EDISON

Hurricane Energy

Updated drilling campaign for 2020–21

Operational update

Oil & gas

In December 2019, Hurricane Energy provided a trading and operational update on its activities, announcing a strong ongoing performance of the Lancaster early production system (EPS), with well tests supporting guidance of 20,000bopd for FY20 (before operational downtime). Hurricane was also granted a five-year extension to its P1368 licence, covering Lancaster and Lincoln, which resulted in changes to its near-term work programme. One or more sub-vertical wells will be drilled on both Lincoln (in 2020) and Lancaster (in 2021) to determine the maximum vertical extent of each reservoir. Hurricane estimated FY19 revenue of c $165m and year-end unrestricted cash of c $150m, relatively in line with our estimates for the year. Our risked valuation stands at 109.9p/share (from 102.8p/share) as we roll forward our NAV, adjust our short-term oil price assumptions and update forecasts to reflect Lancaster EPS performance and the 2020–21 work programme.

Year-end	Revenue ($m)	EBITDA ($m)	Operating cash flow ($m)	Capex* ($m)	Net debt/ (cash) ($m)
12/17	0.0	(14.6)	(8.1)	(265.7)	(157.9)
12/18	0.0	(12.6)	(4.4)	(209.9)	100.3
12/19e	166.5	87.0	69.5	(41.7)	45.4
12/20e	374.3	245.9	230.9	(32.0)	(153.5)

Note: *Capex is net of carried investment by Spirit Energy.

Lancaster EPS delivered c 3.1mmbbls in 2019

The Lancaster EPS has continued to demonstrate high productivity, while Hurricane now expects vessel uptime of 90% before any shut-ins required for tie-ins or debottlenecking. Individual tests have confirmed a flow of 14,700bopd from the 205/21a-6 well with minimal water cut, and 9,400bopd from 205/21a-7Z with a water cut of 25–30%, both under natural flow. On this basis, the company has maintained its FY20 guidance of 20,000bopd for now, which could be updated following completion of the individual flow tests in January 2020.

Further reservoir assessment in 2020–21

Hurricane was granted a five-year extension to its P1368 licence covering Lancaster and Lincoln, which resulted in changes to its 2020–21 work programme. One or more sub-vertical wells will be drilled on both Lincoln (in 2020) and Lancaster (in 2021) to determine the maximum vertical extent of the reservoirs, while the Greater Warwick Area horizontal wells will no longer be drilled next year.

Valuation: Core NAV at 35.2p/share

Changes to our valuation are driven by rolling forward our NAV and updating Lancaster EPS FY19 performance. We have also updated our short-term Brent price expectations, which are based on EIA forecasts. Our long-term (2022 onwards) Brent assumption remains at $70/bbl. Our risked valuation stands at 109.9p/share, or 35.2p/share excluding any value beyond Lancaster EPS.

20 January 2020

Price	**25.9p**
Market cap	**£515m**
	US$1.26/£
Net debt ($m) at 30 June 2019	105.5
Shares in issue	1,990m
Free float	80%
Code	HUR
Primary exchange	AIM
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	(13.2)	(42.0)	(48.4)
Rel (local)	(14.8)	(45.9)	(54.5)
52-week high/low		60.8p	25.6p

Business description

Hurricane Energy is an E&P focused on fractured basement exploration and development in the West of Shetland region. The company's 100%-owned Lancaster oil discovery (523mmbbl 2P reserves + 2C resources) achieved first oil on target in H119.

Next events

FY19 financial results	19 March 2020
Capital markets day	25 March 2020

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Edison profile page

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Lancaster EPS strong performance

The Lancaster EPS was successfully brought on-stream in June 2019 and has continued to perform above Hurricane's initial forecasts for production, system availability and cash flow generation. Production guidance for FY19 has been 3.1mmbbls, corresponding to an average of c 13,300bopd since first oil. Reservoir performance to date supports the company's FY20 guidance of 20,000bopd, before operational downtime. Data from ongoing individual flow tests, together with downhole pressure data, will be used to review whether this guidance is appropriate. The EPS is additionally benefiting from a high vessel uptime of 90% before any shut-ins required for tie-ins or debottlenecking.

