Hurricane Energy plc

- Introduction
- Hurricane’s achievements, story and team
- Fractured basement reservoirs
- Operations due to start in Q2
- Future planning
Hurricane is all about...

- Discovery and development of oil from naturally fractured basement reservoirs
- Hurricane has successfully found light oil in fractured basement reservoirs West of Shetland
- Potentially a strategic resource for the UK
UK government PILOT scheme

Conclusions

- Abundant New and Underexplored Plays could yield significant resources
- Basement play most extensive but needs de-risking
- Extensive seismic data exists to explore many of the plays
- Require new seismic / high tech over West of Hebrides, WOS and Forth Approaches Basin
- And of course.........more wells.

Pilot Exploration Task Force

Plays identified include:

- Fractured Basement, UKCS
- Sub basalt, West Hebrides & West of Shetland
- Triassic, West of Shetland
- Permian, East Irish Sea, North Channel & Northern Ireland
- High Inert Gas, Southern North Sea
- Carboniferous, Southern North Sea & Forth Approaches Basin
- Triassic, Sherwood Sandstone, English Channel, North and South Celtic Sea, St Georges Channel and Cardigan Bay basins
- Kimmeridge Clay, Quad 16 & beyond
Basement plays around the World
Features of basement reservoirs

- Basement fields can be associated with large reserves
- Significant upside potential
- Produced, processed and exported via conventional development facilities
- Fractured basement is a proven concept – it works around the world
  - Bach Ho Vietnam, 1,450 MMbbl Reserves, over a billion barrels of oil produced
  - La Paz Venezuela, 678 MMbbl Reserves, over 350 MMbbl produced
  - Zeit Bay Egypt, 198 MMbbl Reserves
- Hurricane is pioneering fractured basement reservoirs in the UK
What have we achieved so far?

- Two major discoveries of over 200 MMboe recoverable 2C Contingent Resources each, 2009 (Lancaster) and 2011 (Whirlwind, oil case)
  - The average size discovery on the UKCS 2009/10 was 20-23 MMboe
UK Average discovery size

- Whirlwind (oil case)
- Lancaster


MMboe:
- 500
- 400
- 300
- 200
- 100
- 0
What have we achieved so far?

- Two major discoveries of over 200 MMboe recoverable 2C Contingent Resources each, 2009 (Lancaster) and 2011 (Whirlwind, oil case)
  - The average size discovery on the UKCS 2009/10 was 20-23 MMboe
- Hurricane’s discoveries are light hydrocarbons and in relatively shallow water
  - On and alongside same ridge and oil source as Clair Field which has been reported by BP to have 8 billion boe in place
- All discoveries achieved with 100% Hurricane control
- Portfolio of further exploration opportunities, P50 of 440 MMboe
- All resource figures come from CPR prepared by RPS Energy Limited
Hurricane’s potential in peer group context

Sources: Hurricane resources sourced from October 2013 CPR; other company reserves and resources data sourced from latest company reports / presentations; proportion of portfolio in OECD regions is based on WoodMac analysis of company NPV by geography (October 2013)

2P reserves + 2C resources (MMboe)

(*Hurricane does not yet have Reserves and there is no certainty that its Contingent Resources will become Reserves)
Executive management

Dr Robert Trice CEO
As Hurricane’s founder, Robert has over 25 years’ oil industry experience. He has combined specialist technical expertise in fractured reservoirs’ characterisation and evaluation. He has a PhD in Geology from Birkbeck College, University of London and gained the bulk of his geoscience experience with Enterprise Oil and Shell. He has worked in field development, exploration, well-site operations and geological consultancy. Robert has held the position of Visiting Professor at Trondheim University (Norway) and has published and presented on subjects related to fractured reservoirs and exploration for stratigraphic traps.

It is Robert’s vision that lies behind Hurricane, providing clear strategic direction as the company develops and he takes the lead in all aspects of the scientific and technical heart of the company.

Nicholas Mardon Taylor CFO
Nicholas has worked in the oil industry for over 30 years, his first involvement in the North Sea being in the early licensing rounds. Nicholas is a highly experienced company director having held Finance Director roles with a number of companies, including, Saxon Oil, Carless and Alkane, and senior finance roles in Total.

Nicholas ensures that we have robust accounting and finance policies and procedures and works closely with the management team on business direction and strategy.

Nicholas has been with Hurricane since its creation in 2005 when he was the company’s first CFO. Since then he has had special responsibility for our thorough Environmental Management System, returning now to the finance role.

Keith Kirby CAO
An experienced business manager, prior to joining Hurricane in 2011 Keith spent 10 years with the Hutchison Whampoa Group as CEO of a Group business unit and profit centre, advising companies on strategic communications around the World. He has previously advised Kuwait Petroleum International in Europe and Emarat in the UAE. Keith has an MBA with distinction from London Business School where he was winner of the Alumni prize for Academic Achievement.

As Hurricane’s Chief Administrative Officer, Keith is responsible for general management of the Company, communications, investor relations, company systems and facilities, HR and the other administrative aspects of running the business, including leadership of certain key corporate level activity.

