

# INVESTOR UPDATE

April 2024

ORCADIAN  
ENERGY









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## Objective to deliver a high return for investors

- Support Ping in delivering the polymer flood project for Pilot
  - Particular focus on sub-surface aspects of the project
- Maximise value from Elke & Narwhal and seek to re-license discoveries and prospects surrounding Pilot
- Secure discovered resources at low cost and to transform those resources into reserves and onto production
  - 33rd round presented good opportunities
  - Orcadian bid for three licences and has been offered two licences so far





# Experienced leadership team and Board

**Joe Darby**  
Non-Executive  
Chairman



- 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 oil & gas business.
- Mr Darby is currently a Non-Executive director at Gulfsands Petroleum plc and was the senior independent director at Premier Oil plc for six years.
- He has held non-executive roles at Alkane Energy plc, Nordaq Energy plc, British Nuclear Fuels plc, Mowlem plc, Bowleven plc and Centurion Energy Inc. He was Chairman of Mowlem plc (2005-2006) and Faroe Petroleum plc (2003-2007) and an advisor to the board of Setanta Energy (2011-2013).

**Tim Feather**  
Non-Executive  
Director



- Trained as a lawyer and now a Qualified Chartered Accountant with 30 years of experience in the financial industry.
- Currently, the Chief Financial Officer of Vanadium Resources Limited an ASX listed company
- Previously the Chief Financial Officer of Sumner Group Mining plc, and Corporate Finance Director at WH Ireland where he was a Qualified Executive for AIM and acted as retained adviser for a portfolio of AIM 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 worked for Brown Shipley & Co. Limited, Henry Cooke Lumsden and Touche Ross (now Deloitte).

**Steve Brown**  
CEO



- 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 North Sea.
- The first Andrew operations manager during the project execution phase.
- Founder of Challenge Energy (now part of SLR), Exile Resources (now Oando Energy Resources), Setanta Energy and Orcadian Energy.

**Alan Hume**  
CFO



- A highly expert and experienced CFO with a diverse background in the oil and gas exploration and production sector as well as the broader energy market.
- Held senior finance, commercial and operational roles in the oilfield services, engineering, construction and energy production sectors.
- Significant experience with both private equity backed companies and publicly listed entities.
- A Fellow of the Chartered Institute of Management Accountants.
- Halliburton, Brown & Root, Rockwater, Xtract Energy plc, Elko, Zenith Energy, Edison Mission Energy.

**Maurice Bamford**  
Exploration &  
Geoscience Mgr



- Geologist with over 37 years of experience in academia, BP, Robertson's Research, Talisman Energy, EnQuest & Orcadian..
- Strong background in technical assurance, exploration, appraisal, evaluations, and structural geology.
- Formerly Exploration & Geoscience Manager for EnQuest and Talisman Energy UK.

**David Puckett**  
EOR Specialist



- Scientist and Chemical Engineer with UKAEA and AEA Technology working on DTI Oil Recovery Programme.
- 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.



