EDISON

Hurricane Energy

Defining EPS development volumetrics

Fund-raising and FY results

Oil & gas

Hurricane's 2016 well programme aims to firm up volumes in Lancaster's mapped structural closure, oil that Hurricane plans to monetise through a two-well EPS development. More clarity on volumes will support concept definition and should provide the basis for further farm-out discussions, taking the Lancaster field through to EPS first oil in 2019. Hurricane's £52m fund-raise, announced on 18 April, was carried out at a 46% premium to market and will provide capital for the Q316 Lancaster 7 Wells drilling programme consisting of a multi-objective vertical pilot well and horizontal production test. Our RENAV for Lancaster, including net cash and net of corporate overheads, stands at 34p/share, down from our last published 47p/share as a result of fund-raising equity dilution, a 10$/bbl reduction in our long-term oil price assumptions and higher risk assigned to full field development volumes outside mapped structural closure.

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)	(43.0)	11.8
12/17e	0.0	(4.6)	(4.6)	(4.5)	(16.7)	(9.3)

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

High-spec rigs available at lower cost

Hurricane and Transocean have entered into a rig contract for the harsh weather, semi-sub Transocean Spitsbergen for the forthcoming Q316 drilling programme. We believe that current market dynamics have enabled Hurricane to contract the high-spec rig at an attractive day rate and at short notice. Final permitting and authorisation to drill are expected in the coming months, with a pilot well to be drilled this summer.

Potential for EPS first oil in 2019

Assuming the Lancaster 7 Wells are drilled in 2016, the company believes it will be able to make a final investment decision for the EPS phase by H117. Sourcing a suitable FPSO and shipyard for topside modification works will be key to ensuring first oil can be achieved by 2019.

Valuation: Significant upside remains

Our updated valuation reflects fund-raising proceeds and associated equity dilution. We also make some changes to our model to reflect updated assumptions for our base case two-well EPS, full field development and farm-out dilution. In addition, our long term oil price has moved from 80$/bbl long to 70$/bbl real. The net result is a decrease in our RENAV from 47p/share to 34p/share.

28 April 2016

Price	**13.5p**
Market cap	**£86m**
	£/US$1.44
Net cash (£m) at end December 2015	9.9
Shares in issue (excludes 347m share issue announced 18 April)	635m
Free float	88%
Code	HUR
Primary exchange	AIM
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	17.4	38.2	(6.9)
Rel (local)	13.7	31.0	3.0
52-week high/low		18.38p	9.40p

Business description

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

Next event

Lancaster 7 Wells	Q316

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Funded 2016 well programme

On 18 April 2016, Hurricane Energy announced that it had conditionally raised £52.1m gross through the proposed issue of 347m new ordinary shares at 15p/share. The net proceeds of the fund-raise are earmarked for drilling a pilot well and a horizontal well on Lancaster in Q316 (Lancaster 7 Wells: £43.9m) and for general corporate purposes (£5.4m).

In our view, Hurricane's 2016 well programme is well timed, taking advantage of high-spec rig availability at an attractive price. The company has not released the contracted day rate for the Transocean Spitsbergen, but we understand that costs reflect recent reductions seen in deepwater rig rates which are down by more than 60% since peak. While Hurricane's fund-raise at 15p/share is dilutive to our NAV, we believe it is sensible of Hurricane to take advantage of current availability and low day rates in the high-spec, deepwater rig market.

Lancaster 7 Wells – Q316

The company's 2016 well programme incorporates a pilot well and a horizontal sidetrack on Lancaster and is known as Lancaster 7 Wells. The three objectives of the Pilot Well are as follows:

- **Data acquisition to confirm hydrocarbon distribution and depth of the oil water contact:** Hurricane's two-well EPS is aimed at recovering hydrocarbons trapped above mapped structural closure; to date there has been no definitive oil down to (ODT) to calculate this STOIIP volume. Confirmation of the ODT from the planned 2016 pilot well will reduce STOIIP uncertainty and assist in the selection of suitable facilities for EPS development. In 2013, RPS Energy estimated the range on conventional basement STOIIP in Lancaster at 140-383mmbbl gross.
- **Evaluation of the properties of a potential aquifer below the 205/21-4 well oil water contact:** the existence and strength of aquifer pressure support will be an important consideration in progressing Lancaster through to EPS and full field development. Aquifer pressure support has potential to prevent early gas breakthrough, but may have negative implications for water cut and the design of water-handling facilities.
- **Determining the properties of the overlying Victory sandstone (Commodore sandstone), which has potential to be significantly thicker and better quality at the well location:** in 2013, RPS estimated Victory conventional STOIIP in Lancaster at 3-28mmbbl gross. The 2016 well has potential to lead to an increase in Pmean STOIIP if logs suggest a thicker and/or better quality reservoir section at the selected well location.