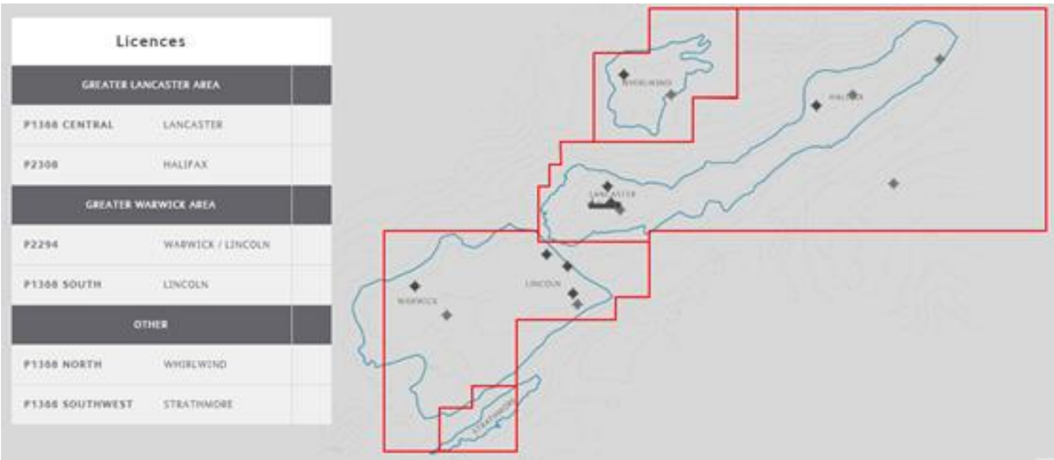
Individual well flow tests are ongoing and due to be completed by the end of January 2020, but to date have confirmed a flow rate of 14,700bopd from the 205/21a-6 well with minimal water cut, and 9,400bopd from 205/21a-7Z with a water cut of 25–30%, both under natural flow. Water production is in line with the company's modelled expectations for perched water and is not believed to be from aquifer water breakthrough, based on temperature data, lack of rate dependency, and water production behaviour after shut-in periods.

Data gathered up to December 2019 indicate immediate and strong pressure communication between the 205/21a-6 and 205-21a-7Z wells, suggesting that together they act as a single well. Since late October, Hurricane has been carrying out individual flow tests to establish the optimum combined flow rate from the two wells and to assess individual well fluid dynamics. Both wells are currently only drawing on a small section (c 50–60m) of each 1km horizontal section. As previously outlined, Hurricane will take up to 12 months of steady-state production before it is able to confirm its reservoir model and continues to see this timeline as appropriate. We expect to have further details at Hurricane's capital markets day on 25 March 2020.

P1368 licence extension

In December 2019, the P1368 licensees, Hurricane Energy and Spirit Energy, agreed on a deed of variation with the Oil and Gas Authority (OGA). The deed grants a five-year extension to the P1368 licence, covering the Lancaster and Lincoln subareas, subject to specific conditions which include the commitment to drill one well in the Lincoln sub-area (by 22 December 2020) and one well in the Lancaster sub-area (by 22 December 2021). The P1368 licence includes four subareas: Central – Lancaster; South – Lincoln; North – Whirlwind; and South West – Strathmore.

Exhibit 1: Hurricane Energy licence map



Source: Hurricane Energy

The Whirlwind and Strathmore sub-areas were relinquished at the OGA's requirement and Hurricane will no longer recognise resources in relation to Whirlwind (2C contingent resources of 179–205mmboe) or Strathmore (2C contingent resources of 32mmboe).

Revised 2020–21 work programme

The addition of a commitment well in each of the Lancaster and Lincoln sub-areas has resulted in changes to Hurricane's work programme in 2020/21. In the Greater Warwick Area (GWA), Hurricane is currently planning one or more sub-vertical wells with the objective of determining the maximum vertical extent of the Lincoln field and, at a minimum, confirming the mid-case oil-water contact at 2,200m. Consequently, the company no longer plans to drill any additional horizontal producers on the GWA in 2020. To allow time for the planning and permitting of this commitment well, drilling activity is not expected to start before June 2020, and Hurricane is considering alternative options to utilise the Transocean Paul B Lloyd Jr rig during this period to minimise rig downtime, currently estimated by management to result in regret costs, net to Hurricane of c $10m. An option being considered is drilling a third horizontal producing well in Lancaster. First oil from this well, if drilled, would be expected in late 2021/early 2022. In the Greater Lancaster Area, the work programme will include one or more sub-vertical wells to determine the maximum extent of the Lancaster field in 2021.