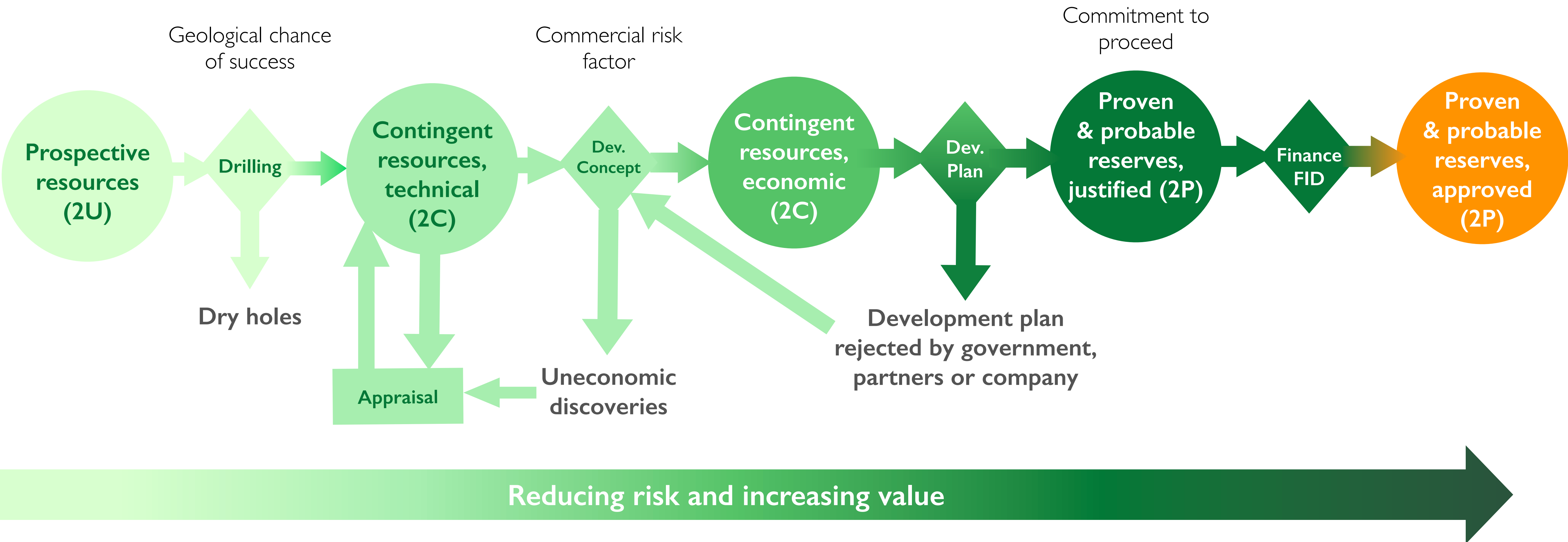
# Transforming resources into reserves

## Prospects

## Discoveries

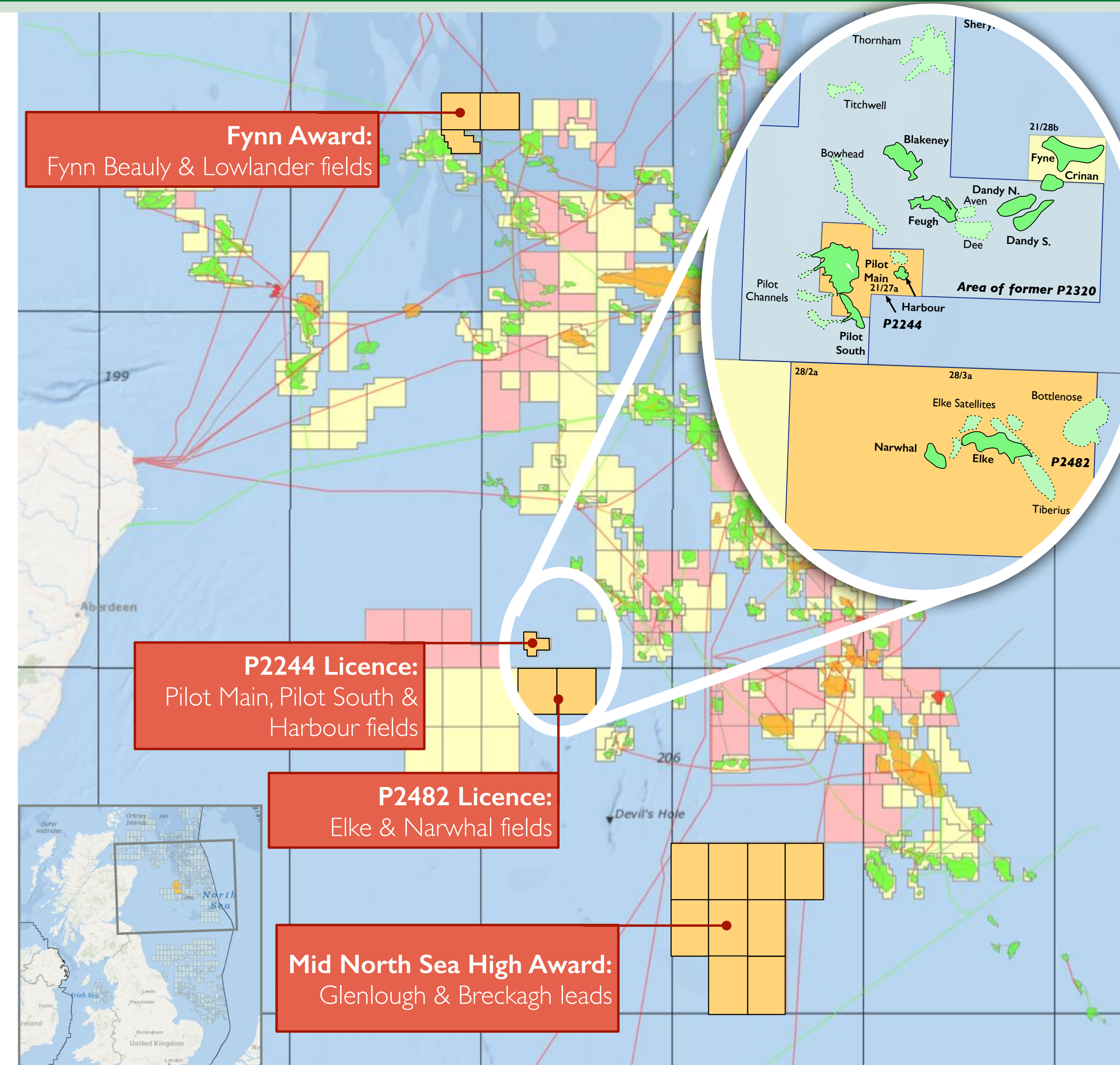
## Commercial discoveries

## Developments





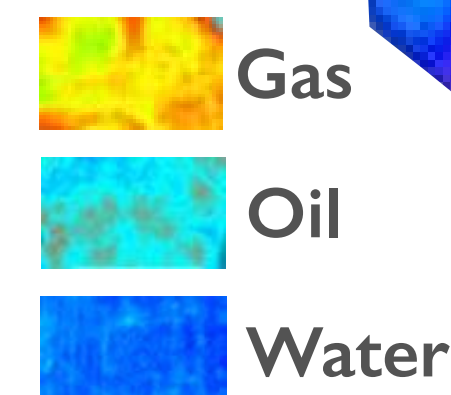
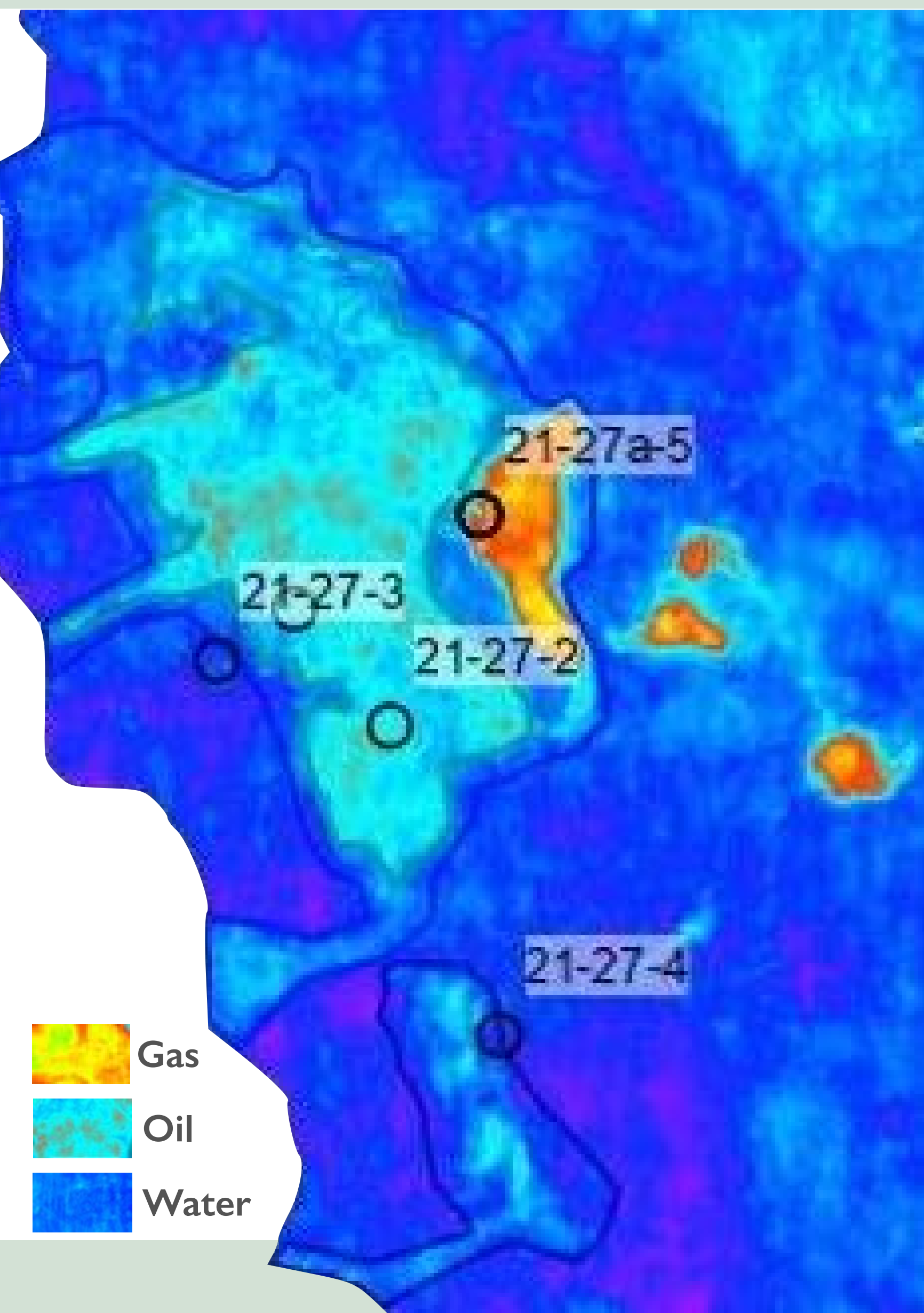
- **Pilot field development carried by Ping Petroleum UK plc until first offload of production**
- Pilot oilfield had a substantial audited reserve: 79 MMbbl 2P reserves (Sproule)
- Post farm-out 13.6 MMbbl 2C net to Orcadian (reclassified to be consistent with Ping)
- Pilot field is a well appraised and development-ready project, based on a polymer flood, using an FPSO, a mixture of subsea and platform wells and a floating wind turbine
- **53 MMbbl of contingent resources in Elke and Narwhal**
- Elke satellite exploration and appraisal targets contain over 50 MMbbl with chance of success from 64% to 87%
- Two 33rd Round offers of award received, one further application under consideration





| Pilot                | Parameter | Units    |
|----------------------|-----------|----------|
| Oil water contact    | 2724      | feet     |
| Oil column           | >100      | 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    | ppm      |

- Pilot Main discovered by Fina in 1989, fields appraised by five wells, plus two sidetracks/horizontals, Pilot South discovered in 1990; two 3D surveys
- Six wells were cored, three wells were tested including a relatively short horizontal well that tested at rates over 1,800 bopd
- Oil in place (STOIIP) of 263mmbbls; polymer flood delivers **recovery factor of c. 40% in developed area**
- **Ithaca has enjoyed “consistent success [applying polymer flood] across the Captain field”**



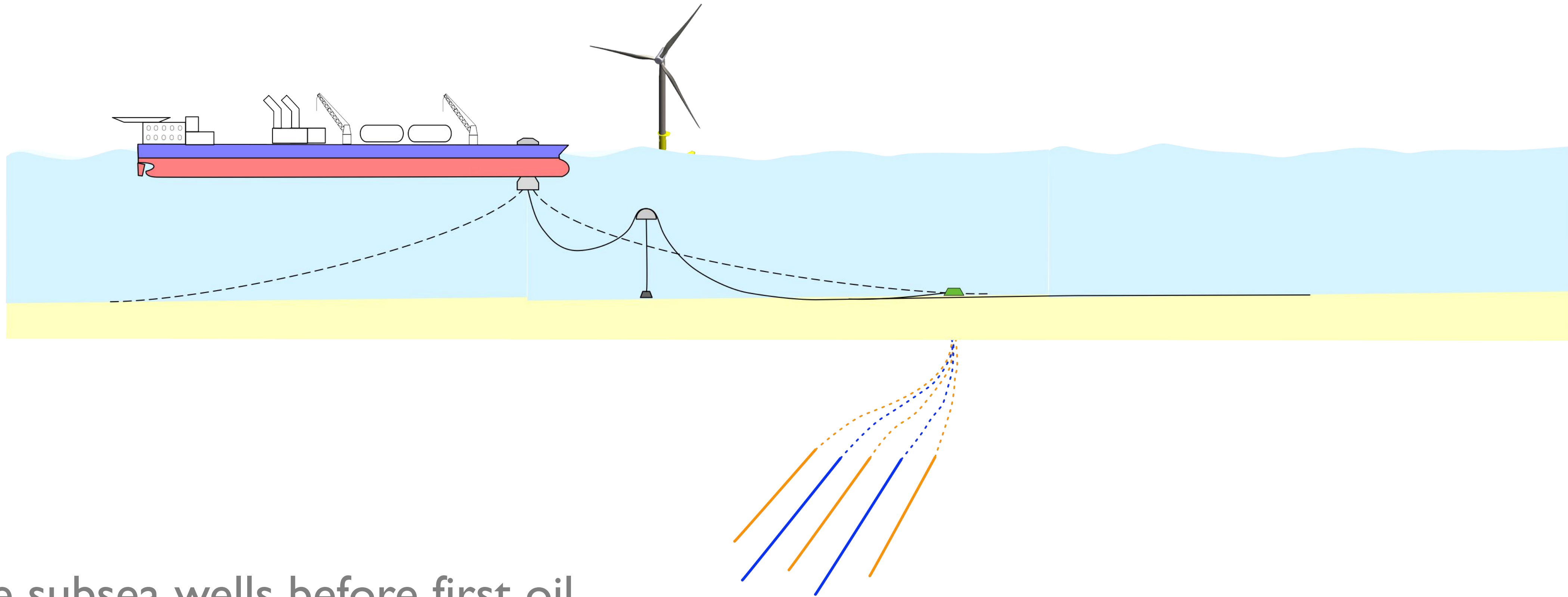


- **81.25% interest in P2244 successfully farmed out to Ping Petroleum UK plc**
- Orcadian has an 18.75% carried interest to first oil, and retains 13.6 MMbbl of 2C resources (development pending) in Pilot, fully carried to first oil,
  - Carry is repaid by an increase in Ping's revenue interest in the development from 81.25% to 90% until payback is achieved
  - Upshot is that NPV to Orcadian is slightly higher than 18.75% of the project NPV
- NSTA granted a two-year licence extension until November 2025
- Pilot project well advanced and will deliver on the NSTA's Net Zero agenda and Government's Energy Security goals



