

# Hurricane Energy

## Extending Lancaster along the Rona Ridge

Company update

Oil & gas

In September 2016, the 205/21a-7 pilot well helped confirm a continuous oil column below Lancaster basement structural closure. Hurricane is looking to extend this play along the Rona Ridge through the exploration of analogues, Lincoln and Halifax. Management estimates combined gross unrisked prospective resource of over 500mmbbls, offering potential for a significant increase to the 300mmbbls we currently assume for Lancaster. In our updated valuation, we incorporate the dilutive impact of Hurricane's October 2016 fund-raise, offset by the inclusion of risked prospective value for Lincoln and Halifax. Our RENAV increases from 73p/share to 75p/share (+3%).

| Year end | Revenue (£m) | EBITDA* (£m) | PBT* (£m) | Operating cash flow (£m) | Capex (£m) | Net (debt)/cash (£m) |
|----------|--------------|--------------|-----------|--------------------------|------------|----------------------|
| 12/14    | 0            | (8.5)        | (9.0)     | (4.7)                    | (36.5)     | 15.9                 |
| 12/15    | 0            | (5.4)        | (5.5)     | (2.6)                    | (3.4)      | 9.9                  |
| 12/16e   | 0            | (4.6)        | (4.5)     | (4.4)                    | (86.1)     | 39.3                 |
| 12/17e   | 0            | (4.6)        | (4.5)     | (4.4)                    | (39.8)     | (4.9)                |

Note: \*PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

## Funded to drill Lincoln and Halifax

On 20 October 2016, Hurricane announced a placing and open offer to raise a combined £74.4m (gross proceeds) from existing and new shareholders. Proceeds are to be used to fund a two-well exploration programme targeting delineation of the Greater Lancaster Area extending the basement play along the Rona Ridge. Exploration targets, Lincoln and Halifax, have been partly de-risked by oil discovered in historic exploration wells targeting conventional sandstone above basement. Oil source is therefore viewed as relatively low risk; key risks include seal and trap effectiveness.

## EPS funding options

Lancaster EPS development funding is critical for Hurricane to be able to achieve a target of final investment decision in H117 and first oil H119. A number of financing options exist including a combination of farm-out, construction bonds, oil pre-payment facilities and equity. Current cash resources will enable Hurricane to purchase long lead items for the EPS to avoid schedule slippage while development funding options are progressed.

## Valuation: Risked upside offsets placing dilution

We incorporate placing dilution and risked value for Lincoln and Halifax prospective in our valuation. The net impact is a 2p/share increase (+3%) in our RENAV, which now stands at 75p/share. This valuation assumes a 300mmbbl Lancaster discovery funded through the EPS phase and full field development by farm-out (farminee 25% IRR). We also include value for 500mmbbls of gross P50 risked prospective resource across Lincoln and Halifax.

23 November 2016

**Price** 42.25p  
**Market cap** £508m

|                                     |         |
|-------------------------------------|---------|
| Estimated net cash (£m) at end FY16 | 39.3    |
| Shares in issue (post raise)        | 1198.2m |
| Free float                          | 53%     |
| Code                                | HUR     |
| Primary exchange                    | AIM     |
| Secondary exchange                  | N/A     |

## Share price performance



|                  |       |      |       |
|------------------|-------|------|-------|
| %                | 1m    | 3m   | 12m   |
| Abs              | 3.7   | 47.2 | 216.4 |
| Rel (local)      | 6.4   | 47.6 | 196.2 |
| 52-week high/low | 42.2p | 9.4p |       |

## Business description

Hurricane Energy is an E&P focused on UKCS fractured basement exploration. It owns 100% of the 200mmbbl (last published CPR) Lancaster oil discovery.