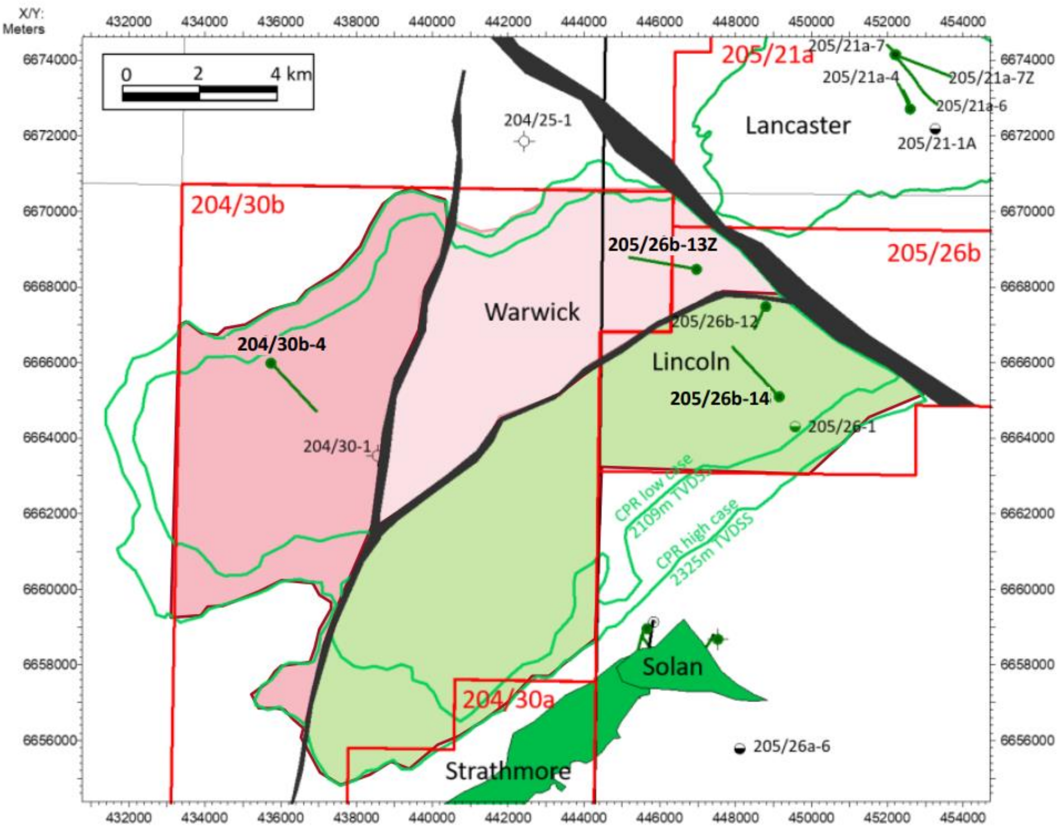
Debottlenecking work will be undertaken in 2021, to be available for the additional throughput from the Lancaster and Lincoln wells. We expect to include debottlenecking potential once Hurricane has authority to export gas through the West of Shetland Pipeline System (WOSPS). All proposed activity is subject to regulatory consent and, where related to joint activity with Spirit Energy, partner approval.

Lincoln Crestal and Warwick West discoveries in 2019

The accelerated three-well drilling programme on the GWA delivered the successful Lincoln Crestal well and an oil discovery in Warwick West. The Warwick Deep well did not flow at commercial rates. Drilling programme results are still being analysed.

The Lincoln Crestal well, 205/26b-14, produced light 43° API oil at a maximum stable flow rate of 9,800bopd using electrical submersible pumps (ESPs) and at a natural flow rate of 4,682bopd with no formation water. The well has been suspended and will be tied back to the Aoka Mizu FPSO, accessing c 23mmboe of the 604mmboe 2C Lincoln resources. The tie-back to the FPSO, together with tie-in to the WOSPS and associated modifications to the FPSO, are planned for 2020. However, regulatory approval could delay activity until 2021 if not received as expected during Q120. In the absence of OGA approval, the licence partners would be required to plug and abandon the well before 22 June 2020.

