EDISON

Hurricane Energy

Company update

Hurricane hoping for a storm-less 2018

Oil & gas

Investor focus is understandably on the execution of Hurricane's Lancaster EPS development. First oil from Lancaster will complete the transition from explorer to producer and unlock a stream of cash flow that management can direct towards appraisal, full field development or shareholder returns. In this note, we look at progress made to date and the potential for farm-down of the Greater Lancaster Area (GLA) and Greater Warwick Area (GWA) to fund further appraisal ahead of full field development. Our updated RENAV stands at 79p/share, down from 103p/share, reflecting a recent reduction in our long-term (2022) oil price assumption from $80/bbl to $70/bbl.

Year end	Revenue (£m)	EBITDA (£m)	Operating cash flow (£m)	Capex (£m)	Net cash (£m)
12/15	0	(5.4)	(2.6)	(3.4)	9.9
12/16	0	(6.5)	(4.1)	(46.8)	82.2
12/17e	0	(7.2)	(5.6)	(71.2)	236.1
12/18e	0	(7.2)	(18.0)	(138.4)	79.7

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

Lancaster EPS progressing to schedule

To date, Lancaster EPS contract award and development progress remains in line with management expectations. We flag that the 2018 summer weather window will remain critical in order to ensure Hurricane can meet a mid-2019 first oil. Edison continues to use capital (+10%) and schedule (+6-9 months) contingencies over and above management guidance to reflect this uncertainty. Releasing this contingency would drive our core Lancaster valuation up from 64p/share to 69p/share.

GLA farm-down options

Management continues to look at options in order to farm down the wider resource base in order to fund further appraisal and ultimately full field development. We believe this could materialise in several different forms, including a two-stage farm-down process in order to accelerate appraisal and utilise available drilling capacity West of Shetland in 2018/2019. We currently assume full field development is funded via farm-out and we assume a farminee IRR of 20%, and on this basis Hurricane retains a 42% carried interest in the GLA and GWA.

Valuation: Impact of lower long-term oil price

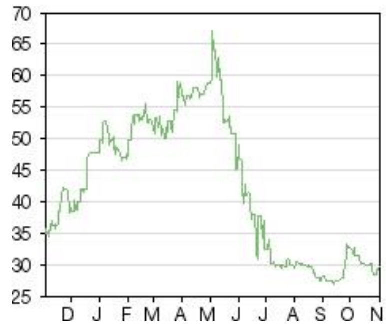
Our total risked NAV falls from 103p/share to 79p/share as we see greater dilution in GLA/GWA working interest under a farm-down scenario (farminee 20% IRR) in a lower oil price environment – we assume a $70/bbl long-term (2022) oil price (vs $80/bbl before). As would be expected, our valuation is sensitive to both oil price and cost of capital assumptions; hence, we provide sensitivities to both within this note.

2 November 2017

Price	**29.75p**
Market cap	**£583m**

Net cash (£m) at 31 December 2017e including convertible debt	236m
Shares in issue (ex convert)	1,959m
Free float	53%
Code	HUR
Primary exchange	AIM
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	(8.5)	0.9	(23.2)
Rel (local)	(9.3)	(0.3)	(30.1)
52-week high/low		67.0	27.0p

Business description

Hurricane Energy is an E&P focused on UKCS fractured basement exploration and development. It owns 100% of the 523mmbbl (RPS 2P reserves plus 2C resources) Lancaster oil discovery, West of Shetland.