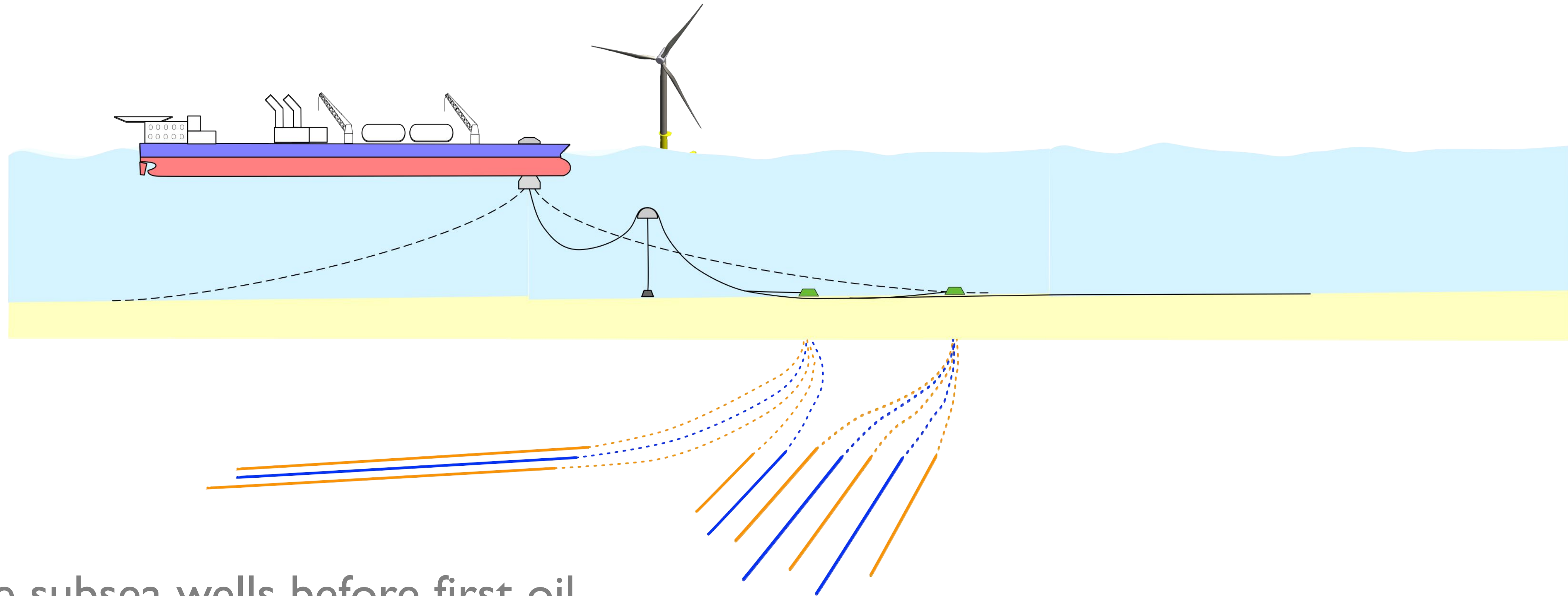


# Pilot field phased development plan, subsea wells with platform wells in second phase





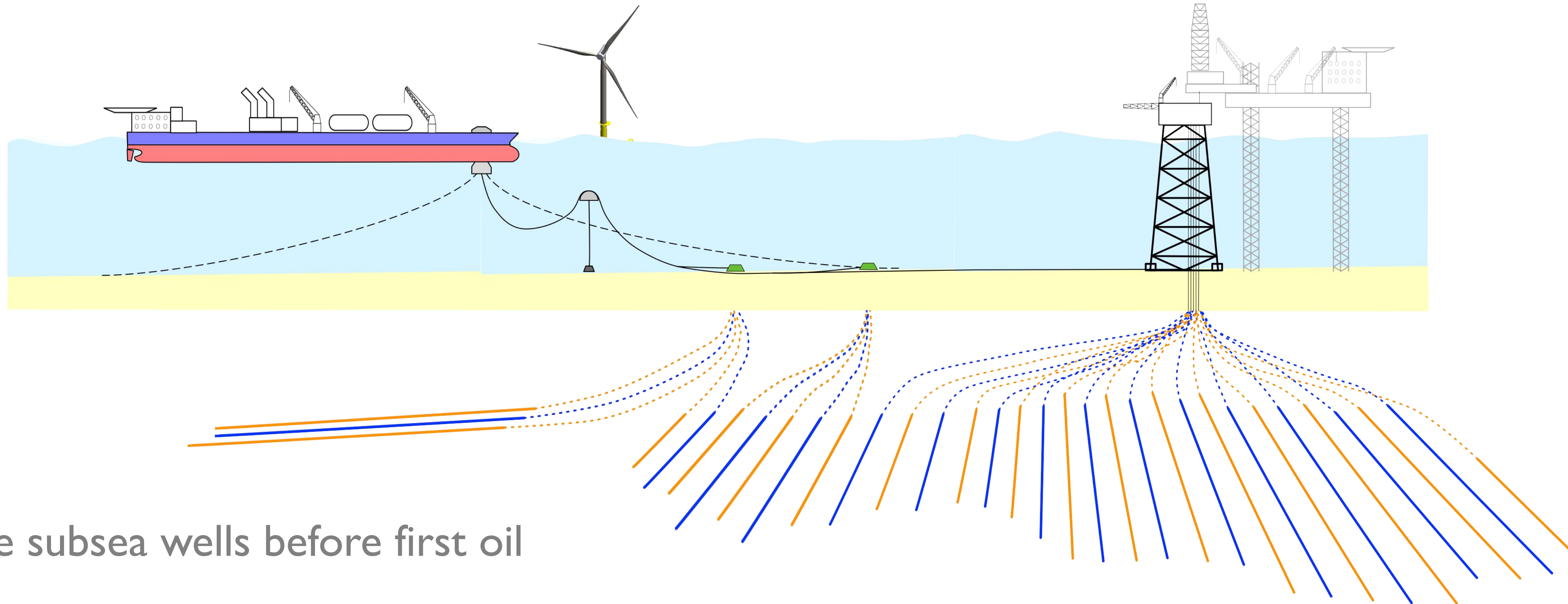
# Pilot field phased development plan, subsea wells with platform wells in second phase



- Five subsea wells before first oil
- Five further subsea wells after first oil



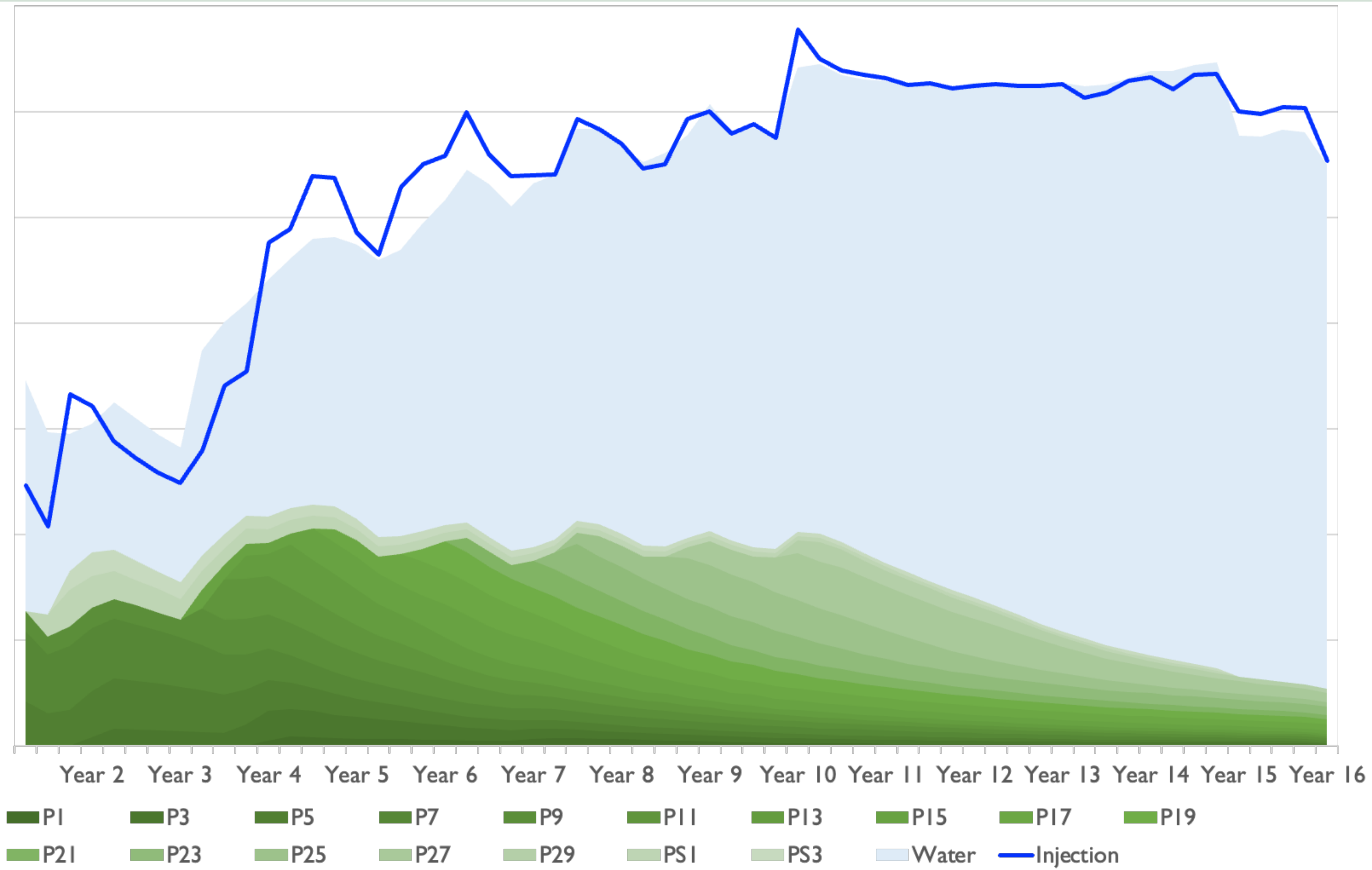
# Pilot field phased development plan, subsea wells with platform wells in second phase



- Five subsea wells before first oil
- Five further subsea wells after first oil
- Twenty-two platform wells to complete development