## Next events

|                     |               |
|---------------------|---------------|
| Lincoln well result | December 2016 |
| Halifax well result | Q117          |
| Lincoln CPR         | H117          |

## Analysts

|                 |                     |
|-----------------|---------------------|
| Sanjeev Bahl    | +44 (0)20 3077 5700 |
| Elaine Reynolds | +44 (0)20 3077 5713 |

[oilandgas@edisongroup.com](mailto:oilandgas@edisongroup.com)

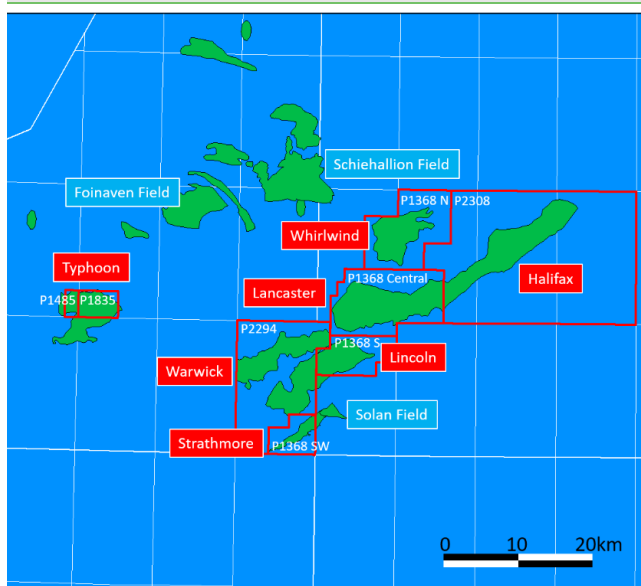
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## Adding Lincoln and Halifax upside

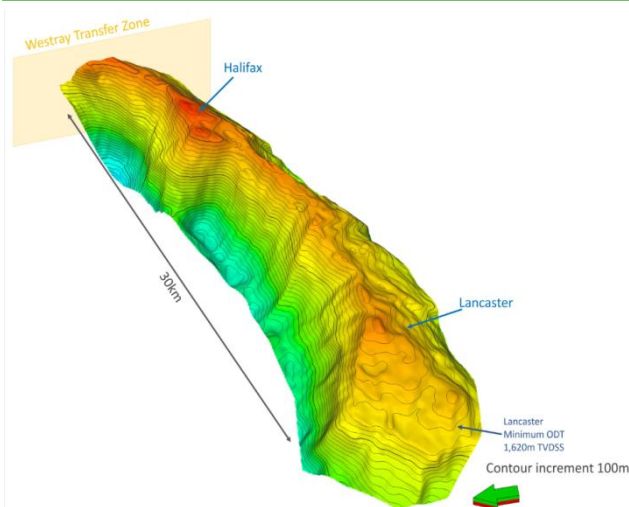
Hurricane has committed to drilling two further exploration wells with the Transocean Spitsbergen, taking advantage of what could potentially be bottom-of-the-cycle rig costs. The two-well programme is targeting delineation of the Greater Lancaster Area (GLA) through drilling of the Lincoln and Halifax prospects. Lincoln (205/26b-A) was spud on 9 November and is to be immediately followed by Halifax, with each well taking approximately 40-45 days to reach target depth.

**Exhibit 1: Hurricane licence portfolio map**



Source: Hurricane Energy

**Exhibit 2: Lancaster 3D surface map**



Source: Hurricane Energy

## Lincoln pre-drill resource estimates and risks

The Lincoln exploration well (205/26b-A) is targeting a Lancaster analogue 9km to the south-west and separated from Lancaster by a sealing fault. Hurricane's seismic interpretation of Lincoln indicates a well-connected fault network partially de-risking reservoir. In addition, the 205/26-1 well drilled by Arco in 1975 on the down-dip flank of Lincoln discovered traces of oil in sandstone just above basement, de-risking source. Key outstanding prospect risks include trap and seal effectiveness above and below mapped closure. For the basement section, Hurricane proposes the overlying mapped Rona Sand spill point at 2,135m TVDSS, which is supported by oil bleeding from cores of the 205/26-1 well at 2078m TVDSS.

