agenda and Government's Energy Security goals
- Core projects alone have a NPV₁₀ of \$1.5 billion at **\$70/bbl***
- Multiple paths forward to finance the project
- Highly experienced management team, significantly aligned with shareholders and focussed on maximising shareholder returns
- Farm-out deal should result in a substantial rerating by the market

*NPV estimates based upon Sproule 2021 CPR







Experienced leadership team and Board



Faroe

- Former Chief Executive of LASMO plc.
- Worked for Shell Petroleum before becoming Managing Director of Thomson North Sea Ltd. He has held a number of senior roles in the gas business.
- Mr Darby is currently a Non-Executive director at Gulfsands Petroleun and was the senior independent director at Premier Oil plc for six year
- He has held non-executive roles at Alkane Energy plc, Nordaq Energy British Nuclear Fuels plc, Mowlem plc, Bowleven plc and Centurion End Inc. He was Chairman of Mowlem plc (2005-2006) and Faroe Petroleu plc (2003-2007) and an advisor to the board of Setanta Energy (2011-2



- Petroleum engineer with over forty years of experience with BP, Halliburton, Challenge Energy, Petrofac and Setanta Energy.
- Commercial, project development and operational background.
- Led Harding pre-project team for BP, which conceived and shaped the development plan. Harding was BP's first viscous oil project in the No Sea.
- The first Andrew operations manager during the project execution pl
- Founder of Challenge Energy (now part of SLR), Exile Resources (now Oando Energy Resources), Setanta Energy and Orcadian Energy.

Maurice Bamford

Exploration & Geoscience Mgr





- Strong background in technical assurance, exploration, appraisal, evaluations, and structural geology.
- Formerly Exploration & Geoscience Manager for EnQuest and Talisman Energy UK.



Tim Feather	• Trained as a lawyer and now a Qualified Chartered Accountant with 3 of experience in the financial industry.
Non-Executive	• Currently the Chief Financial Officer of Sumner Group Mining plc, and previously Business Development Director within the same group.
WH IRELAND SUMNER GROUP	 Previously Corporate Finance Director at WH Ireland where he was a Qualified Executive for AIM and acted as retained adviser for a portfol quoted clients in a wide range of sectors including mining, oil and gas, healthcare and technology.
	 A co-founder of Westhouse Securities, Mr. Feather also previously wor Brown Shipley & Co. Limited, Henry Cooke Lumsden and Touche Ross Deloitte).
Alan Hume	 A highly expert and experienced CFO with a diverse background oil and gas exploration and production sector as well as the broad energy market.
	Held senior finance, commercial and operational roles in the oilfie services, engineering, construction and energy production sectors
xtract energy _{plo}	• Significant experience with both private equity backed companies publicly listed entities.
	• A Fellow of the Chartered Institute of Management Accountants.

- BP Research Senior Reservoir Engineer, Pushing Reservoir Limits Team Lead and IOR Network Leader.
- BP EOR Research and Development Team Leader & Programme Manager.
- NSTA EOR Specialist and Senior Reservoir Engineer.















Scale matters in offshore oil, and core asset is the Pilot ORCADIAN C oilfield with 79MMbbl of 2P reserves

- Key asset is the Pilot oilfield which has a substantial audited reserve: 79 MMbbl 2P (proven & probable)
 - Pilot field is well appraised and development ready, project NPV₁₀ \$937m at \$70/bbl, NPV₁₀ breakeven of c. \$40/bbl, based on a polymer flood, using an FPSO, two WHPs and a floating wind turbine
 - 78 MMbbl of contingent resources in Elke, Narwhal & Blakeney with an NPV₁₀ at \$70/bbl of \$631m
- Low risk exploration on licensed acreage
 - Bowhead prospect, a Pilot lookalike, 44 MMbbl with appraisal style risks (65% geological chance of success)
 - Elke appraisal and satellite exploration targets contain over 80 MMbbl with chance of success from 64% to 87%
- NSTA has issued a "Letter of no objection" to our selected concept and a draft FDP has been submitted

NPV and resource estimates as per Sproule 2021 CPR; chance of success for Bowhead is a management estimate; NPV does not include the impact of an evergreen EPL.