# Pilot field potential production

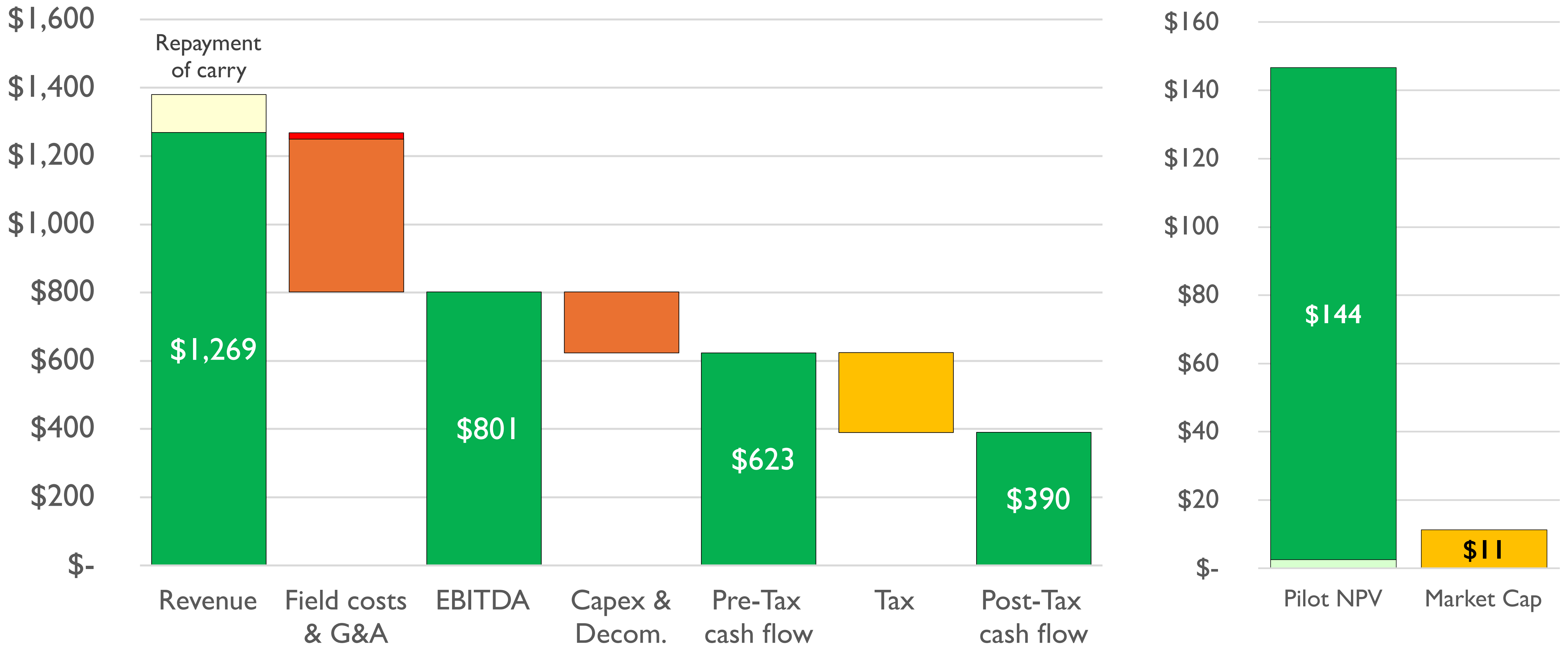


- Potential production profile from Pilot based on modified development plan
- Revised drilling schedule and facility capacities
- Potential to significantly reduce fluid handling requirements on the FPSO by injecting more viscous water than previously assumed
- Creates opportunity to optimise development with a lower capacity FPSO



# Illustrative Pilot net asset value based on Pilot audited resources

\$m Orcadian share

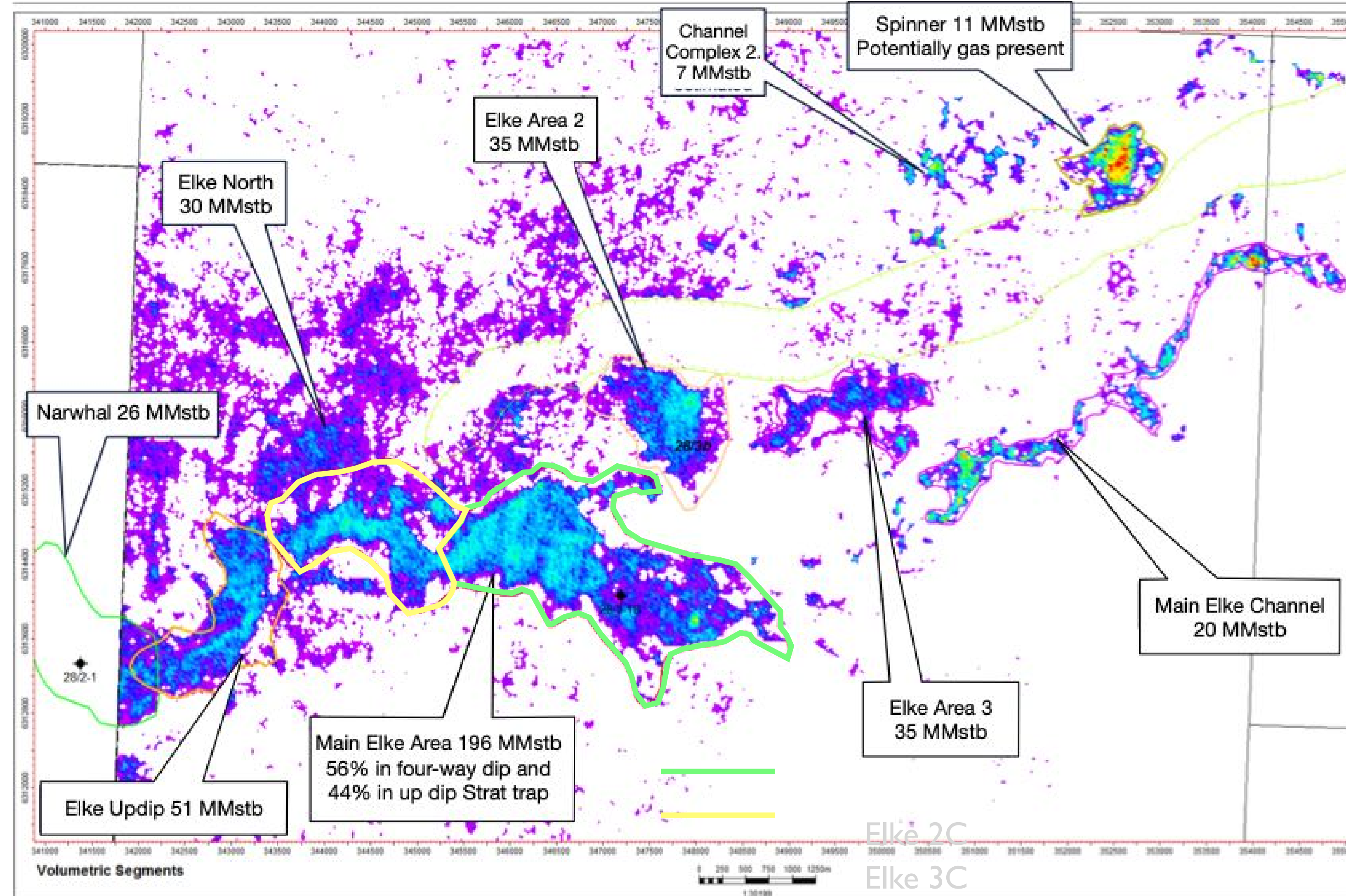


Market cap as of 9/4/24;; Development scenario and resource estimates based on Orcadian management forecasts. Total gross CAPEX \$1.3 bn, of which \$0.5bn is expended prior to first oil, gross P50 recoverable resource of 85 MMbbl. EPL ends 2Q 2029 as currently legislated. G&A assumes £1m per year for 15 years; Oil price \$70/bbl real £/\$ 1.25



# Elke, Narwhal & Prospective satellites

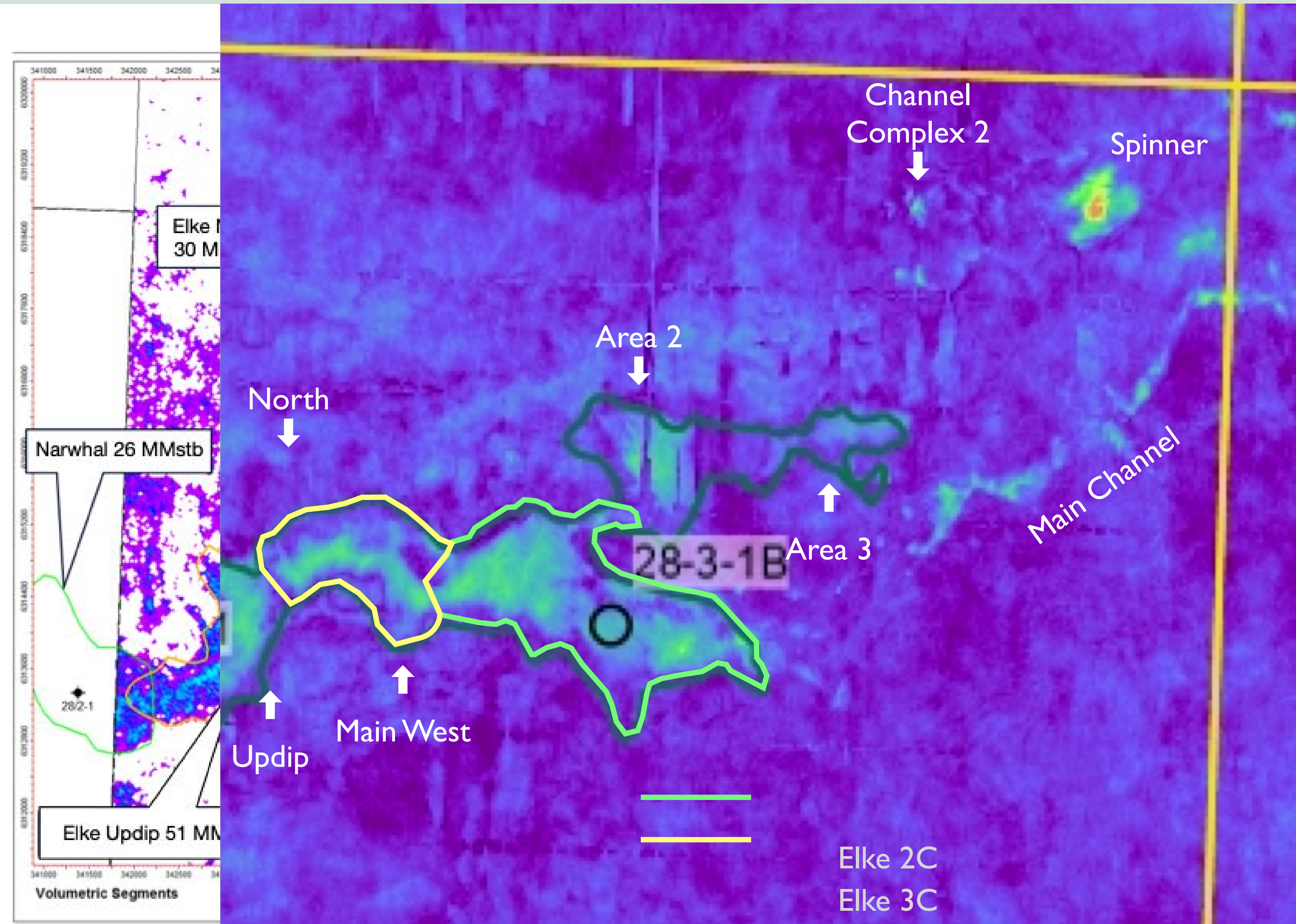
| Pool              | 2C/2U resource | GCoS | rEEI |
|-------------------|----------------|------|------|
| Narwhal           | 9.2            | 100% |      |
| Elke Main         | 45.5           | 100% |      |
| Elke Main West    | 22.8           | 90%  |      |
| Elke Updip        | 17.5           | 87%  |      |
| Elke Area 2       | 12.3           | 64%  |      |
| Elke North        | 10.5           | 66%  |      |
| Elke Area 3       | 13.3           | 64%  |      |
| Main Elke Channel | 7.0            | 64%  |      |
| Spinner           | 4.0            | 38%  |      |
| Channel Complex 2 | 3.0            | 10%  |      |
| <b>Total</b>      | <b>145.1</b>   |      |      |