Exhibit 2: Greater Warwick Area 2019 well locations



Source: Hurricane Energy

Warwick West (204/30b-4) discovered light oil in Warwick, with less than 0.5% of water and an API gravity of 43°, similar to that seen in Lincoln. The well flowed naturally at a stable rate of 1,300bopd, although a rate using an ESP could not be reliably measured. The flow rate is lower than seen in Lancaster and Lincoln, and the JV will now evaluate the results and carry out further technical analysis to determine the potential for the GWA to be a single accumulation.

Warwick Deep could only produce traces of oil during testing and is believed to have encountered a poorly connected reservoir section. The well was plugged and abandoned, and further analysis of the well results is ongoing, alongside results from the two other wells.

Valuation

We value Hurricane's asset base using a conventional risked net asset value (NAV) approach, based on a risked valuation for proven reserves, and contingent and prospective resources. Key assumptions include estimates of production profiles, asset development costs and operational costs, in addition to realised commodity prices. We have updated our forecasts and NAV to reflect Hurricane's December 2019 announcement on the 2020–21 work programme. Our risked valuation is increased to 109.9p/share, or 35.2p/share excluding any value beyond Lancaster EPS. Besides rolling forward the discount to 2020, the main changes in our modelling assumptions are:

- We assume one sub-vertical well being drilled on Lincoln in 2020 and one sub-vertical well being drilled on Lancaster in 2021, while the Greater Warwick Area horizontal wells will no longer be drilled next year.
- Our short-term Brent assumptions move from $67.0/bbl to $64.8/bbl in FY20, and from $68.5/bbl to $67.5/bbl in FY21, based on EIA forecasts as published in January 2020. The

impact of a decrease in near-term price assumptions was offset by the strong performance of the Lancaster EPS. We continue to base our valuation on a long-term oil price expectation of $70/bbl Brent from 2022 inflated at 2.5% onwards.

Exhibit 3: Changes to short-term forecasts

	New			Old			Change		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Production (kbopd)	7.6	17.0	21.3	5.0	16.0	21.3	52%	6%	0%
Brent ($/bbl)	64.36	64.83	67.53	66.51	67.00	68.48	-3%	-3%	-1%
Revenue ($m)	166.5	374.3	488.9	113.2	365.0	496.3	47%	3%	-1%

Source: Edison Investment Research

We have not updated the GWA resource base estimate since this is still under evaluation following the 2019 drilling campaign. We also expect to have further details on the near-term work programme at Hurricane's capital markets day on 25 March 2020. The NAV table below provides a breakdown of our valuation by asset.

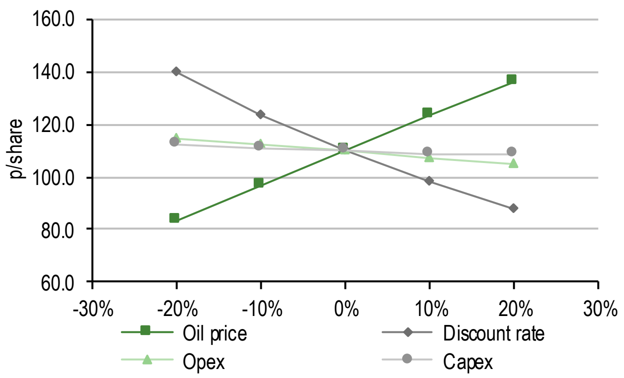
Exhibit 4: Edison breakdown of Hurricane NAV

Asset	Country	Diluted WI	CCoS	Recoverable reserves Gross	Recoverable reserves Net	NPV/boe	Net risked value	Net risked value per share
		%	%	mmboe	mmboe	$/boe*	$m	p/share
Net cash at 31 December 2019e*							(45)	(1.4)
SG&A (three years)							(24)	(0.8)
2020/21 E&A wells							(55)	(1.8)
Lancaster EPS – 10 years	UK	100%	100%	56	56	22.0	1,226	39.1
Core NAV				**56**	**56**		**1,102**	**35.2**
Lancaster FFD (post-EPS)**	UK	46%	81%	451	207	8.5	1,431	45.6
Contingent RENAV				**451**	**207**		**1,431**	**45.6**
GWA tieback (carried)	UK	50%	64.0%	23	11	17.6	128	4.1
GWA FFD (part carried)	UK	50%	42.0%	478	239	7.8	785	25.0
Total inc exploration RENAV				**1,007**	**514**		**3,445**	**109.9**

Source: Edison Investment Research. Note: *Number of shares = 2,432.5, assumes conversion of convertible debt. **Assumes farm-down and carry, 20% IRR.