Oil quality at Lincoln is expected to be marginally heavier than at Lancaster as charge is modelled from multiple source kitchens. RPS believes that Lincoln may have received equal charge from the Faroe-Shetland and Back Basin source rocks, giving a co-mingled Lincoln oil density of 30-40°API; this compares to 36-38° API for Lancaster.

Hurricane's 2013 CPR estimated Lincoln P50 prospective resource at 150mmmbbls; however, Hurricane believes that if a continuous oil column can be proven at Lincoln, following the success at Lancaster, and oil down to (ODT) can be located below 2,135m TVDSS, as per Hurricane's internal prospect model, P50 prospective resource for Lincoln could be up to 250mmmbbls.

In our analysis, we assume a 250mmmbbl oil prospect with geological probability of success (GPoS) of 25% and commercial chance of success (CCoS) of 15%.

## **Halifax pre-drill resource estimates and risks**

Hurricane was awarded the P2308 licence by the Oil and Gas Authority (OGA) in an out-of-round application in November 2016. Halifax has been de-risked by the Lancaster pilot well (205/21a-7), which encountered a minimum oil down to (ODT) of 1,620m TVDSS, indicating that the oil accumulation is likely to extend beyond the Lancaster block boundary. In addition, source is de-risked at Halifax by the 205/23-2 well, which encountered oil and gas shows in sandstones immediately above basement, as well as oil in basement cuttings. Seismic interpretation indicates a well-defined fault network in the fractured basement, analogous to Lancaster. Key remaining risks include effectiveness of trap and seal below structural closure.

Hurricane has not provided a specific P50 prospective oil volume for Halifax, although management has indicated pre-drill volumes across the two prospects, Lincoln and Halifax total over 500mmbbls P50. We assume Halifax that holds a pre-drill unrisks prospective volume of 250mmbbls gross. We assume the prospect is marginally lower risk than Lincoln based on the Lancaster spill point and lack of sealing fault interpreted between the two structures. We assume a GPoS of 30% and CCoS of 18%. Clearly, there is significant upside to our resource estimates if well results prove a continuous oil column extending from Lancaster through to the Halifax well location along the Rona Ridge.

## **Lancaster volumes and CPR**

As mentioned in our last note, [Confirming oil below structural closure](#), published on 19 September 2016, we currently assume P50 recoverable gross oil volumes at Lancaster of 300mmbbls. This is Edison's estimate and we expect to have further certainty on mid-case recoverable volumes on publication of Hurricane's updated Lancaster CPR in H117.

## **Valuation: Fund-raise extends exploration campaign**

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We make several changes to our valuation of Hurricane to reflect the company's fund-raise, announced on 20 October 2016. Use of proceeds includes drilling two additional exploration wells: Lincoln and Halifax, which we include as risks prospective resource.

## **Fund-raise provides >£70m for delineation of Greater Lancaster Area**

On 20 October 2016, Hurricane Energy announced that it had conditionally raised £70m through the issue of 205.9m new shares at 34p/share, with support from existing shareholders including Kerogen and Crystal Amber. In addition to the placing, an open offer to qualifying shareholders is expected to raise a further £4.4m.

While the placing price of 34p/share is at a material discount to our last published RENAV of 73p/share, it provides Hurricane with the capital to pursue two material exploration prospects using the Transocean Spitsbergen, which is currently on location.

## **Use of proceeds: Exploration drilling and progressing EPS**

Proceeds are to be used to drill the Lincoln and Halifax exploration wells and provide capital to purchase long lead items for the Lancaster EPS. Capex to first oil for the Lancaster EPS is estimated at \$400m, with final investment decision expected in H117 and first oil targeted for H119 and timing contingent on funding and FPSO contract.

## Balance sheet and funding

Hurricane's cash pile, post fund-raise, should enable it to complete both the Lincoln and Halifax exploration wells and provide for long lead items towards the EPS phase of development. However, further funds will be required for EPS development, with capex to first oil estimated at \$400m gross. We understand that Hurricane is looking at a number of funding options including farm-out, construction bonds, oil pre-payment facilities, equity and possibly a combination of these sources of capital. In our analysis, we assume Hurricane farms out for a cost carry in the EPS phase and is able to access \$250m of net RBL debt for full field development. Total Lancaster gross capex before first oil is estimated at \$3.1bn or \$10.3/bbl.