# Elke, Narwhal & Prospective satellites

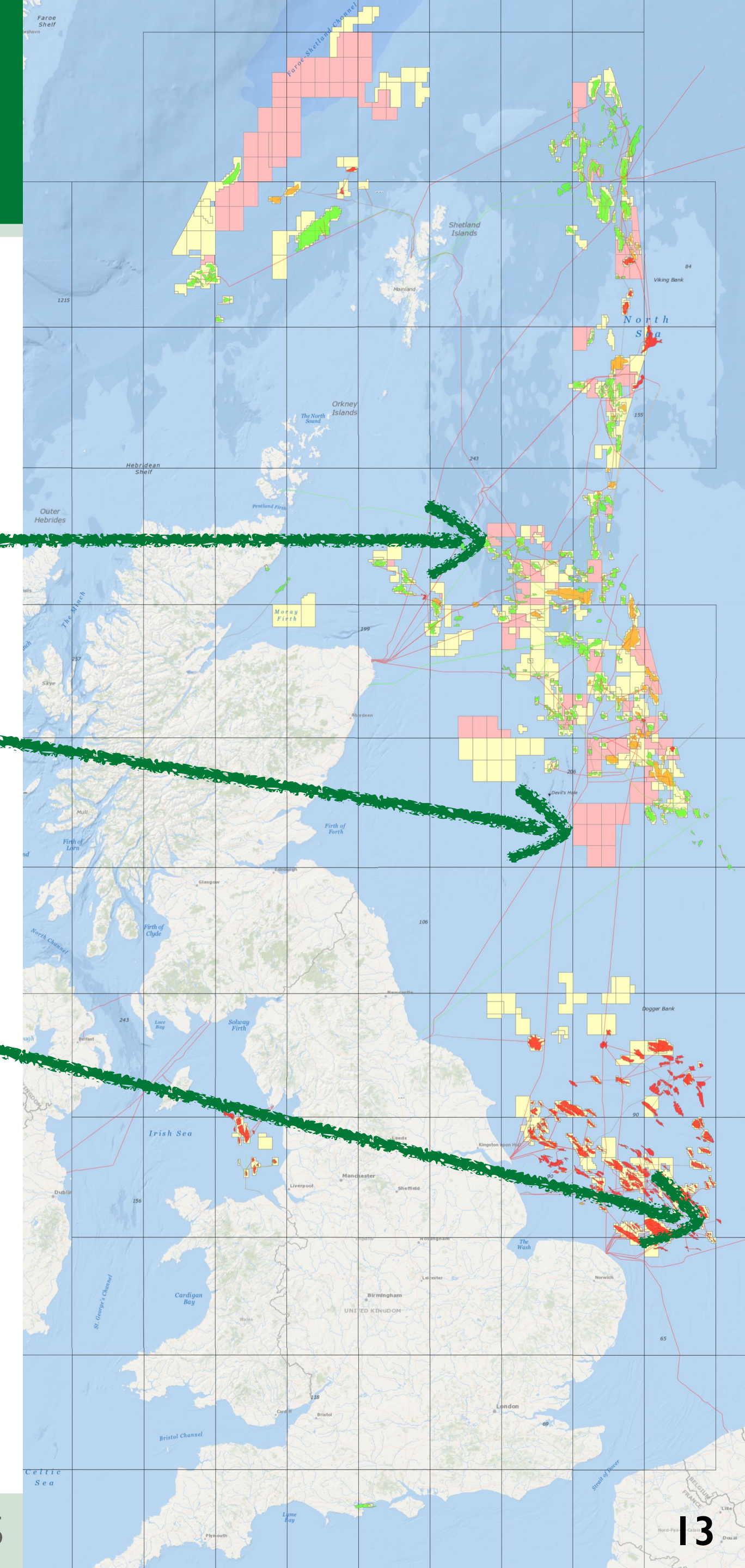
| Pool                 | 2C/2U resource | GCoS | rEEI |
|----------------------|----------------|------|------|
| Narwhal              | 9.2            | 100% |      |
| Elke Main            | 45.5           | 100% | ✓    |
| Elke Main West       | 22.8           | 90%  | ✓    |
| Elke Updip           | 17.5           | 87%  | ✓    |
| Elke Area 2          | 12.3           | 64%  | ✓    |
| Elke North           | 10.5           | 66%  | ✗    |
| Elke Area 3          | 13.3           | 64%  | ?    |
| Main Elke Channel    | 7.0            | 64%  | ✓    |
| Spinner              | 4.0            | 38%  | ✓    |
| Channel Complex 2    | 3.0            | 10%  | ?    |
| Total                | 145.1          |      |      |
| Total rEEI supported | 107.3          |      |      |





# 33rd Round

- Orcadian participated in the 33rd Round making three licence applications, one in partnership with Parkmead, one with Triangle and one on its own
- The Fynn award builds upon Orcadian's viscous oil experience and previous partnership with Parkmead, Fynn Beaully is a very large discovery lying between Piper and Claymore
- The Mid North Sea High award, in partnership with Triangle Energy, is focussed on shallow gas opportunities with c. 269 bcf of gas in two high-graded prospects
- The SNS application includes a discovery with 114 bcf of sales gas which could be developed as a potential gas-to-wire project, with integrated carbon capture, which could deliver baseload electricity with minimal emissions and a compelling prospect with 153 bcf of prospective resources
- This area has not yet been awarded and the licensing round is a competitive process so there can be no guarantee that the licence will be awarded to Orcadian
- SNS awards now expected in early May

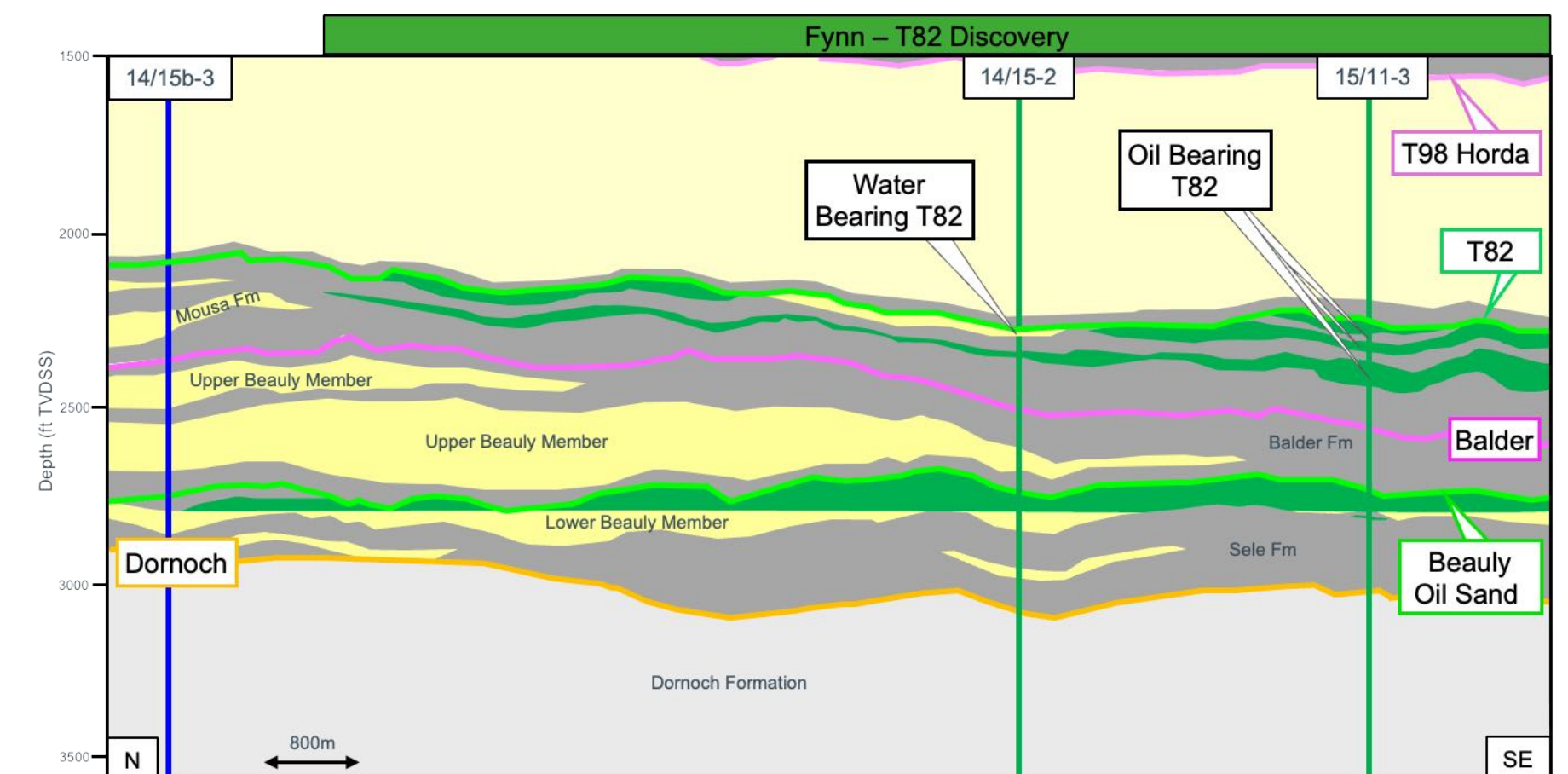
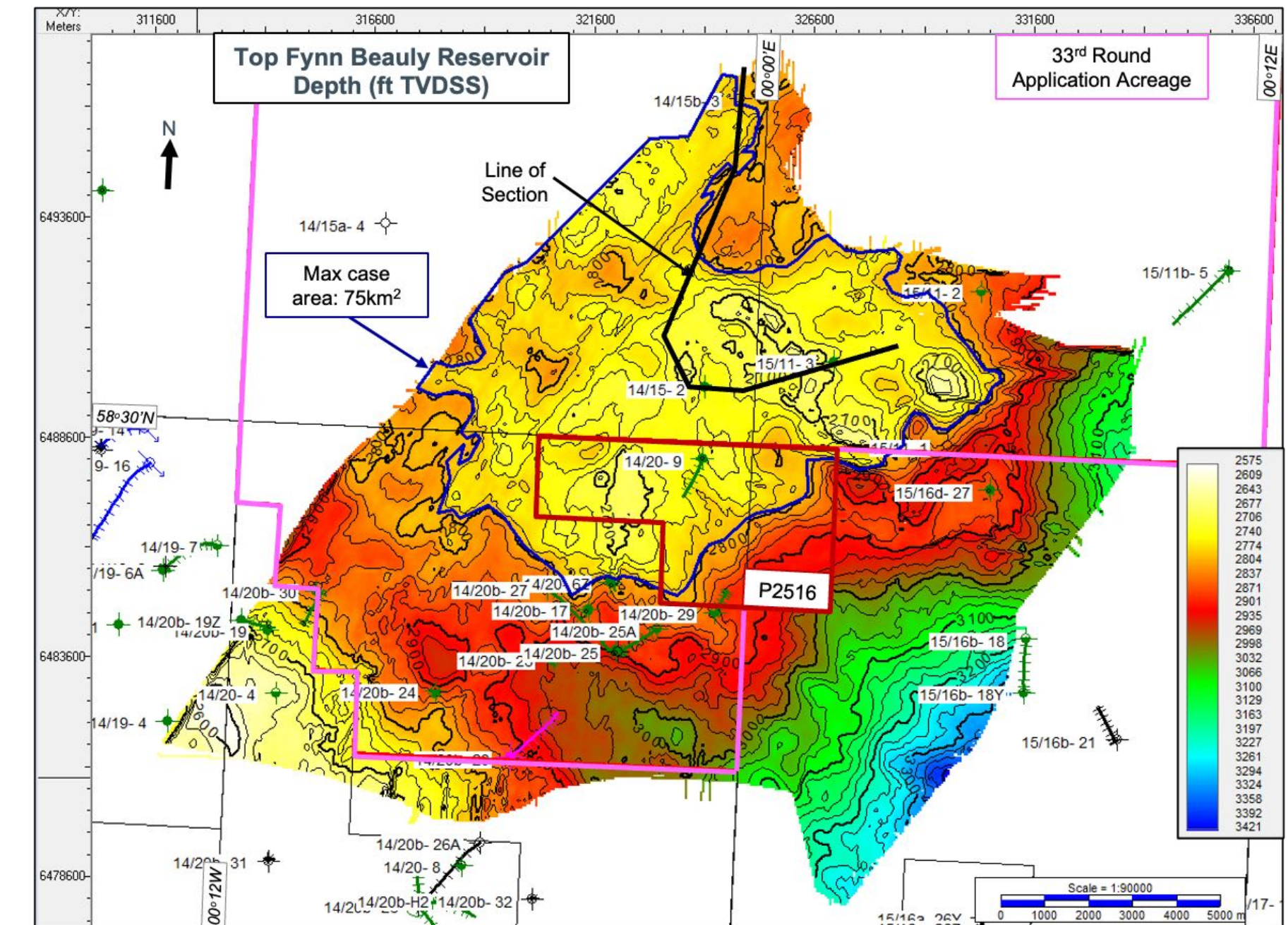




