Hurricane Energy

Corporate update

Confirming oil below structural closure

Oil & gas

Preliminary analysis of the Lancaster pilot well confirms a continuous oil column below the basement structural closure. An increase in mid-case estimates of Lancaster oil in place and a higher recovery factor, supported by aquifer drive, could potentially lead to a material increase in recoverable resource estimates. We expect third-party validation of resource upgrades on completion of the 2016 well programme. Ahead of validation, we have increased our estimated early production system (EPS) recoverable volumes to the company's base-case 53mmbbls and assume full field development P50 recoverable volume of 300mmbo. As a result, our RENAV increases from 41p/share to 73p/share (+78%) based on Edison's long-term Brent crude price of $70/bbl.

Year end	Revenue (£m)	EBITDA* (£m)	PBT* (£m)	Operating cash flow (£m)	Capex (£m)	Net (debt)/ cash (£m)
12/14	0.0	(8.5)	(9.0)	(4.7)	(36.5)	15.9
12/15	0.0	(5.4)	(5.5)	(2.6)	(3.4)	9.9
12/16e	0.0	(4.6)	(4.5)	(4.4)	(41.2)	13.6
12/17e	0.0	(4.6)	(4.6)	(4.5)	(13.0)	(3.9)

Note: *EBITDA and PBT are normalised, excluding intangible amortisation, exceptional items and share-based payments.

Oil-down-to (ODT) confirmed below structural closure

A key objective of the 205/21a-7 pilot well was to confirm the location of oil water contact (OWC) and refine the Lancaster resource range which stood at 62-456mmboe. With preliminary analysis indicating a minimum ODT at 1,620m true vertical depth sub-sea (TVDSS), and 240m below structural closure, the pilot well has confirmed Hurricane's conceptual reservoir model which predicts a continuous oil column across the basement reservoir. Hurricane has high confidence in a field-wide recoverable resource exceeding 200mmbo.

Horizontal well adds second EPS producer

Next up in the Lancaster 7 wells programme is a horizontal well with a 1km lateral which is expected to intersect 13 fault zones. This well will act as a second producer for the early production system (EPS) phase of development. Hurricane expects to move rapidly into FEED, with FID by the end of H117 and first oil by H119, contingent on funding.

Valuation: Incorporating higher resource estimates

Our updated valuation assumes a 53mmbo EPS development and 300mmbo full field development funded through RBL and farm-out. As a result of an increase in resource, de-risked full field development, and better farm-out terms, our RENAV increases from 41p/share to 73p/share (+78%).

19 September 2016

Price	**40.75p**
Market cap	**£401m**
	£/US$1.4
Net cash (£m) at end December 2015	9.9
Shares in issue	979m
Free float	88%
Code	HUR
Primary exchange	AIM
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	69.8	147.0	191.1
Rel (local)	73.4	119.6	171.5
52-week high/low		40.8p	9.4p

Business description

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

Next events

Lancaster 7 Wells	Q316
Interim results	22 September 2016

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Edison profile page

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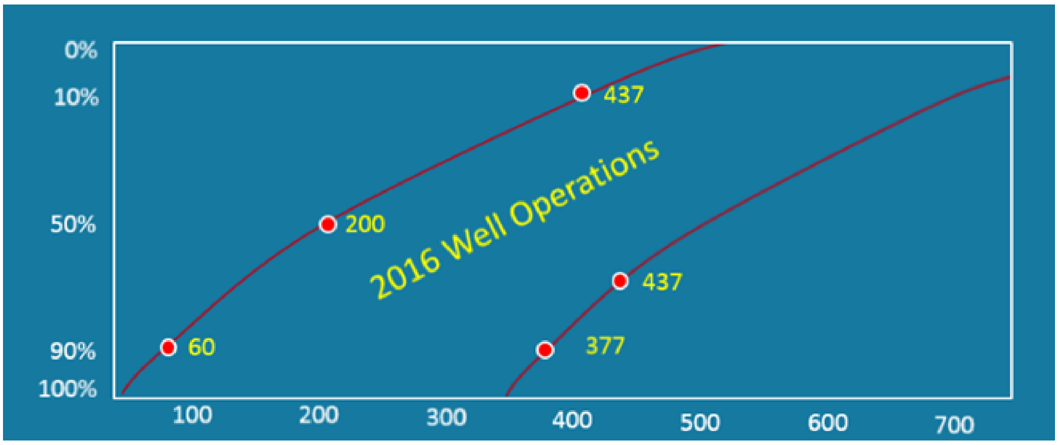
Pilot well 205/21a-7 results

Hurricane Energy has released preliminary analysis of the 205/21a-7 Lancaster pilot well. The pilot well confirms the company's estimates of mid-case ODT and the potential for a continuous oil column.