Licence & CPR Summary

Licence and block numbers	Operator or admin.	Orcadian Interest	Status	Term Expiry*	Phase Expiry¶	Licence Area (km²)	Discoveries	2P Reserves MMbbl	2C Contingent Resources (On hold) MMbbl	2C Contingent Resources (Technical) MMbbl	2L Prospe Resou (Unris MM
P2244 21/27a	Orcadian	100%	Second Term	30th Nov 2023	n/a	43.2	Pilot Main, Pilot South and Harbour	78.8		13.0	
P2320 21/22a, 21/26a, 21/27b & 21/28a	Orcadian	100%	Initial Term Phase A	I4th Nov 2024	I 4th May 2023	447.9	Blakeney, Feugh, Dandy & Crinan		25.I	2.2	72.
P2482 28/2a & 28/3a	Orcadian	100%	Initial Term Phase B	l 4th July 2027	l 4th July 2025	361.6	Narwhal & Elke		52.7	2.0	119
P2516 14/20g, 15/16g	Parkmead (E&P) Ltd	50%	Initial Term Phase A	30th Nov 2026	30th Nov 2023	19.9	Fynn (Beauly) & Fynn (Andrew)	All and a start of the start of	Not	audited	
F P2320, P2482 an by May 2023, July	d P2516 are a v 2025 and N	all drill-or-dro ovember 202	p licences, a 3 respectiv	and require ely.	a well com	mitment	Total	78.8	77.8	17.2	191

- * The Directors recognise that it is possible that the conditions for the P2244 licence to continue into the Third Term will not be satisfied by the stated deadline and accordingly a term extension may need to be sought from the NSTA.









Pilot is fully appraised following its discovery by Petrofina in 1989

Pilot	Parameter	Units
Oil water contact	2724	feet
Oil column	> 00	feet
Gross sand thickness	50-60	feet
Net to gross ratio	0.95	fraction
Porosity	0.34	fraction
Water saturation	< 0.10	fraction
Permeability	2 to 8	Darcies
Oil gravity	12° - 17°	API
Oil viscosity	c. 400	cP
Gas-Oil ratio	80	scf/bbl
Reservoir Temp.	31	°C
Salinity	72,000	ррт

- Pilot discovered by Fina in 1989
- Fully appraised with 7 wells and modern 3D seismic
- 5 wells were cored, 2 wells were tested including a short horizontal well that produced over 1,800 bopd
- Previously approached as simple waterflood with multiple subsea wells
- Publication of Captain polymer flood pilot results in 2018 provided analogue polymer flood results and the methodology for offshore polymer implementation



Oil pore volume map with field outlines superimposed; Oil in place and recoverable reserve estimates – Sproule CPR

New geophysical and geological interpretation supports an uplift to reserves

- Interpreted new seismic database to build structure and thickness maps
- Developable area oil-in-place has increased by about 10%



Coloured Inversion display from Full Offset volume, TGS reprocessed data



Max amplitude: Base Tay to Top Tay + 10ms

Oil pore volume map for mid-case heterogeneity 8



Updated reservoir models include multiple geological ORCADIAN ENERGY realisations based on real world analogues

- potential geological realisations based upon geological analogues
- covering extensive heterolithic through to homogenous models





Erosional Analogue: 'Cigar outcrop', Sorbas Basin, Tabernas

Aggradational Analogue: Scafferels, Annot, France









Pilot field development works best with alternating production and injection horizontal wells

- Thirty four horizontal wells planned to sweep the reservoir efficiently
- Tight well spacings maximise return on injected polymer and are proven on Pelican Lake and Milne Point projects
- But only five wells (three producers and two injectors) needed at first oil as initial oil rates are high
- Two drilling centres ensure that step-outs and drilling challenges are minimised
- Pilot South can be reached from WHP-A







IMEX Full Field Model Well pattern and spacing







Pilot Field Development Plan



responsive gas reciprocating engines with batteries for frequency control

- Floating wind turbine supplies power to platforms and FPSO, onboard power generation from highly
- Excess gas when wind power high, injected into Feugh gas cap to avoid flaring, supplies gas when needed





Emissions reduced to almost a tenth of the North Sea average by using floating wind power