Next events

CPR	End 2017

Analysts

Sanjeev Bahl +44 (0)20 3077 5700

Elaine Reynolds +44 (0)20 3077 5713

oilandgas@edisongroup.com

Edison profile page

Hurricane Energy is a research client of Edison Investment Research Limited

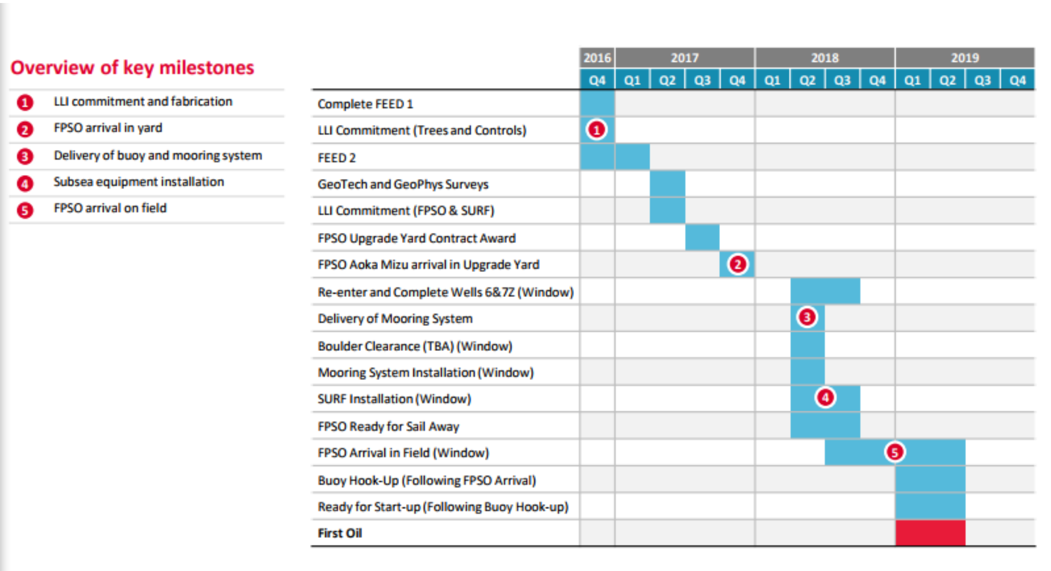
Lancaster EPS progressing to schedule

In recent weeks, Hurricane has released several updates relating to contractual and development progress at the Lancaster EPS. First oil remains on track for H119; however, with several weather-dependent components of work scheduled for the summer of 2018, there is inevitably a risk that supply chain interruptions or extraordinary weather could lead to a delay, despite planned contingencies. Below, we look at EPS progress to date, schedule and cost risk and potential impact on valuation (we cover EPS subsurface and operational risks in our note published on 16 May 2017).

Key milestones delivered to date:

- Hurricane Energy has taken final investment decision (FID) on the EPS development and the UK government has approved the Lancaster EPS field development plan (FDP).
- The 'Aoka Mizu' FPSO arrived at dry dock on 30 September 2017.
- Agreements effective with Bluewater Energy Services for upgrade, lease and operation of the 'Aoka Mizu' FPSO.
- Rig contract signed with Transocean to complete previously drilled horizontal EPS production wells 205/21a-6 and 205/21a-7Z.
- Fabrication orders have been placed with TechnipFMC for SURF and SPS.

Exhibit 1: EPS status and timeline



Source: Hurricane Energy

Mitigating capex risk through contractual arrangements

Hurricane has mitigated capex risk through contractual arrangement with over 75% of capex spend committed on a lump sum basis, and the remainder being largely reimbursable. A key component of the fixed price, lump-sum contract with Bluewater is for the Aoka Mizu FPSO vessel upgrade, buoy fabrication and pre-operational work prior to final project acceptance. To date, there have been limited variation orders, giving us some comfort that the lump-sum order is suitably specified.

Some reimbursable contract risk remains ($98m of the total capex budget of $467m) and largely comprises day-rate-linked items, including the completion of the two producers and installation work (diver vessels, support vessels and heavy-lift vessels). Hurricane includes some weather-related contingency in its $467m capex cost estimate – we include an additional 10% capex cost contingency to reflect potential weather-related delays and scope variations in light of recent North Sea execution mishaps.

Schedule risks and 2018 summer weather window

Hurricane's EPS project schedule (Exhibit 1) highlights several critical items planned for the 2018 summer weather window (March through to early October 2018). Management remains confident in the development plan, and have built-in weather contingencies such that only extreme weather patterns in summer 2018 would have schedule impact. Nevertheless, we believe an extended period of adverse weather, including seasonally anomalous wave heights during the summer weather window, could potentially lead to a start-up delay. Summer 2018 weather critical items include the items below:

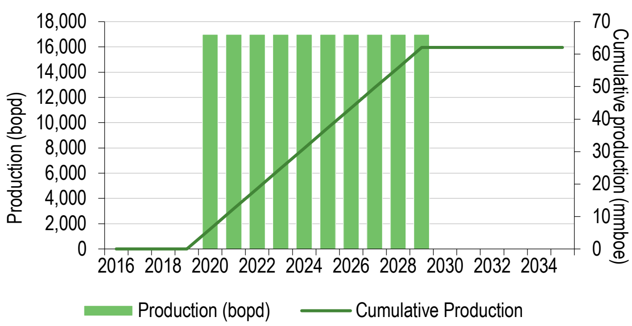
1. re-entry and completion of 6 & 7z wells
2. boulder clearance
3. mooring system clearance
4. SURF installation
5. FPSO arrival and hook-up