On completion of pilot well operations, the well will be plugged and abandoned and a horizontal well will be drilled and tested from the same borehole. The horizontal will be flow tested to clean up the well and look to replicate the results of the 2014 flow test. A longer duration shut-in and pressure build-up test than 2014 should provide further information on reservoir quality and continuity away from the wellbore.

A successful outcome from the 2016 well programme has the potential to materially de-risk EPS development, potentially providing Hurricane with more favourable terms for an EPS and/or full field farm-down. Importantly, we should see more certainty on the size of recoverable resource for the EPS phase of development, giving us greater confidence in the mid-case volumetrics that drive our valuation.

Transocean Spitsbergen

The Transocean Spitsbergen is a 2009 Aker H-6e semi-sub with harsh environment, ultra-deepwater capability currently ready stacked in Norway, according to RigLogix. We understand that

Hurricane's' rig contract remains contingent on completion of the fund-raising and is available to commence work in Q316. Hurricane has not released details on cost contingency or risk-sharing arrangements with Transocean; well AFE stands at £43.9m.

Exhibit 1: Transocean Spitsbergen harsh environment, ultra-deepwater semi-sub

Source: Transocean

EPS and full field development

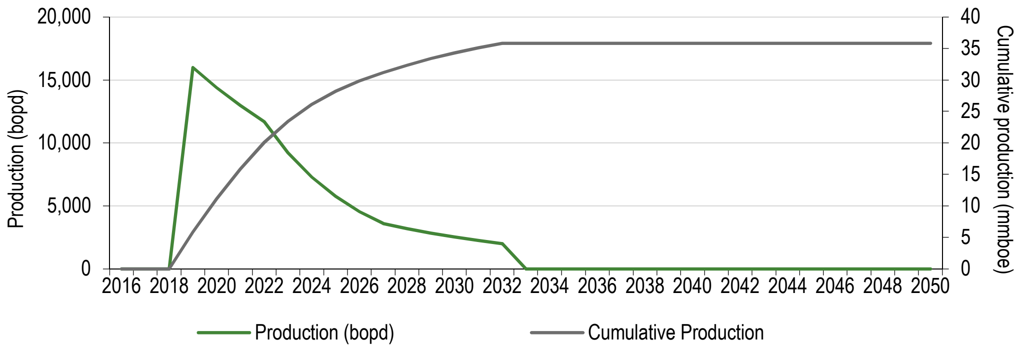
Hurricane believe that the results of Lancaster 7 Wells should allow it to make a final investment decision to progress Lancaster's EPS development phase. EPS is planned for first oil in 2019, which should provide long-term production data to de-risk and optimise full field development and provide shareholders with an acceptable risked return on capital.

Two-well EPS development – first oil in 2019

EPS or development of Lancaster will involve recompleting and tying back two horizontal wells (recompletion of wells drilled in 2014 and 2016) to a leased FPSO. The minimal facility FPSO, which is limited to oil separation, produced water clean-up and fuel gas power systems. Tanker offloading will be required as there is no alternative export infrastructure. Total cost from the end of 2016 through to first oil is estimated by Hurricane at $240m excluding letters of credit.

Ours EPS production profile is based on two wells producing at start-up with an IP rate of 8mb/d. We assume per well EUR in the EPS phase is inline with average full field development EUR as per Hurricane's 2013 CPR. There is potential upside to this assumption as the EPS phase development focuses on the monetisation of oil within mapped closure as successfully tested by well 205/21a-6 in 2014. We view our assumption as conservative and expect to update post the Lancaster 7 wells programme.

Exhibit 2: EPS production profile



Source: Edison Investment Research

Exhibit 3: Lancaster EPS key assumptions

Lancaster EPS – two wells	
Capex to first oil post 2016	$240m
First oil	2019
Average well IP rate	8,000b/d
Per well EUR	17.9mmbbl
No. of wells	2
Total recovery	36mmbbl
FPSO lease rate	$235k/day