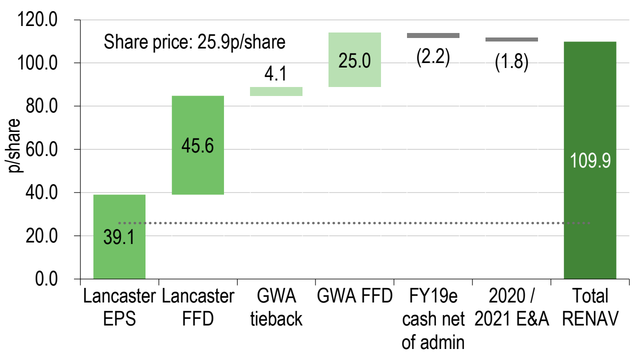
Our valuation of Hurricane is highly sensitive to oil price assumptions. In our base case, we use the EIA's short-term forecasts ($64.8/bbl Brent in 2020 and $67.5/bbl in 2021) and a long-term oil price of $70/bbl (from 2022) inflated at 2.5% onwards. At our current pricing assumptions, our risked NAV valuation for Hurricane, excluding any value beyond Lancaster EPS, stands at 35.2p/share, 36% higher than the current share price. In the event of a 20% decrease in our oil price expectations, our total RENAV would stand at 86.3p/share.

Exhibit 5: Hurricane risked valuation sensitivities



Source: Edison Investment Research

Exhibit 6: Hurricane RENAV waterfall



Source: Edison Investment Research

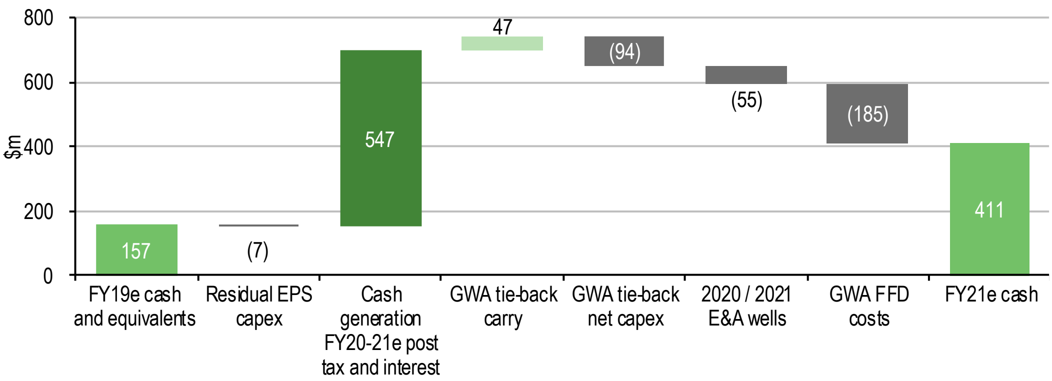
Financials

Short-term financial forecasts will be driven by timing, performance of the Lancaster EPS and Brent price. Consequently, there is significant uncertainty in precise forecasts of revenues and cash flows. However, we expect FY20 to be more reflective of the stabilised cash generation potential of the EPS development phase compared to FY19.

The GWA farm-down provides Hurricane with funding for a large portion of the upfront capital expenditure, while Lancaster EPS cash flows will provide for appraisal and development of the rest of the portfolio.

Hurricane remains relatively unlevered, with the company's only debt being a $230m convertible bond due in 2022 bearing interest of 7.5% and convertible at $0.52/share. We assume the bond converts in our RENAV, treating this debt instrument as equity. Below we look at a cash flow bridge, which highlights Hurricane's potential to fund capital commitments through to end 2021 from a combination of existing cash resources, cash flow from EPS operations and existing cost-carry arrangements.

Exhibit 7: End FY19e to end FY21e cash flow bridge*



Source: Edison Investment Research. Note: *Outstanding convertible bond of $230m due in 2022 if not redeemed prior to maturity.