We understand that Hurricane continues to negotiate heads of terms for an FPSO for the EPS phase of development and expect news on progress shortly. We expect lease terms to be favourable in the current market environment.

## Updated risked NAV

We have updated our risked NAV to reflect the dilutive impact of Hurricane's recent fund-raise (relative to our RENAV), as well as including the offsetting impact of value for risked prospective resource at Lincoln and Halifax. Our valuation for Lancaster remains on the basis of 300mmbbls of gross recoverable oil and we assume a farm-down of EPS and full field development, with a farminee generating a 25% point-forward, post-carry IRR. Working interest and per-barrel values shown below include the impact of farm-out and cost carry for Lancaster.

**Exhibit 3: Updated Hurricane NAV**

|                              |         |                |          | Recoverable reserves |             |                  | Net risked  | Value per share  |
|------------------------------|---------|----------------|----------|----------------------|-------------|------------------|-------------|------------------|
| Asset                        | Country | Diluted WI (%) | CCoS (%) | Gross (mmboe)        | Net (mmboe) | NPV/boe (\$/boe) | Value (\$m) | Risked (p/share) |
| Number of shares 1,198.2m    |         |                |          |                      |             |                  |             |                  |
| Net (debt)/cash at end FY16e |         | 100%           | 100%     |                      |             |                  | 55          | 3                |
| SG&A (2 years)               |         | 100%           | 100%     |                      |             |                  | -11         | -1               |
| Core NAV                     |         |                |          |                      |             |                  | 44          | 3                |
| Contingent                   |         |                |          |                      |             |                  |             |                  |
| Lancaster EPS - 2 wells      | UK      | 48%*           | 70%      | 53                   | 25          | 15.9             | 281         | 17               |
| Lancaster FFD (post-EPS)     | UK      | 48%*           | 57%      | 247                  | 118         | 10.2             | 681         | 41               |
| Contingent RENAV             |         |                |          | 300                  | 143         |                  | 962         | 57               |
| Lincoln                      |         | 100%           | 15.0%    | 250                  | 250         | 3.7              | 138         | 8                |
| Halifax                      |         | 100%           | 18.0%    | 250                  | 250         | 3.7              | 166         | 10               |
| Total inc exploration RENAV  |         |                |          | 800                  | 643         |                  | 1,266       | 75               |

Source: Edison Investment Research. Note: \*\$/boe and WI for Lancaster includes impact of cost carry from modelled farm-out. Assumes \$/£1.4.

## Financials

Our financial forecasts incorporate Hurricane's fund-raise and capex associated with drilling Lincoln and Halifax, as well as the acquisition of long lead items for Lancaster EPS development. Our FY16 estimates include capex of £86.1m, which we expect to be funded from existing cash resources. Funding will be required to progress the EPS phase of Lancaster in 2017.