1. **Pilot well confirms ODT:** The pilot well indicates a minimum ODT at 1,620m true vertical depth sub-sea (TVDSS), 240m TVD below structural closure and with fluid samples of mobile oil consistent with previously tested Lancaster oil. Confirmation of minimum ODT at 1,620m TVDSS is below depth at which oil was swabbed in the 205/21a-4 well (1595m TVDSS) and is in line with Hurricane's prior estimates of mid-case. Hurricane has significantly de-risked the 2014 CPR P50 estimate of Lancaster recoverable resource of 200mmbo and we expect the revised P50 estimate to be in excess of 300mmbo assuming a continuous oil column across the basement reservoir. We note that Hurricane's last published CPR had assumed a 50% water saturation below structural closure, which should significantly reduce if a continuous oil column is proven. We expect third-party analysis post the completion of the 2016 drilling programme, to include revised resource estimates.

Exhibit 1: Conceptual impact to resource range by confirming CPR 2C ODT and continuous oil column



Source: Hurricane Energy

2. **Confirmation of aquifer drive:** Aquifer has been confirmed in a porous and permeable interval. We expect this to be a positive for the field-wide recovery factor and per well EUR as pressure support should drive basement oil towards producers at the crest of the Lancaster structure. Water breakthrough can be mitigated through careful well placement together with production under low drawdown.
3. **Continuous oil column:** Wireline and well test data indicate no pressure barriers. We believe this helps reduce the risk of reservoir compartmentalisation and should provide the basis for assuming a continuous oil column within the reservoir.
4. **Commercial flow rates:** Drill stem testing (DST) of the basement reservoir yielded a maximum, natural flow rate of 6,600bopd and a maximum flow rate of 11,000bopd (artificial lift with an electrical submersible pump) of good quality 38 degree API oil with no formation water produced. Hurricane has replicated the excellent flows seen in the 2014 DST from the vertical pilot well. We see this as a positive on two fronts: 1) the well design appears to have been optimised in order to avoid formation damage issues incurred in prior well tests. This bodes well for full field development; and 2) oil quality appears consistent with prior well tests – oil is of good quality and flows naturally to surface. We note that the DST was an open hole test so it is difficult to know exactly where formation fluids have emanated from; however, third-party interpretation suggests that flow is from a single fracture connected to the basement.

The pilot well will now be permanently abandoned prior to side-tracking the top-hole to form the 7Z horizontal side-track.

Horizontal sidetrack objectives

Sidetrack 205/21a-7z will be drilled at a similar depth to the existing 205/21a-6 well and around 140m above the shallowest estimated OWC. The well will have a 1km horizontal section and is expected to intersect 13 fault zones. It will be positioned close enough to 205/21a-6 to monitor interference between the wells during the EPS, while remaining far enough away to allow for reservoir drainage. Data gathering will be similar to that in the pilot hole, although wireline logging and PLT cannot be taken in a horizontal section. Once the drilling and testing programme is completed on the two Lancaster 7 wells, the company plans to move rapidly into FEED, with FID by the end of H117 and first oil by H119.

Updated resource assumptions and valuation

We have made several changes to our valuation to reflect the results of the 205/21a-7 pilot well.

1. Hurricane has been able to replicate flow rates seen in the 205/21a-6 and confirmed the potential for aquifer drive giving us greater comfort in the volume recoverable in the company's two-well early production system (EPS). We have increased our recovery assumptions to a base-case 53mmbbl recoverable.
2. Confirmation of ODT at TVDSS 1,620m leads us to believe there is significant resource upside from a CPR estimated P50 of 200mmbo. We have used a preliminary estimate of P50 300mmbo ahead of the third-party resource confirmation. Uncertainty regarding the resource range remains an important investment consideration; however, we believe an updated CPR will show a significant increase in P90 resource as well as higher P50 estimates.
3. We have increased our geological chance of success (CoS) for oil outside the mapped disclosure to 90% from 70%.

As a result of the modelling changes highlighted above, we believe the full field development (FFD) project has better stand-alone IRR than we previously estimated. We now estimate a P50 stand-alone, point-forward project IRR of 50%, up from 46% (Edison $70/bbl real long-term Brent). This has a positive impact on the working interest we believe Hurricane can retain through farm-out. In our farm-out analysis we continue to assume Hurricane is able to access $250m of net RBL debt and farms-out for a residual cost carry (total Lancaster gross capex prior to first oil is estimated at $3.1bn or $10.3/bbl). In this analysis, we assume a farminee requires a 25% point-forward, post-carry IRR of 25%. Better underlying returns from the development project enable Hurricane to retain a 50% working interest in Lancaster versus our prior estimate of 45%. The net valuation impact of the changes described above is a 78% increase in our RENAV from 41p/share to 73p/share.

Hurricane is funded through the 2016 well programme, although further funds will be required to progress Lancaster through to EPS and FFD. Based on our forecasts, we expect the company to require more funds in 2017. Our financial forecasts assume £3.9m of net debt at year-end 2017. Alternatives to RBL, equity and farm-down being considered for the EPS phase of development include export credit finance available to fund yard costs, which we understand make up the bulk of pre-EPS first oil capex.