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Exhibit 8: Financial summary

$m	2017	2018	2019e	2020e	2021e
Year-end 31 December	**IFRS**	**IFRS**	**IFRS**	**IFRS**	**IFRS**
PROFIT & LOSS					
Revenue	0.0	0.0	166.5	374.3	488.9
Operating Expenses	(14.6)	(12.7)	(81.6)	(200.1)	(224.7)
EBITDA	(14.6)	(12.6)	87.0	245.9	346.0
Operating Profit (before amort. and except.)	(14.6)	(12.7)	79.9	164.3	254.2
Exploration expenses	(10.4)	0.0	0.0	0.0	0.0
Exceptionals	10.4	(42.4)	(23.5)	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0
Operating Profit	(14.6)	(55.0)	56.4	164.3	254.2
Net Interest	7.6	(5.9)	(12.8)	(15.0)	(15.0)
Profit Before Tax (norm)	(7.0)	(18.5)	67.1	149.3	239.2
Profit Before Tax (FRS 3)	(7.0)	(60.9)	43.7	149.3	239.2
Tax	0.0	0.0	6.2	0.0	(14.6)
Profit After Tax (norm)	(7.0)	(18.5)	73.4	149.3	224.6
Profit After Tax (FRS 3)	(7.0)	(60.9)	49.9	149.3	224.6
Average Number of Shares Outstanding (m)	1,583.8	1,959.6	1,990.2	1,990.2	1,990.2
EPS - normalised (c)	(0.4)	(2.2)	(2.5)	12.9	13.9
EPS - normalised and fully diluted (c)	(0.4)	(2.2)	8.4	17.0	25.6
EPS - (IFRS) (c)	(0.4)	(3.1)	2.5	7.5	11.3
Dividend per share (p)	0.0	0.0	0.0	0.0	0.0
Gross Margin (%)	NA	NA	51.0	46.6	54.0
EBITDA Margin (%)	NA	NA	52.3	65.7	70.8
Operating Margin (before GW and except.) (%)	NA	NA	48.0	43.9	52.0
BALANCE SHEET					
Fixed Assets	587.9	884.2	967.1	917.5	1,087.1
Intangible Assets	126.4	131.5	132.3	136.1	136.1
Tangible Assets	445.3	728.2	834.6	781.2	950.8
Investments	16.3	24.5	0.2	0.2	0.2
Current Assets	350.1	106.0	223.2	422.1	477.0
Stocks	1.4	4.6	11.2	11.2	11.2
Debtors	4.7	2.6	55.1	55.1	55.1
Cash	343.9	98.9	156.8	355.7	410.7
Other	0.0	0.0	0.0	0.0	0.0
Current Liabilities	(28.8)	(55.1)	(70.9)	(70.9)	(70.9)
Creditors	(28.8)	(55.1)	(70.9)	(70.9)	(70.9)
Short term borrowings	0.0	0.0	0.0	0.0	0.0
Long Term Liabilities	(226.7)	(307.0)	(431.7)	(431.7)	(431.7)
Long term borrowings	(191.1)	(198.4)	(202.3)	(202.3)	(202.3)
Other long-term liabilities	(35.6)	(108.7)	(229.4)	(229.4)	(229.4)
Net Assets	682.5	628.1	687.8	837.0	1,061.6
CASH FLOW					
Operating Cash Flow	(8.1)	(4.4)	69.5	230.9	316.4
Cash tax paid	0.0	0.0	0.0	0.0	0.0
Capex	(265.7)	(209.9)	(41.7)	(32.0)	(261.5)
Acquisitions/disposals	0.0	0.0	0.0	0.0	0.0
Financing	322.3	(38.5)	27.1	0.0	0.0
Dividends	0.0	0.0	0.0	0.0	0.0
Net Cash Flow	48.5	(252.9)	54.9	198.9	55.0
Opening net debt/(cash)	(101.3)	(157.9)	100.3	45.4	(153.5)
HP finance leases initiated	0.0	0.0	0.0	0.0	0.0
Other	8.0	(5.3)	0.0	0.0	0.0
Closing net debt/(cash)	(157.9)	100.3	45.4	(153.5)	(208.4)

Source: Hurricane Energy, Edison Investment Research

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