**Exhibit 4: Financial summary**

|  | £ '000s | 2014     | 2015     | 2016e    | 2017e    |
|--|---------|----------|----------|----------|----------|
| Dec  |         | IFRS     | IFRS     | IFRS     | IFRS     |
| <b>PROFIT &amp; LOSS</b>                     |         |          |          |          |          |
| Revenue                                      |         | 0        | 0        | 0        | 0        |
| Operating Expenses                           |         | (8,489)  | (5,366)  | (4,646)  | (4,646)  |
| EBITDA                                       |         | (8,489)  | (5,366)  | (4,646)  | (4,646)  |
| Operating Profit (before amort. and except.) |         | (8,584)  | (5,448)  | (4,741)  | (4,741)  |
| Exploration expenses                         |         | 0        | 0        | 0        | 0        |
| Exceptionals                                 |         | 0        | 0        | 0        | 0        |
| Other  |         | 0        | 0        | 0        | 0        |
| Operating Profit                             |         | (8,584)  | (5,448)  | (4,741)  | (4,741)  |
| Net Interest                                 |         | (441)    | (75)     | 228      | 237      |
| Profit Before Tax (norm)                     |         | (9,025)  | (5,523)  | (4,513)  | (4,504)  |
| Profit Before Tax (FRS 3)                    |         | (9,025)  | (5,523)  | (4,513)  | (4,504)  |
| Tax  |         | 19       | 0        | 0        | 0        |
| Profit After Tax (norm)                      |         | (9,006)  | (5,523)  | (4,513)  | (4,504)  |
| Profit After Tax (FRS 3)                     |         | (9,006)  | (5,523)  | (4,513)  | (4,504)  |
| Average Number of Shares Outstanding (m)     |         | 621.4    | 632.2    | 1,088.8  | 1,198.2  |
| EPS - normalised (p)                         |         | (1.4)    | (0.9)    | (0.4)    | (0.4)    |
| EPS - normalised and fully diluted (p)       |         | (1.4)    | (0.9)    | (0.4)    | (0.4)    |
| EPS - (IFRS) (p)                             |         | (1.4)    | (0.9)    | (0.4)    | (0.4)    |
| Dividend per share (p)                       |         | 0.0      | 0.0      | 0.0      | 0.0      |
| <b>BALANCE SHEET</b>                         |         |          |          |          |          |
| Fixed Assets                                 |         | 177,653  | 176,231  | 262,282  | 302,007  |
| Intangible Assets                            |         | 177,308  | 176,012  | 176,012  | 176,012  |
| Tangible Assets                              |         | 215      | 89       | 86,140   | 125,865  |
| Investments                                  |         | 130      | 130      | 130      | 130      |
| Current Assets                               |         | 17,409   | 10,771   | 40,176   | 830      |
| Stocks                                       |         | 0        | 410      | 410      | 410      |
| Debtors                                      |         | 1,553    | 420      | 420      | 420      |
| Cash   |         | 15,856   | 9,941    | 39,346   | 0        |
| Other  |         | 0        | 0        | 0        | 0        |
| Current Liabilities                          |         | (1,487)  | (271)    | (271)    | (271)    |
| Creditors                                    |         | (1,487)  | (271)    | (271)    | (271)    |
| Short term borrowings                        |         | 0        | 0        | 0        | 0        |
| Long Term Liabilities                        |         | (7,281)  | (3,221)  | (3,221)  | (8,103)  |
| Long term borrowings                         |         | 0        | 0        | 0        | (4,882)  |
| Other long term liabilities                  |         | (7,281)  | (3,221)  | (3,221)  | (3,221)  |
| Net Assets                                   |         | 186,294  | 183,510  | 298,966  | 294,462  |
| <b>CASH FLOW</b>                             |         |          |          |          |          |
| Operating Cash Flow                          |         | (4,677)  | (2,558)  | (4,418)  | (4,409)  |
| Net Interest                                 |         | 0        | 0        | 0        | 0        |
| Tax  |         | 0        | 0        | 0        | 0        |
| Capex  |         | (36,542) | (3,407)  | (86,146) | (39,820) |
| Acquisitions/disposals                       |         | 0        | 0        | 0        | 0        |
| Financing                                    |         | 16,783   | 22       | 119,969  | 0        |
| Dividends                                    |         | 0        | 0        | 0        | 0        |
| Net Cash Flow                                |         | (24,436) | (5,943)  | 29,405   | (44,229) |
| Opening net debt/(cash)                      |         | (14,022) | (15,856) | (9,941)  | (39,346) |
| HP finance leases initiated                  |         | 0        | 0        | 0        | 0        |
| Other  |         | 26,270   | 28       | 0        | 0        |
| Closing net debt/(cash)                      |         | (15,856) | (9,941)  | (39,346) | 4,882    |

Source: Edison Investment Research

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