# 33rd Round offers of award: OMF: Fynn Beaully heavy oil discovery

## 50% Orcadian and 50% Parkmead Group (Operator)

- Fynn Beaully is a very large (over 900 MMbbls in place) shallow heavy oil accumulation
- Discovered in 1974, one well was tested and did flow 10.6° API oil at c. 10 bbls/day, based on that sample, viscosity is expected to be in the range 2,500 to 5,000 cP, but even modest reservoir heating significantly reduces viscosity
- Recoverable 2C resources, assuming warm polymer flood, are estimated to be c. 292MMbbl, with 257MMbbl on block.
- Exploring development options including downhole RF heating (powered by wind turbines) and geothermal warm water polymer injection
- The overlying Fynn T82 could add significant further resources
- Licence also included the Lowlander and Midlander discoveries

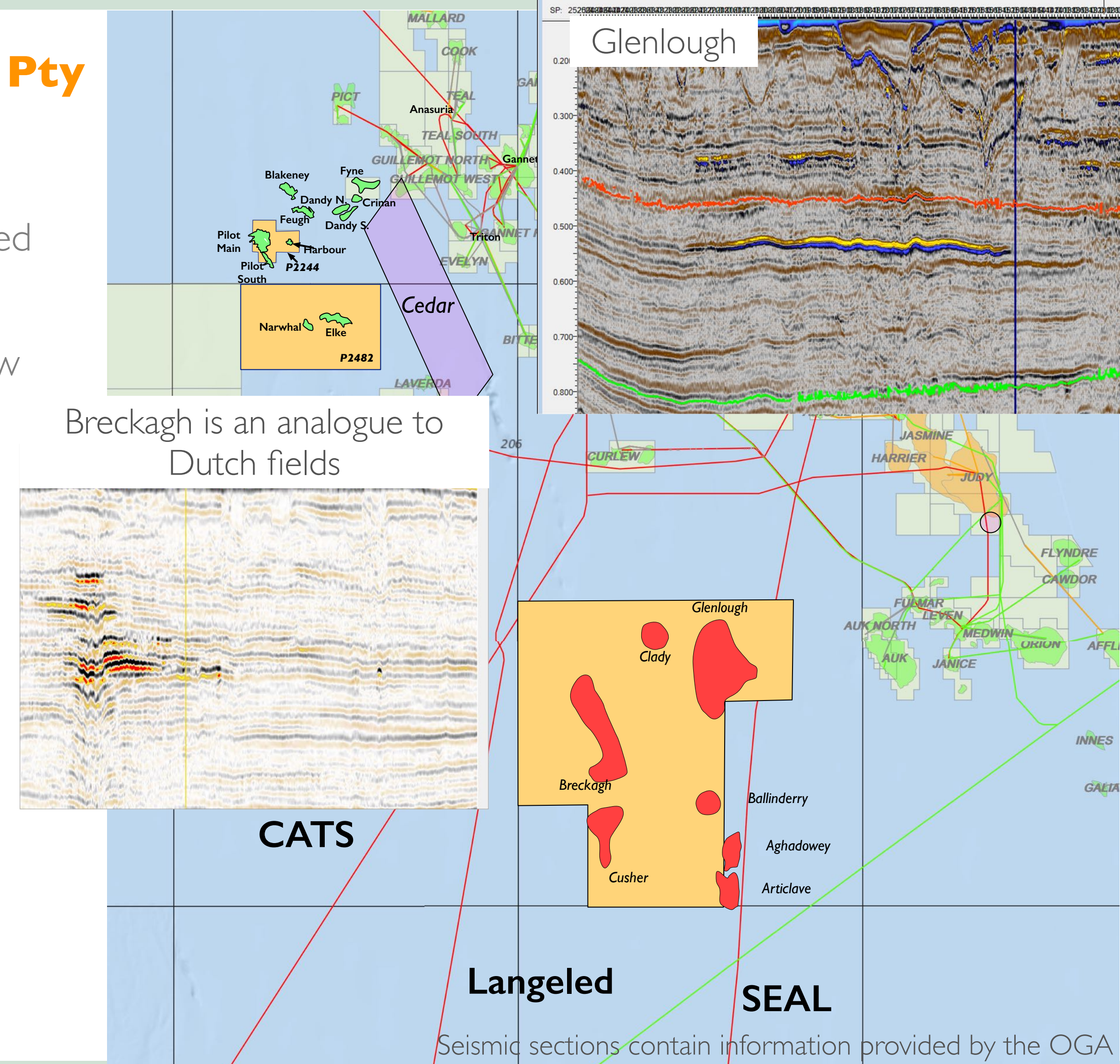




# 33rd Round offers of award: CNS: Quad 29 shallow gas

## 50% Orcadian (Operator) and 50% Triangle Energy Pty

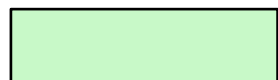
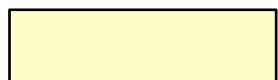
- Multiple shallow gas prospects identified on seismic
  - Breckagh: P50 recoverable prospective resource is 138 bcf in stacked sands, analogous to Dutch fields
  - Glenlough: P50 recoverable prospective resource is 131 bcf in a low relief structure similar to Aviat field
  - Clady, Cusher and Ballinderry prospective resource estimates are 29, 14 and 24 bcf respectively
- Development would likely be via a compression platform tied in to Tee #6 on the CATS line
- Wind turbines could provide 60-70% of the power needed for compression
- Six shallow gas fields on production in the Netherlands, and from the Aviat field to supply Forties with fuel gas; Peon shallow gas field also under development in Norway





# Licence & Resource Summary<sup>2</sup>

| Licence and block numbers                              | Operator or Licence admin. | Equity | Status                            | Phase Expiry   | Term Expiry    | Licence Area (km <sup>2</sup> ) | Key Discoveries or Prospects             | Net 2U Prospective Resources (Unrisked) MMboe | Net 2C Contingent Resources (Unclarified) MMboe | Net 2C Contingent Resources (On hold) MMboe | Net 2C Contingent Resources (Dev. Pending) MMboe | Phase |
|--|----------------------------|--------|-----------------------------------|----------------|----------------|---------------------------------|--|---|---|---|--|-------|
| <b>P2244</b><br>21/27a                                 | Ping                       | 18.75% | Second Term                       | n/a            | 30th Nov 2025  | 43.2                            | Pilot Main and Pilot South               |   | 1.8   |   | 13.6   | Oil   |
| <b>P2482</b><br>28/2a & 28/3a                          | Orcadian                   | 100%   | Initial Term Phase B <sup>1</sup> | 14th July 2025 | 14th July 2027 | 361.6                           | Narwhal & Elke, selected Elke satellites | 52  |   | 54.2  |  | Oil   |
| <b>P2650</b><br>29/16, 17, 18, 19, 21, 22, 23, 27 & 28 | Orcadian                   | 50%    | Offer                             |                |                | 2068.9                          | Glenlough                                | 10.9  |   |   |  | Gas   |
|  |                            |        |                                   |                |                |                                 | Breckagh                                 | 11.5  |   |   |  | Gas   |
| <b>P2634</b><br>14/15a & 20d, 15/11a                   | Parkmead (E&P) Ltd         | 50%    | Offer                             |                |                | 322.6                           | Fynn (Beauly)                            |   | 128.6   |   |  | Oil   |
|  |                            |        |                                   |                |                |                                 | Lowlander etc.                           |   | 5.8   |   |  | Oil   |
| <b>Total (Net)<sup>3</sup></b>                         |                            |        |                                   |                |                |                                 |  | <b>74.4</b>                                   | <b>136.2</b>                                    | <b>54.2</b>                                 | <b>13.6</b>                                      |       |