Source: Edison Investment Research

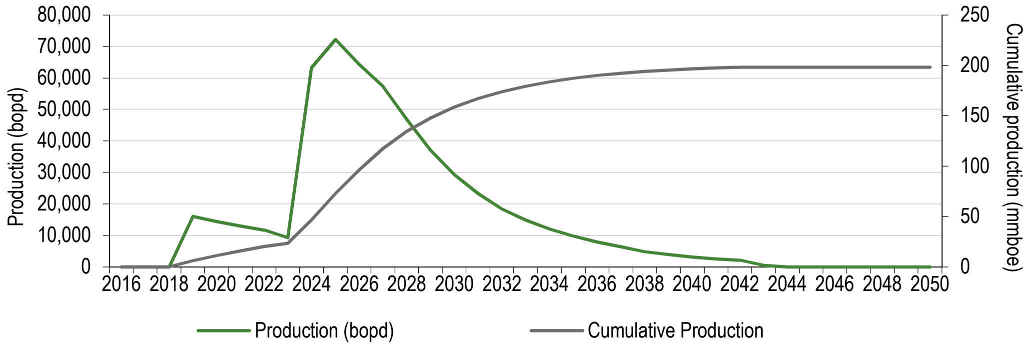
We model first oil in line with company guidance in H119, giving an unrisked, forward-looking IRR (gross basis) of 48% based on our oil price deck, which assumes Brent long-term at 70$/bbl (real). We note that delivery of first oil in 2019 will be dependent on EPS FPSO and modification yard availability.

Full field development – first oil in 2024

Full field development (FFD) of Lancaster is aimed at recovering remaining oil from Lancaster's mapped structural closure, in addition to oil from basement reservoir and Victory sands below mapped closure. We currently model 36mmbbl recovery in the EPS phase and 164mmbbl through FFD. Hurricane's 2013 CPR splits Lancaster volume between above and below mapped closure (61mmbbl and 139mmbbl respectively).

Our FFD development largely follows assumptions made in the company's 2013 CPR, adjusted for the latest cost information and improved per well flow rates after Hurricane's success at well 205/21a-6 in 2014. Our base case assumes a purchased FPSO development delivering first oil in 2024, with peak production of c 70mb/d as shown in the production profile below.

Exhibit 4: Full field development production profile



Source: Edison Investment Research

Exhibit 5: Lancaster FFD key assumptions (excludes EPS phase)

Capex to first oil post 2016	$1,338m
First oil	2024
Average well IP rate	8mb/d
Per well EUR	18mmbbl
No. of wells	9
Total recovery	164mmbbl
FPSO lease rate	$500k/day

Source: Edison Investment Research

Our unrisked forward-looking IRR of a combined EPS and FFD development of Lancaster on a gross basis and at an Edison (70$/bbl real long term Brent) price deck, is estimated at 41%.

Development funding

Hurricane is funded through the 2016 well programme, although further funds will be required to progress Lancaster through to EPS and FFD. We assume Hurricane's net capex through to EPS and FFD first oil is funded via farm-down and an FFD reserve-based lending (RBL) facility (we assume $250m net RBL in our base case). Based on our forecasts, we expect the company to require more funds in 2017. Our financial forecasts assume £9.3m of net debt at year-end 2017. Taking a view on asset dilution through farm-out, our analysis assumes a farminee will require a 25% forward-looking, post-carry IRR to invest. On this basis, we believe that Hurricane will need to farm down a 58% equity interest in Lancaster i to fund both EPS and FFD. This dilution is reflected in the working interests we apply in our NAV, with Hurricane retaining a 42% working interest in both EPS and FFD.

Valuation and financials

Our RENAV moves from 45p/share to 34p/share to reflect the issue of new shares, macro and asset-level updates. Despite this RENAV downgrade, we continue to see more than 149% upside from the current share price and believe there is potential for our RENAV to increase over the course of 2016 as EPS development is de-risked through the Lancaster 7 Wells programme.

Key changes to our last published model include:

1. inclusion of new shares issued and net proceeds from Hurricane's proposed £52m fund-raise;
2. addition of the Q316 Lancaster 7 Wells programme in capex projections;
3. changes to FFD geological risk to reflect a moderately higher risk of developing volumes outside structural closure;

4. partial de-risking of EPS development, with Hurricane retaining a higher equity interest post farm-down (from 34% WI to 51%). Farm-down dilution assumes the farminee generates a post-carry IRR of 25%;
5. $240m of development capex required to take EPS through to first oil after the 2016 drilling programme;
6. increase in well IP rates from 6,000b/d to 8,000b/d to reflect the positive results of Hurricane's 2014 appraisal programme; and
7. updated macro assumptions which move from 80$/bbl Brent long-term real to 70$/bbl.