Our conservative EPS assumptions – additional contingency to be released over time

In our base valuation, we include an additional 10% capex cost contingency above Hurricane's forecast of $467m and assume first oil in Q120, relative to Hurricane guidance of Q219. If management continues to track internal forecasts of time and cost schedule, we expect to release this additional contingency built in to our NAV estimate and forecasts.

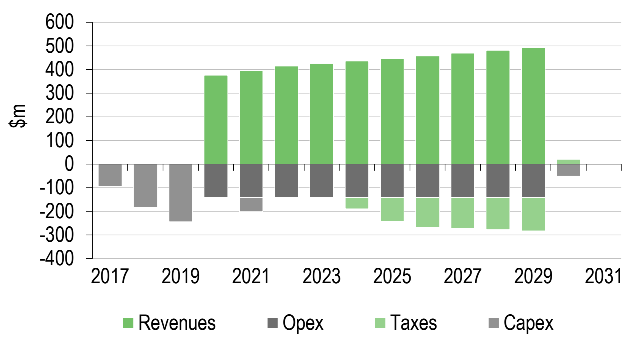
Edison's base case Lancaster EPS standalone valuation (including cash and net of overheads) stands at 64p/share. On release of the additional contingency built in to our forecasts, this has the potential to rise to 69p/share.

Exhibit 2: Lancaster EPS assumed production profile



Source: Edison Investment Research

Exhibit 3: Lancaster EPS free cash flow profile



Source: Edison Investment Research

Hurricane currently has flaring approvals in place to cover the EPS phase; however, if gas to oil ratio is higher than predicted, or if application for extended flaring consents are not approved beyond management may elect to drill a gas injection well. We conservatively now include gas injection in our base case EPS valuation (in 2022) at a cost of $60m to cover well costs and compression capex.

GLA/GWA appraisal options

We expect further details to be released on GLA/GWA resource upside once Hurricane publishes an updated CPR at the end of 2017. Ahead of CPR publication, management is looking at options to appraise the company's wider asset base in order to reduce resource uncertainty.

Management estimates that a further five appraisal wells could be required in order to define the GLA/GWA resource base; assuming similar costs to the 2016 well programme, we estimate that the total appraisal programme would have an approximate gross cost of US$350m.

Hurricane's options for funding this appraisal programme include a combination of the below:

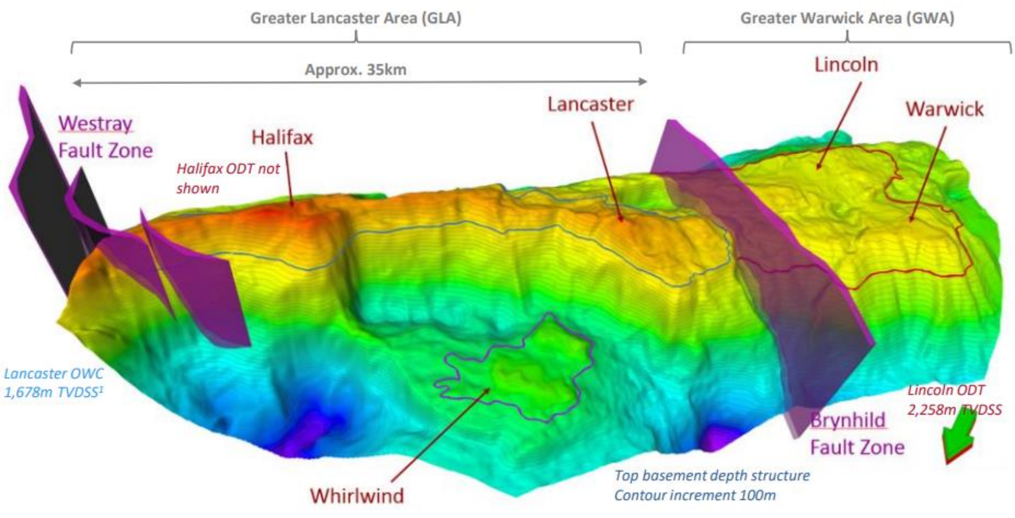
- Organic cash generation from Lancaster EPS
- equity financing
- debt financing
- appraisal farm-out
- combined appraisal and full field development farm-out

In our view, a farm-out is the most likely source of capital and this could be structured in several forms, including multiple farm-outs, a combined appraisal and development farm-down or a farm-out with payments contingent on appraisal/EPS success.