 Sproule CPR       Management estimates

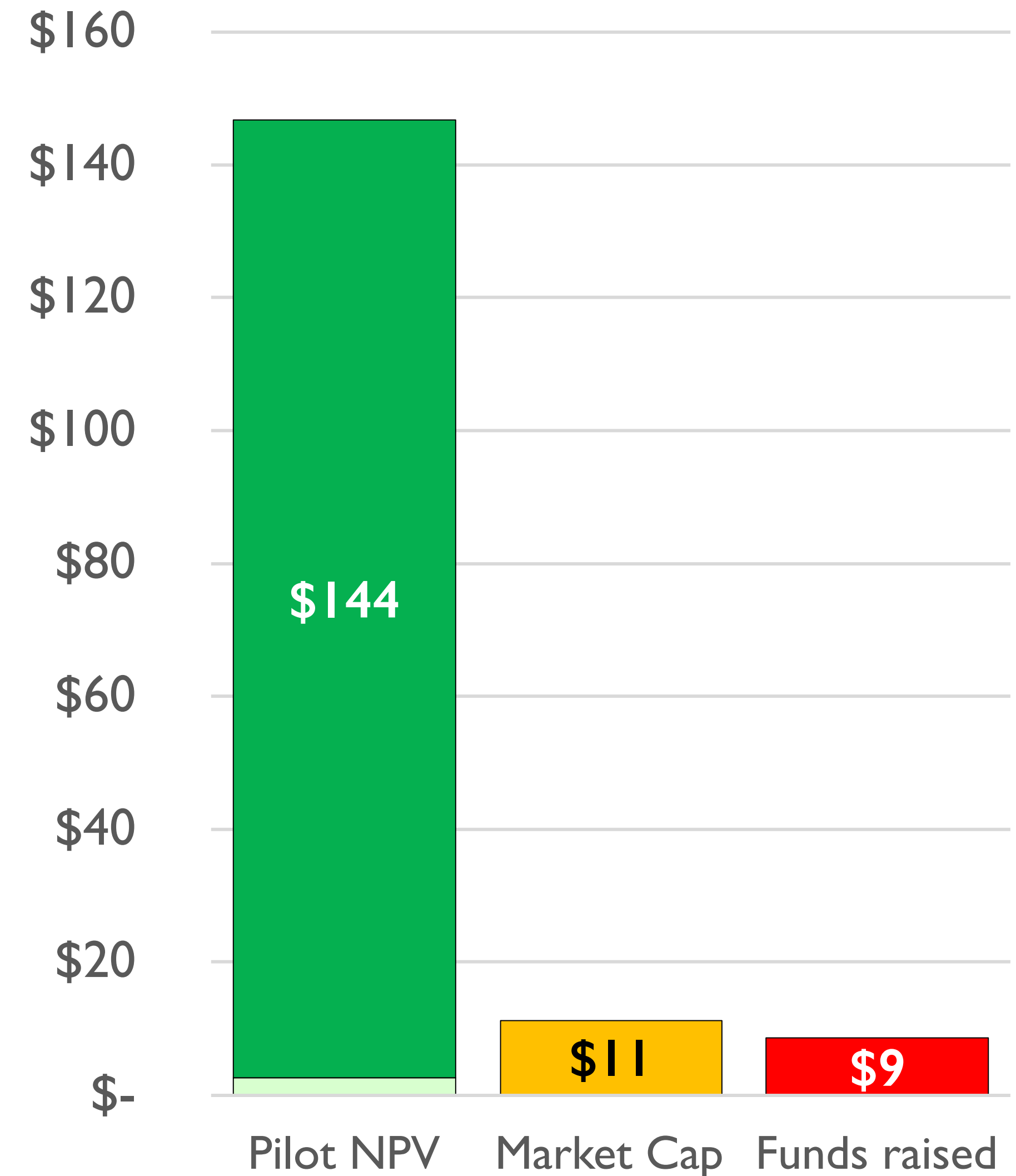
<sup>1</sup> P2482 is a drill-or-drop licence, and requires a well commitment by July 2025

<sup>2</sup> Pilot, Elke and Narwhal (Sproule CPR), Glenlough, & Breckagh Orcadian management estimates; Fynn Beauly & Lowlander Operator estimate

<sup>3</sup> Net calculation includes a deduction for the TGS royalty applicable to P2244 and P2482 and the impact of the carry on revenue interest in P2244



- Company future is underpinned by the carried interest in the Pilot project
- Building an attractive portfolio of funded developments, innovative projects and compelling prospects
- Some big changes coming for mature fields in the UK oil and gas sector, but new low-carbon developments will be favoured
- Orcadian has focussed on licensing as many opportunities as we had the capacity to pursue as we expect a licensing hiatus under Labour
  - Good success so far in 33rd round
- Cost so far incurred to secure this portfolio with over 200 MMbbl of contingent resources (14 MMbbl funded to first oil) and nearly 50 MMboe of risked prospective resources is just over £7m





|  |   |  |
|--|---|--|
| <b>Auditor: PKF Littlejohn</b>                             | <b>Nomad &amp; Joint Broker:<br/>Zeus Capital Limited</b>     | <b>Joint Broker:<br/>Novum Securities</b>            |
| 15 Westferry Circus<br>London E14 4HD                      | 125 Old Broad St.<br>London EC2N 1AR                          | 2nd Floor, 7-10 Chandos Street<br>London W1G 9DQ     |
| <b>Lawyer: Hill Dickinson</b>                              | <b>Lawyer: TandonHildebrand</b>                               | <b>Banker: Barclays</b>                              |
| The Broadgate Tower, 20 Primrose Street<br>London EC2A 2EW | Labs Atrium, Chalk Farm Rd,<br>London, NW1 8AH                | Level 25, 1 Churchill Place,<br>London, E14 5HP      |
| <b>Public Relations: Tavistock</b>                         | <b>Competent Person: Sproule</b>                              | <b>Registrar: Neville</b>                            |
| 18 St Swithin's Lane,<br>London EC4N 8AD                   | President Kennedylaan 19<br>2517 JK Den Haag, The Netherlands | Neville House, Steelpark Road,<br>Halesowen, B62 8HD |