Exhibit 2: Hurricane Energy valuation summary – FFD purchased FPSO (base case)								
				Recoverable reserves			Net risked	Value per share
Asset	Country	Diluted WI	CoS	Gross	Net	NPV/boe	value	risked
NOSH: 979.4		%	%	mmboe	mmboe	$/boe	$m	/share
Net (debt)/cash post well programme		100%	100%				19	1
SG&A (2 years)		100%	100%				(11)	(1)
Core NAV							**8**	**1**
Contingent								
Lancaster EPS - two wells	UK	50%	70%	53	26	14.5	268	20
Lancaster FFD (post-EPS)	UK	50%	57%	247	124	10.3	723	53
RENAV				**300**	**150**		**999**	**73**

Source: Edison Investment Research. Note: NPV/boe assumes a farm-out will be full capex carry for Hurricane.

At this stage, we do not include value from other discoveries and prospects, as there is no clarity on when appraisal/exploration wells will be drilled and/or funded. This blue-sky exploration/appraisal portfolio is potentially worth a further 13p/share on our estimates. We have not conducted detailed dilution analysis for this portfolio of assets and as such we may be overestimating the commercial chance of success.

Exhibit 3: Hurricane Energy valuation summary – exploration/appraisal portfolio								
				Recoverable reserves			Net risked	Value per share
Asset	Country	Diluted WI	CoS	Gross	Net	NPV/boe	value	risked
		%	%	mmboe	mmboe	$/boe	$m	/share
Discovery - on hold								
Whirlwind	UK	100%	13%	192	192	2.3	59	4
Strathmore	UK	100%	10%	32	32	0.3	1	0
Long-term exploration upside								
Lincoln	UK	100%	7%	150	150	3.6	36	3
Tempest/Typhoon	UK	100%	8%	175	175	2.9	41	3
Lancaster prospective resources	UK	100%	5%	53	53	6.9	18	1
Whirlwind prospective resources	UK	100%	8%	85	85	2.8	19	1
Long-term exploration upside NAV					**687**		**174**	**13**
Total long-term valuation including blue-sky upside					**771**		**735**	**54**

Source: Edison Investment Research

Our financial forecasts for 2016 and 2017 remain unchanged from our last published note, dated 12 July 2016.

Exhibit 4: Financial summary

	£ '000s	2014	2015	2016e	2017e
Dec		IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
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)	225	189
Profit Before Tax (norm)		(9,025)	(5,523)	(4,516)	(4,552)
Profit Before Tax (FRS 3)		(9,025)	(5,523)	(4,516)	(4,552)
Tax		19	0	0	0
Profit After Tax (norm)		(9,006)	(5,523)	(4,516)	(4,552)
Profit After Tax (FRS 3)		(9,006)	(5,523)	(4,516)	(4,552)
Average Number of Shares Outstanding (m)		621.4	632.2	979.4	979.4
EPS - normalised (p)		(1.4)	(0.9)	(0.5)	(0.5)
EPS - normalised and fully diluted (p)		(1.4)	(0.9)	(0.5)	(0.5)
EPS - (IFRS) (p)		(1.4)	(0.9)	(0.5)	(0.5)
Dividend per share (p)		0.0	0.0	0.0	0.0
Gross Margin (%)		NA	NA	NA	NA
EBITDA Margin (%)		NA	NA	NA	NA
Operating Margin (before GW and except.) (%)		NA	NA	NA	NA
BALANCE SHEET					
Fixed Assets		177,653	176,231	217,337	230,282
Intangible Assets		177,308	176,012	176,012	176,012
Tangible Assets		215	89	41,195	54,140
Investments		130	130	130	130
Current Assets		17,409	10,771	14,436	830
Stocks		0	410	410	410
Debtors		1,553	420	420	420
Cash		15,856	9,941	13,606	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)	(7,112)
Long term borrowings		0	0	0	(3,891)
Other long term liabilities		(7,281)	(3,221)	(3,221)	(3,221)
Net Assets		186,294	183,510	228,281	223,729
CASH FLOW					
Operating Cash Flow		(4,677)	(2,558)	(4,421)	(4,457)
Net Interest		0	0	0	0
Tax		0	0	0	0
Capex		(36,542)	(3,407)	(41,201)	(13,041)
Acquisitions/disposals		0	0	0	0
Financing		16,783	22	49,287	0
Dividends		0	0	0	0
Net Cash Flow		(24,436)	(5,943)	3,665	(17,497)
Opening net debt/(cash)		(14,022)	(15,856)	(9,941)	(13,606)
HP finance leases initiated		0	0	0	0
Other		26,270	28	0	0
Closing net debt/(cash)		(15,856)	(9,941)	(13,606)	3,891

Source: Edison Investment Research. Note: Forecasts assume £3.9m of debt at the end of 2017.

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