We currently model full field development of Lancaster, making the assumption that Hurricane farms down in exchange for a full cost carry through to first oil in 2026. In this scenario, the modelled farm-down implies a 20% cost of capital (ie the farminee generates an IRR of 20%) with Hurricane releasing 58% equity interest in the asset. Our farm-out calculations assume our base case oil price assumptions, which follow EIA oil price projections for the next two years ($50.8/bbl 2017 and $51.6/bbl 2018 rising to $70/bbl by 2022). The implied cost of capital from the farm-in is broadly in line with historical sector E&P farm-in transactions, which typically range from 15% to 25%.

We also assume similar equity dilution and funding terms for the development of Halifax and Lincoln (including appraisal costs) in our analysis, leaving Hurricane with a reduced working interest across the entire asset base of 42% (from 100%). We have left these underlying assumptions unchanged in our latest valuation; however, we expect to update these once we have more clarity on GLA/GWA resources, development concepts and costs or an agreed farm-out scenario.

Exhibit 4: GLA and GWA resources



Source: Edison Investment Research

Valuation

Our valuation below is updated to reflect our latest oil price assumptions, which use EIA short-term forecasts (last published $50.8/bbl in 2017 and $51.6/bbl in 2018) trending to $70/bbl Brent by 2022. A lower long-term (2022 onwards) oil price assumption (reduced from $80/bbl long term) has a negative impact on our asset cash flow forecasts, as well as the impact of working interest dilution through farm-out. Under our new commodity price scenario, we estimate that Hurricane would retain just 42% of GLA full field development post farm-down (compared to a previously estimated 49%).

Exhibit 5: Change in valuation post oil price reduction

Change in valuation	Old (p/share)	New (p/share)	Change %
Core (Lancaster EPS +cash-SG&A)	39	33	-15%
Core+Contingent (inc Lancaster full field development - FFD)	81	64	-21%
Total risked NAV (inc GLA)	**103**	**79**	**-23%**

Source: Edison Investment Research

A breakdown of our valuation is shown in the table below. Core valuation (Lancaster EPS plus cash and net of SG&A) stands at 33p/share. This rises to 64p/share when including Lancaster FFD and 79p/share including risked value for GLA and GWA upside.

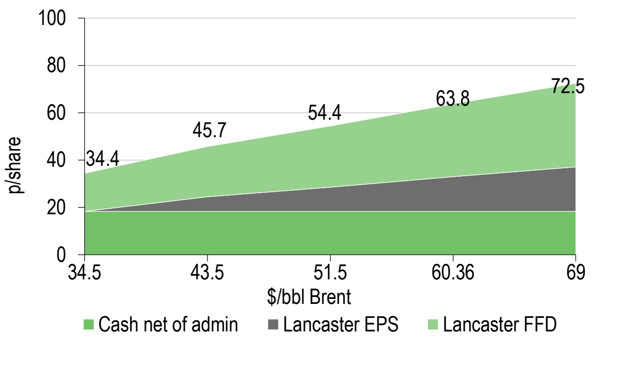
Exhibit 6: Hurricane Energy base case valuation table

				Recoverable reserves			Net risked	Value per share
Asset	Country	Diluted WI	CCoS	Gross	Net	NPV/boe	value	Risked
NOSH*: 2401.5m		%	%	mmboe	mmboe	$/boe*	$m	p/share
Net (debt)/cash YE17 ex convert (assumed conversion)		100%	100%				587	18.8
SG&A (2 years)		100%	100%				-15	-0.5
Lancaster EPS - 10y	UK	100%	90%	62	62	8.2	461	14.8
Core NAV							**1,033**	**33.1**
Contingent								
Lancaster FFD (post-EPS)	UK	42%	73%	462	194	6.8	960	30.8
Contingent RENAV				**462**	**194**		**960**	**30.8**
Lincoln/Warwick		42%	48.8%	250	105	5.0	253	8.1
Halifax		42%	45.0%	250	105	5.0	234	7.5
Total inc exploration RENAV				**962**	**404**		**2,481**	**79.5**

Source: Edison Investment Research. Note: *Number of shares assuming convertible bond conversion.