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# ORCADIAN ENERGY PLC

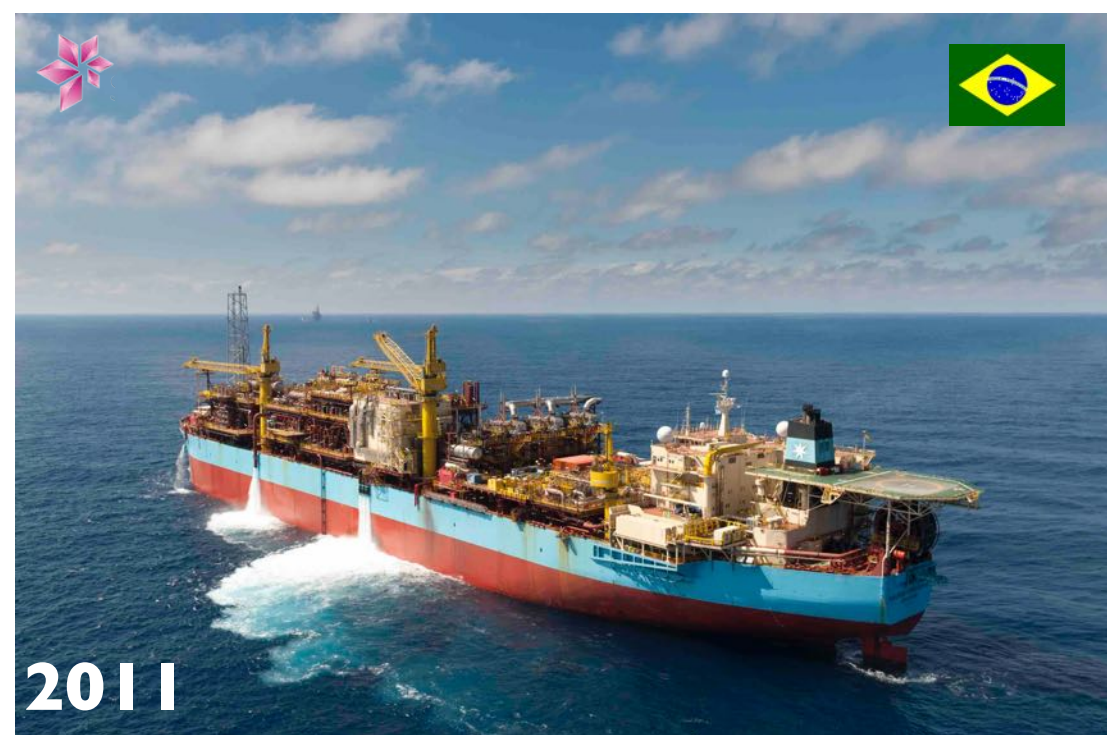


# Offshore viscous oil

JUBARTE – 17° VEGA – 15.5° SZ36-1 – 14.4° BETA – 14° ATLANTA – 14° KRAKEN – 13.7°



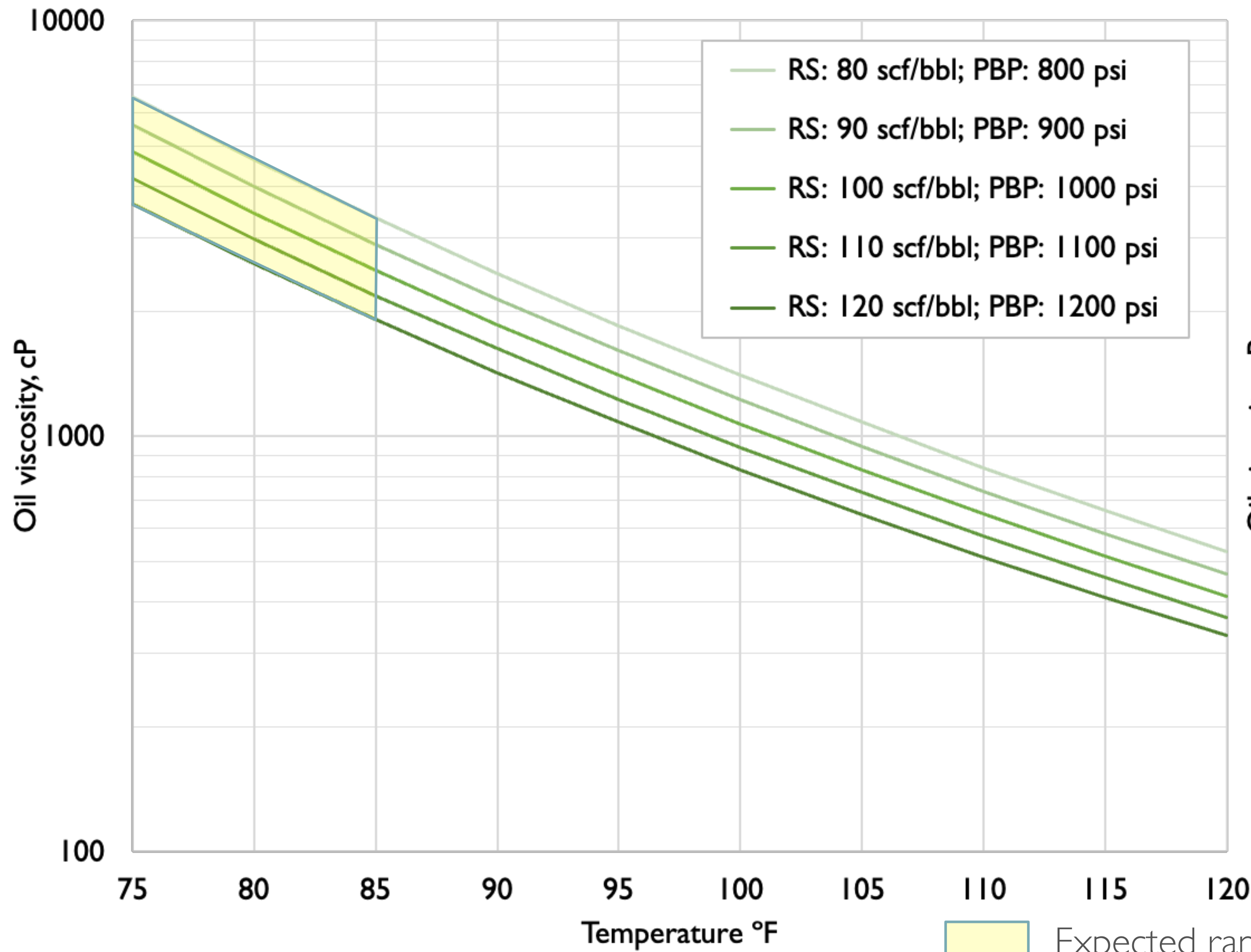
PEREGRINO – 13.5° MARINER – 12°-14° SIRI – 12.3° ROSPO MARE – 12° AYATSIL - 9°-12°



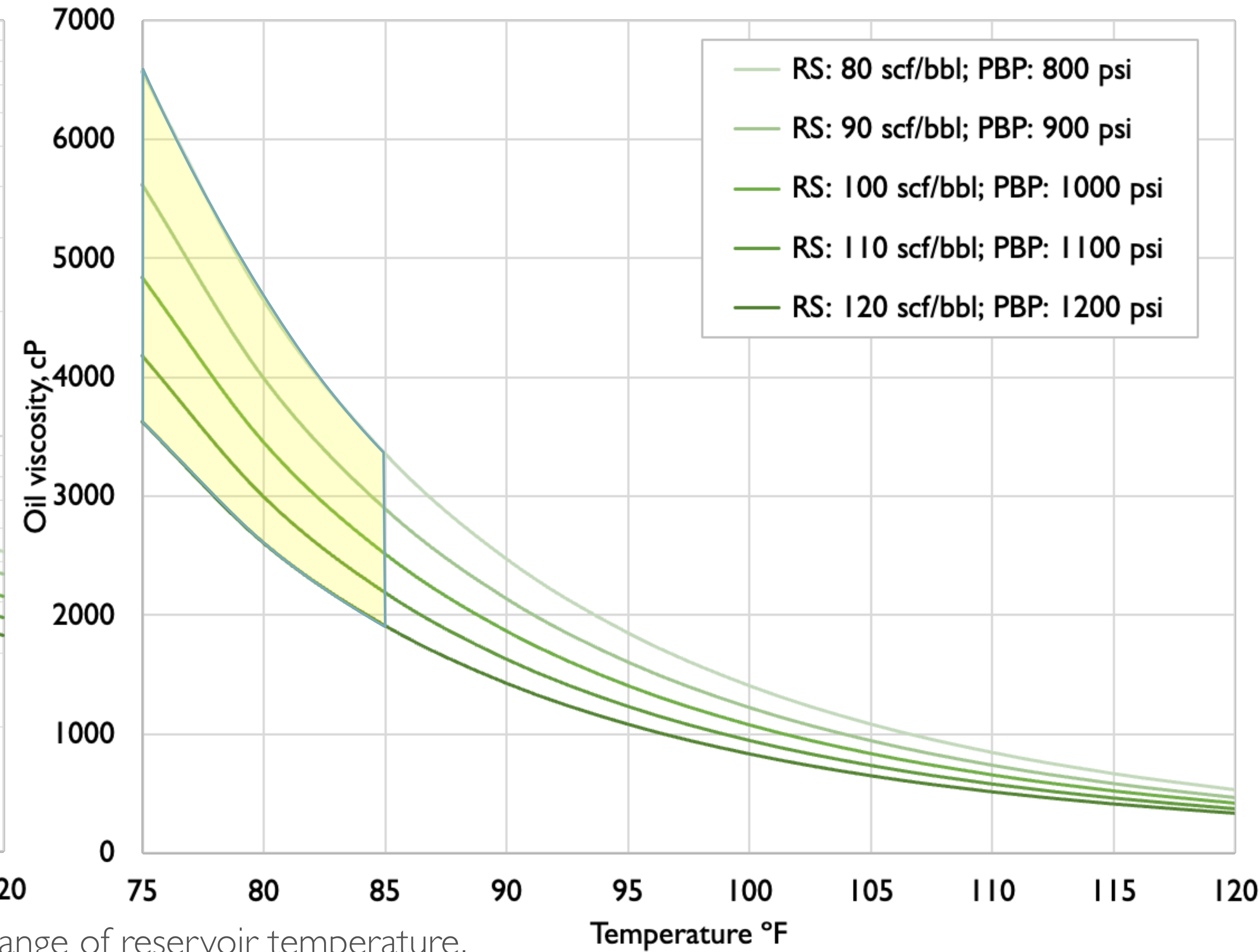



# Fynn oil viscosity range

## Logarithmic axis

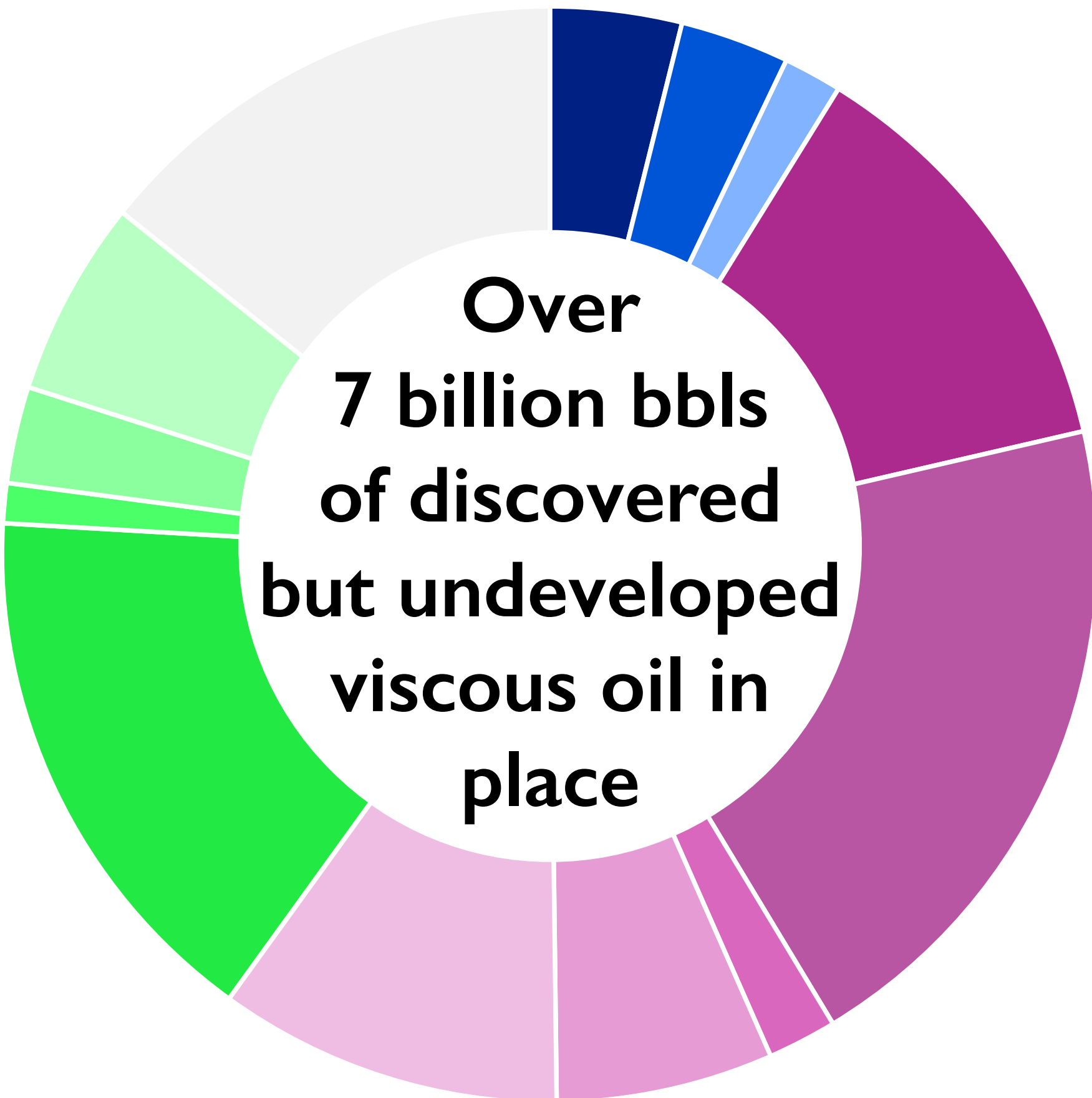


## Linear axis



 Expected range of reservoir temperature, GOR and bubble point





- Most viscous oil is found at the basin margins
- Substantial opportunity for the UK
- Maximising recovery factor is the key to profitability
- EOR from the start is essential for anything greater than 100cP