Neil Platt COO
Neil is has more than 20 years’ experience in the oil industry and has worked for Amoco, BG and Petrofac. He has completed assignments both in the UK and Internationally, working in a variety of engineering, commercial and management roles including Production Asset Manager (NSW) for BG and Vice President for Project Delivery in Petrofac Production Solutions. Neil joined Hurricane in 2011 and was appointed to the Board in 2013.

As Chief Operations Officer Neil is responsible for daily operations and asset delivery (drilling and projects).
Non-Executive Directors

John Hogan, Chairman
John has over 35 years experience in the oil and gas industry. He spent almost 20 years with LASMO Plc where he was Managing Director of LASMO North Sea between 1989–1993 followed by seven years on the main board as Chief Operating Officer. Since 2000 he has held a number of Chairman and non-executive roles in the energy sector. John is currently Managing Director of Argos Resources Limited, a non-executive Chairman of Celtique Energie Limited and a non-executive Director of Chrysaor Holdings Limited.
John joined the Board in March 2013 and is Chairman of the Nominations Committee and is also a member of the Remuneration and Audit Committees.

Dr David Jenkins Non-Executive Director
David is currently an Industry Advisor to Riverstone Holdings and a Corporate Advisor to Temasek Holdings and Cuadrilla Resources. He is also on the Boards of President Energy and Black Platinum Energy.
David spent 37 years at BP, where he was Chief Geologist in 1979, General Manager Exploration in 1984 and then Chief Executive Technology for BP Exploration for 10 years from 1987. He retired at the end of 1998 with the position of Chief Technology Advisor for BP. Following retirement from BP he held a variety of advisory and Board positions including nine years on the Board of BHP Billiton.
David joined the Board in March 2013 and is Chairman of the Remuneration Committee and is also a member of the Nomination and Audit Committees.

John van der Welle Non-Executive Director
John has over 25 years oil industry experience, having qualified as a Chartered Accountant with Arthur Andersen in 1981. He is a member of the Association of Corporate Treasurers and the Institute of Taxation.
After 11 years at Enterprise Oil, where he was Business Development Manager and subsequently Group Treasurer, John has been Finance Director of a number of listed E&P companies, including Premier Oil in 1999–2005. He was Managing Director, Head of Oil and Gas, at the Royal Bank of Scotland in 2007–2008, and since 2010 has worked as a consultant to, and non-executive Director of, a number of listed and private E&P companies.
John joined the Board in March 2013 and is Chairman of the Audit Committee and is also a member of the Remuneration and Nomination Committees.
Hurricane’s strategy

- **Increase shareholder value** through the exploration, appraisal and development of fractured basement reservoirs
- Focus on proven petroleum systems with material reserve potential
- Evaluate basement upside
- Maintain 100% ownership and operatorship during exploration and early stage appraisal
- Engage with a development partner at the optimum time
Capital raising history

- Whirlwind operations 2010 and 2011
Floated on AIM
Ownership

The company has the following share capital structure as at 4 February 2014:
631,882,156 ordinary 0.1p shares in issue
4.38% Held by Directors

<table>
<thead>
<tr>
<th>Top Institutions</th>
<th>%</th>
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<tr>
<td>F&amp;C Asset Management</td>
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<tr>
<td>Artemis</td>
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<tr>
<td>BlackRock</td>
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<tr>
<td>Bluecrest</td>
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<td>AWAL Bank</td>
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<td>JP Morgan</td>
<td>3.26%</td>
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<tr>
<td>Salida Capital</td>
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<tr>
<td>Britannic Strategies</td>
<td>2.78%</td>
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<tr>
<td>Standard Life</td>
<td>2.76%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>46.37%</strong></td>
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Location
Significant resource discovered and large upside potential to confirm

Hurricane's assets:
Contingent and Prospective Resources
Source: CPR November 2013
MMboe

- 1C+P90
- 2C+P50
- 3C+P10

Figures based on arithmetic addition of individual assets, assumes Whirlwind oil case

- 188 470
- 98493
- 442

ConKngent Resources
ProspecKve Resources

Greater Lancaster Area (GLA)
Lancaster + Lincoln

Whirlwind
2C 205 MMboe (Oil case)

Lincoln
P50 150 MMboe

Strathmore
2C 32 MMboe (Sandstone)

Schiehallion Field

Typhoon
P50 149 MMboe

Lancaster
2C 207 MMboe

Foinaven Field

Lincoln
P50 150 MMboe

Schiehallion Field

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P50 149 MMboe

Lancaster
2C 207 MMboe
Natural fractures in basement rock
Model: how oil gets into the fractured basement reservoir

1. Illustrated schematically, layers of rock build up over many millions of years. Somewhere above the basement, oil producing source rock was formed. West of Shetland it is the Kimmeridge Clay, famous for the quality and volume of oil it has produced.

2. Movement caused by tectonic forces can cause disruption in the layers of rock, forcing the basement up resulting in it becoming a buried hill under hundreds of metres of shale and clay. The movement and heavy faulting has created an extensive fracture network. It has also resulted in the oil producing layer being at a lower level than the basement.