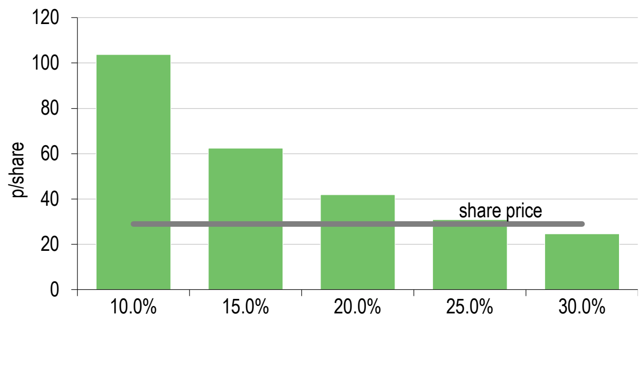
Our valuation remains highly sensitive to key inputs such as oil price and cost of capital and suggests that the market is valuing the Lancaster EPS phase based on a $65-70/bbl long-term oil price assuming Edison capex/schedule assumptions, excluding any value for further phases of development. In the short term, the focus is likely to remain on EPS project execution prior to further detail on GLA and GWA resource upside in a CPR to publish towards the end of 2017. A catalyst for a re-rating could include a GLA/GWA appraisal or development farm-out.

Exhibit 7: Valuation sensitivity to oil price (Lancaster only)



Source: Edison Investment Research

Exhibit 8: RENAV sensitivity to WACC %*



Source: Edison Investment Research. *Note value of cash pile in NAV does not decline with WACC.

Exhibit 9: Total risked NAV valuation sensitivity to long-term oil price (from 2022) and discount rate %*

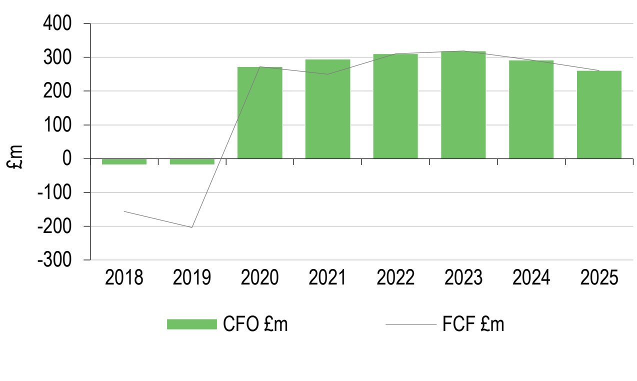
	50	60	70 (base case)	80	90
10.0%	71	87	104	120	137
12.5% (base case)	55	67	79	91	104
15.0%	43	53	62	72	81
17.5%	35	43	50	58	65

Source: Edison Investment Research. *Note farm-out terms are not dynamic but static in this sensitivity.

Financials

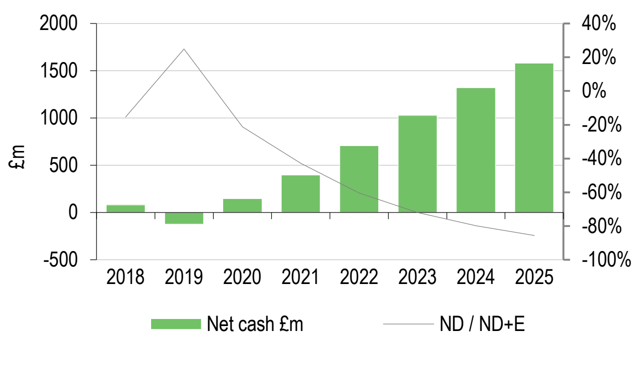
Short-term cash flow and balance sheet items are driven by investment in the Lancaster EPS prior to first oil, which Edison models in 2020. Hurricane is fully funded for the EPS phase with contingency based on current capex forecasts; however, further funding would be required in order to accelerate the appraisal of GLA in 2018/2019. The total gross cost of a five-well programme could be c $350m and is yet to be funded.