- Multiple opportunities to reduce emissions adopted
- Integration of aggressive process heat management with high efficiency backup power generation more than halves emissions
- Inclusion of a wind turbine halves emissions again
- Total emissions abatement cost is low as gas import no longer required



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New oil developments can have dramatically lower emissions than mature fields

140

120

Emissions intensity kgCO2/boe

20

- Data collected by the North Sea Transition Authority for emissions intensity, CO₂, CH₄, SO_x and NO_x in CO_{2eq} terms, per barrel of oil equivalent produced in 2021
- UKCS average is 25 kgCO_{2e}/boe
- This dataset demonstrates how emissions intensity increases as oil production declines and fields mature
- New developments with innovative technologies can have dramatically lower emissions intensity
- Refreshing the portfolio of producing fields can significantly reduce global emissions







Agreement with TGS to access the very best seismic data for Pilot and the surrounding assets

- June 2022, TGS and Orcadian signed a royalty agreement
- In return for a 1% royalty over Orcadian's Western Platform licences, TGS:
 - Deferred an amount of the licence fees due in 2022
 - Undertook to reprocess Catcher and Catcher North surveys in support of Carra and Elke projects, interpret seismic and deliver QI products across whole area
 - Licensed an additional 1870 sq km of seismic data, of which c. 470 sq km covers Orcadian licences under a two company licence.
 - Undertook to acquire 100 sq km of new seismic over Elke and Narwhal on Pilot FDP approval
- TGS return is geared to the success of Pilot

ORCADIAN ENERGY





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MoU with SLB to enhance the Pilot development plan and to deliver the Pilot wells

- SLB will provide subsurface petro-technical expertise, production technology, well and completions engineering resources to
 - Identify, design, and deploy appropriate subsurface, surface and wellbore technologies
 - Prepare, plan and execute all well construction, well intervention and production management activities contemplated by the FDP in conjunction with Petrofac as well operator
 - Assist in the finalisation of the field development plan for Pilot
- Provides Orcadian with access to first class reservoir management and well construction capabilities
- A global technology company driving energy innovation committed to making the Pilot project a success
- Intend to work with SLB on project optimisation to explore opportunities to reduce well cost, facilities cost and to boost recovery as well as to minimise emissions







The British government is strongly supportive of new **O&G** investment with the introduction of the EPL

NORTH SEA

• Government now strongly supportive of new oil and gas

investment



Almost 900 blocks up for grabs as 33rd North Sea oil and gas licensing round launched

• Energy profits levy introduced with investment incentives for tax paying companies



Cost of new North Sea Pilot oilfield 'could be reduced by 75%' by tax incentives



NORTH SEA

Windfall tax measures could 'accelerate' major UK oil projects like Cambo and Rosebank

- Licence round launched and energy security strategy published
- Government intend to "establish Gas and Oil New Project Regulatory Accelerators to provide dedicated, named project support to facilitate the rapid development of projects"









Impact of Energy Profits Levy on the cost of Pilot development to a UK tax-paying operator

- 35% additional tax on profits, but with excellent investment reliefs
- Due to the 2028 "sunset" clause, impact on Pilot standalone NPV is minimal c. 1% to 2%
- But the impact of tax status is very significant for UK ring fence tax paying farm-in partner
 - EPL payer can get an immediate reduction in the levy payable of up to 45.15% of Capex
 - CT payer can get a reduction in CT payable up to an additional 30% of Capex, for a 75.15% reduction in financial exposure in total
 - SCT reliefs increase total tax rebate to 91.4% of Capex

https://www.gov.uk/government/publications/autumn-statement-2022-energy-taxes-factsheet/energy-taxes-factsheet

75%



00%







Sources of finance



Costs based upon development scenario in CSR Addendum submitted in July 2021, as amended in the draft FDP



Farm-in partner(s)

Contractor support











Summary – Objectives and Strategy

Deliver a high return for investors

- Fully finance the polymer flood project for Pilot, multi-strand approach:
 - Seek farm-in partners and project investors
 - Structure a contractor alliance to deliver the project
 - Engage with financing partners, lenders, infrastructure investors
- Secure discovered resources at low cost and to transform those resources into reserves and onto production
 - 33rd round presents opportunities