3. As the oil producing rock forces out hydrocarbons, they move up the flank and through the fracture network.

4. As the oil and gas move up, they are trapped by the thick layer of shale and clay that defines the seal above. Hydrocarbons begin to accumulate in the fractures toward the top of the basement structure. Once structural closure is at capacity, oil at the edges of the closure ‘escapes’ making its way to the surface or into shallower traps.

5. However, one of the great attractions of fractured basement reservoirs is that oil can be found outside of structural closure. Oil backfills down through the highly permeable fracture network. In the basement there is no permeability in the rock, so the oil cannot escape but is trapped for explorers to find in extensive vertical fractures. We call this the ‘jellyfish’ model.

6. Of particular interest are flank accumulations, that is oil that builds up deep down the flank. These accumulations have the potential to be very significant. An example of this phenomenon can be seen on our Typhoon asset with a large potential recoverable oil volume, estimated in the CPR under P10 Prospective Resources, at over a billion stock tank barrels.
Increasing understanding

Pre-drill

Post-drill

Recent seismic work
Q2: Sedco 712
Lancaster model

Approximately 1Km horizontal section
Proposed development

Not to scale and schematic representation only

Riser base structure
Manifold
Inclined well
Horizontal well
Surveillance well

Production
Gas lift
Umbilical
Gas export

Lancaster
Lincoln
Lancaster valuation

From the independent Competent Person’s Report, the 2C, 207MMboe, case for Lancaster *alone* has an NPV$^{10}$ of:

USD $1.3bn
Lancaster scale

<table>
<thead>
<tr>
<th>Base case, MMboe</th>
<th>Lancaster Contingent Resources</th>
<th>Lincoln Prospective Resources</th>
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<tbody>
<tr>
<td></td>
<td>Represents depth for 1C</td>
<td>P90</td>
</tr>
<tr>
<td></td>
<td>Represents depth for 2C</td>
<td>P50</td>
</tr>
<tr>
<td></td>
<td>Represents depth for 3C</td>
<td>P10</td>
</tr>
<tr>
<td></td>
<td>62</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>207</td>
<td>150 (not shown)</td>
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<tr>
<td></td>
<td>456</td>
<td>339</td>
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</table>

Represents depth for:
- 1C: 62 P90
- 2C: 207 P50
- 3C: 456 P10
The schematic diagram below indicates a comparison of various well known buildings with the depth of the Lancaster structure and indicates the approximate path of the horizontal well planned for 2014.

- **1C = 1380m**
- **2C = 1597m**
- **3C = 1781m**

**Vertical scale 2.5x horizontal scale**
Getting to first oil

- Drill and test, 2014, confirming deliverability and flow rate
- Hurricane is working with WoS operators to evaluate technical solutions for shared development
- Hurricane has identified a preferred farm-out specialist adviser

<table>
<thead>
<tr>
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<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tr>
<td>Lancaster Horizontal</td>
<td></td>
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<tr>
<td>Crestal</td>
<td></td>
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<tr>
<td>Lincoln</td>
<td></td>
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</tr>
<tr>
<td>Greater Lancaster Area Completions</td>
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<tr>
<td>First oil</td>
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Whirlwind

- Drilled in 2010, (205/21a-5)
  - 270m vertical hydrocarbon column found in limestone and underlying basement
- Re-entered in 2011
  - successfully brought gas and light oil to surface
- Well suspended for future appraisal/development
Whirlwind – potential gas resources

Whirlwind Prospective Gas Resources
Whirlwind Contingent Gas Resources

<table>
<thead>
<tr>
<th>Case</th>
<th>Oil (Bscf)</th>
<th>Gas Condensate (Bscf)</th>
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<tbody>
<tr>
<td>1C+P90</td>
<td>45</td>
<td>236</td>
</tr>
<tr>
<td>2C+P50</td>
<td>231</td>
<td>528</td>
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<tr>
<td>3C+P10</td>
<td>1017</td>
<td></td>
</tr>
<tr>
<td>1C+P90</td>
<td>77</td>
<td>437</td>
</tr>
<tr>
<td>2C+P50</td>
<td>808</td>
<td></td>
</tr>
<tr>
<td>3C+P10</td>
<td>1303</td>
<td>935</td>
</tr>
</tbody>
</table>
Hurricane blocks outlined in red

Whirlwind

West of Shetland gas pipeline

Possible route of Proposed Rosebank pipeline Shetland
Who could we do it with?

- Major players West of Shetland
  - Ongoing technical studies regarding shared infrastructure
- Global players with basement experience
- Field Development specialists from service sector

Map showing various fields and pipelines in the Shetland region.
The Hurricane opportunity

- Good location: Region of UKCS with most “yet to find oil”, OECD, ‘Big Oil’ neighbours
- 3 billion barrel* upside case opportunity on Hurricane’s acreage
- Flexible forward divestment strategy
- Upcoming Lancaster well aims to significantly de-risk development
- Lancaster 2C valuations attractive
  - Base case $1.3 billion @ NPV$_{10}$
- Relatively low risk follow-on opportunity in 2015 on Lincoln subject to funding and rig following successful Lancaster operations in 2014
- Corporate growth potential on existing licence
- Basement an attractive global play, global analogues to WoS assets