Exhibit 10: Short-term cash flow projections



Source: Edison Investment Research

Exhibit 11: Net cash and gearing



Source: Edison Investment Research

Exhibit 12: Financial summary

£000s	2016	2017e	2018e	2019e	2020e
Dec	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue	0	0	0	0	142,973
Operating Expenses	(6,500)	(7,230)	(7,230)	(7,230)	(3,615)
EBITDA	(6,500)	(7,230)	(7,230)	(7,230)	139,358
Operating Profit (before amort. and except.)	(6,540)	(7,325)	(7,325)	(7,325)	108,285
Exploration write-off	0	0	0	0	0
Exceptionals	0	0	0	0	0
Other	0	0	0	0	0
Operating Profit	(6,540)	(7,325)	(7,325)	(7,325)	108,285
Net Interest	1,839	1,599	(10,804)	(11,230)	(5,789)
Profit Before Tax (norm)	(4,701)	(5,726)	(18,129)	(18,555)	102,496
Profit Before Tax (FRS 3)	(4,701)	(5,726)	(18,129)	(18,555)	102,496
Tax	5,365	0	0	0	0
Profit After Tax (norm)	664	(5,726)	(18,129)	(18,555)	102,496
Profit After Tax (FRS 3)	664	(5,726)	(18,129)	(18,555)	102,496
Average Number of Shares Outstanding (m)	889.5	1,581.0	1,959.2	1,959.2	1,959.2
EPS - normalised (p)	0.1	(0.4)	(0.9)	(0.9)	5.2
EPS - normalised and fully diluted (p)	0.1	(0.4)	(0.9)	(0.9)	5.2
EPS - (IFRS) (p)	0.1	(0.4)	(0.9)	(0.9)	5.2
Dividend per share (p)	0.0	0.0	0.0	0.0	0.0
Gross Margin (%)	NA	NA	NA	NA	97.5
EBITDA Margin (%)	NA	NA	NA	NA	97.5
Operating Margin (before GW and except.) (%)	NA	NA	NA	NA	75.7
BALANCE SHEET					
Fixed Assets	247,621	318,767	457,102	641,942	610,870
Intangible Assets	245,146	245,146	245,146	245,146	245,146
Tangible Assets	15	71,161	209,496	394,336	363,264
Investments	2,460	2,460	2,460	2,460	2,460
Current Assets	86,152	415,871	259,407	56,012	56,012
Stocks	359	359	359	359	359
Debtors	5,893	5,893	5,893	5,893	5,893
Cash	79,900	409,619	253,155	49,760	49,760
Other	0	0	0	0	0
Current Liabilities	(21,341)	(21,341)	(21,341)	(21,341)	(21,341)
Creditors	(21,341)	(21,341)	(21,341)	(21,341)	(21,341)
Short term borrowings	0	0	0	0	0
Long Term Liabilities	(4,829)	(180,648)	(180,648)	(180,648)	(47,080)
Long term borrowings	0	(175,819)	(175,819)	(175,819)	(42,251)
Other long term liabilities	(4,829)	(4,829)	(4,829)	(4,829)	(4,829)
Net Assets	307,603	532,649	514,520	495,965	598,461
CASH FLOW					
Operating Cash Flow	(4,115)	(5,631)	(18,034)	(18,460)	133,568
Net Interest	0	0	0	0	0
Tax	0	0	0	0	0
Capex	(46,773)	(71,241)	(138,430)	(184,935)	0*
Acquisitions/disposals	0	0	0	0	0
Financing	121,338	230,772	0	0	0
Dividends	0	0	0	0	0
Net Cash Flow	70,450	153,900	(156,464)	(203,395)	133,568
Opening net debt/(cash)	(9,941)	(82,230)	(236,130)	(79,666)	123,729
HP finance leases initiated	0	0	0	0	0
Other	1,839	0	0	0	0
Closing net debt/(cash)	(82,230)	(236,130)	(79,666)	123,729	(9,839)

Source: Company data, Edison Investment Research. Note: *FFD funded through farm-out and cost carry.

Frankfurt +49 (0)69 78 8076 960
Schumannstrasse 34b
60325 Frankfurt
Germany

London +44 (0)20 3077 5700
280 High Holborn
London, WC1V 7EE
United Kingdom

New York +1 646 653 7026
295 Madison Avenue, 18th Floor
10017, New York
US

Sydney +61 (0)2 8249 8342
Level 12, Office 1205
95 Pitt Street, Sydney
NSW 2000, Australia