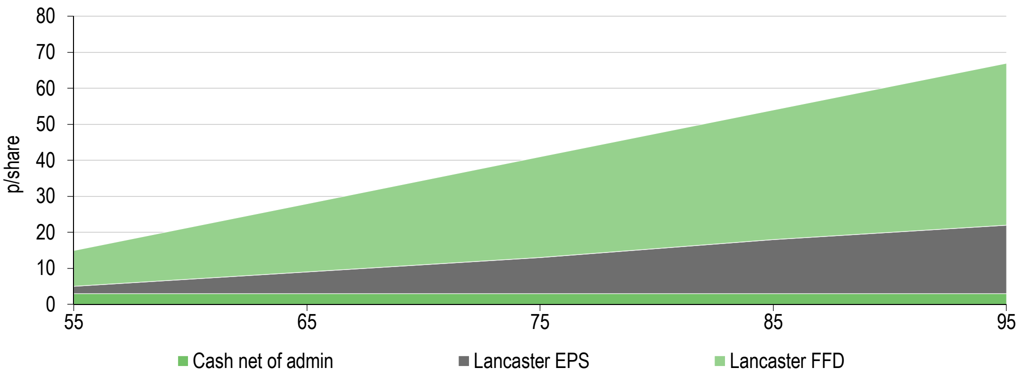
Exhibit 6: Hurricane Energy valuation summary – FFD purchased FPSO (base case)

				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 fund-raise		100%	100%				51	4
SG&A (2 years)		100%	100%				(12)	(1)
Core NAV							**40**	**3**
Contingent								
Lancaster EPS - two wells	UK	42%	70%	36	15	10.6	112	8
Lancaster FFD (post-EPS)	UK	42%	44%	164	69	10.8	331	23
RENAV				**200**	**84**		**483**	**34**

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

Our RENAV remains highly sensitive to long-term oil price assumptions, with a post farm-down NAV break-even at c 50$/bbl Brent. At higher oil prices, our RENAV is several times the current share price, as shown in Exhibit 7 below.

Exhibit 7: RENAV sensitivity to long-term oil price assumption



Source: Edison Investment Research. Note: Retained working interest adjusts with oil price to ensure farminee achieves a 25% IRR post-carry.

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 12p/share on our estimates. We have not conducted detailed dilution analysis for this portfolio of assets and as such may be overestimating the commercial chance of success.

Exhibit 8: 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	2.1	53	4
Strathmore	UK	100%	10%	32	32	0.3	1	0
Long-term exploration upside								
Lincoln	UK	100%	7%	150	150	3.5	35	2
Tempest/Typhoon	UK	100%	8%	175	175	2.8	40	3
Lancaster prospective resources	UK	100%	5%	53	53	6.4	17	1
Whirlwind prospective resources	UK	100%	8%	85	85	2.5	18	1
Long-term exploration upside NAV					**687**		**163**	**12**
Total long-term valuation including blue-sky upside					**771**		**602**	**43**

Source: Edison Investment Research

Exhibit 9: 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)	224	182
Profit Before Tax (norm)		(9,025)	(5,523)	(4,517)	(4,559)
Profit Before Tax (FRS 3)		(9,025)	(5,523)	(4,517)	(4,559)
Tax		19	0	0	0
Profit After Tax (norm)		(9,006)	(5,523)	(4,517)	(4,559)
Profit After Tax (FRS 3)		(9,006)	(5,523)	(4,517)	(4,559)
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	219,146	235,711
Intangible Assets		177,308	176,012	176,012	176,012
Tangible Assets		215	89	43,004	59,569
Investments		130	130	130	130
Current Assets		17,409	10,771	12,625	830
Stocks		0	410	410	410
Debtors		1,553	420	420	420
Cash		15,856	9,941	11,795	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)	(12,549)
Long term borrowings		0	0	0	(9,328)
Other long term liabilities		(7,281)	(3,221)	(3,221)	(3,221)
Net Assets		186,294	183,510	228,280	223,721
CASH FLOW					
Operating Cash Flow		(4,677)	(2,558)	(4,422)	(4,464)
Net Interest		0	0	0	0
Tax		0	0	0	0
Capex		(36,542)	(3,407)	(43,010)	(16,660)
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)	1,854	(21,123)
Opening net debt/(cash)		(14,022)	(15,856)	(9,941)	(11,795)
HP finance leases initiated		0	0	0	0
Other		26,270	28	0	0
Closing net debt/(cash)		(15,856)	(9,941)	(11,795)	9,328

Source: Company accounts, Edison Investment Research. Note: Financials assume £9.3m of debt funding in 2017.

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