Otto Energy Limited (OEL)

Winx, Don Julio 2 and Lightning updates

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Summary

Otto Energy (OEL) will shortly commence production from its second successful discovery in the US Gulf of Mexico – Lightning, on-shore Texas. We estimate this will approximately double production and reduce risk through diversification of production. In addition, OEL has an exciting low risk exploration program underway with reputable JV partner Hilcorp with a further 5 wells to be drilled this year. Finally, another high impact target could be drilled next year in Alaska.

What has changed?

The share price has pulled back due to the high impact Winx exploration well in Alaska proving to be uncommercial, and the smaller target Don Julio 2 well in Texas also unsuccessful.

However data from the production test at the Lightning Texas discovery was significantly better than expected. We model a potential 100 Bcf gas reserve and 4 million barrels of oil condensate (20.7 million barrels of oil equivalent; 5.9 mmboe for OEL's 28.5% NRI share).

Valuation

We have removed Winx & the Alaskan western blocks from our valuation (-2.7 cents per share). We have now incorporated Lightning in our forecasts for the first time (valuation 1.6 cents, previously 0.8c, both 60% risked).

Our Sum of the Parts valuation is reduced from A$195m (7.7 cents per share) to A$149m (5.8 cps). However, with an active exploration program and re-rating potential as increased production and cash flow de-risk the company, we apply a 20% premium to our valuation. Our price target is $0.07 (previously $0.09 per share).

We reiterate our with "Speculative Buy" recommendation.

Catalysts

- Reserves statement and first production from Lightning – next quarter (upside to our 60% risked valuation).
- Drill results on 5 further wells with Hilcorp in the Gulf of Mexico, mostly lower risk, higher probability targets of 3-8m barrels (100% basis). OEL share 37.5%. Success rate so far is 33% (1 out of 3).
- Further exploration in the Alaska North Slope Central blocks eg Talitha (900mmbbls oil in place).
- Possible new JVs (low risk, quick to production).

Recommendation — Spec Buy; PT A$0.07

Risk Rating	**Very High**
12-mth Target Price (AUD)	**$0.07 (was 9.0c)**
Share Price (AUD)	$0.056
12-mth Price Range	$0.035 - $0.083
Forecast 12-mth Capital Growth	25.0%
Forecast 12-mth Dividend Yield	0.0%
12-mth Total Shareholder Return	**25.0%**
Market cap (A$m)	105.0
Net debt (net cash) (A$m)	(2.7) (31/12/18e)
Enterprise Value (A$m)	102.3
Gearing (Net Debt/ Equity)	n/a – Net cash
Shares on Issue (m)	1,875.3
Sector	Energy
Average Daily Value Traded ($)	$431,000
ASX 300 Weight	n/a

Financial Forecasts & Valuation Metrics

Years ending June US$	17(A)	18(A)	19(e)	20(e)	21(e)
Sales revenue	0.0	9.6	31.1	33.6	37.8
EBITDA	-5.2	-0.0	-12.5	5.0	23.1
NPAT (reported)	-5.2	-5.2	-16.2	-0.7	14.8
NPAT (adjusted)	-5.2	-2.8	-18.9	-0.7	14.8
EPS (adj) US cents	-0.4	-0.2	-1.0	-0.0	0.6
EPS growth	n/m	n/m	n/m	n/m	n/m
DPS	0.0	0.0	0.0	0.0	0.0
P/E	-8.9	-20.1	-4.1	-130.1	6.8
EV / Ebitda	-7.5	-5,251.8	-6.8	15.4	2.5
Yield	0.0%	0.0%	0.0%	0.0%	0.0%
Price / Book	2.7	2.9	2.7	2.1	1.6
Net debt / equity	net cash	22.7%	net cash	net cash	net cash

Source: Phillip Capital estimates

OEL SHARE PRICE PERFORMANCE

Drilling update – Winx-1 exploration well uncommercial

OEL has announced that the Winx-1 exploration well on the North Slope Alaska was drilled to target depth (6,800 feet or 2,070 metres) but was unsuccessful and would now be plugged and abandoned. Low oil saturations and low fluid mobility were considered insufficient to warrant the further cost of production testing. This was despite encouragement from oil shows and logging while drilling (LWD) data.

Whilst some oil seems to be present, the issue seems to be dispersed clay which binds much of the fluid in place so that it cannot flow, and occupies pore space within the rock formation. This clay is often present in other successful Nanushuk wells, but in discrete laminations with decent quality, high resistivity, oil saturated sandstones in between.

The data from the secondary target (Torok formation) was better than the primary target (Nanushuk), but still not considered commercial.

As the Winx location was the JV's best target in the permit, we now consider the value of OEL's western blocks acreage on the Alaskan North Slope to be ~nil.

We have removed the item from our Sum of the Parts valuation (A$67.6m or 2.7 cents per share). We had assumed only a 20% probability of success for this well, but this was a disappointing result for such an exciting prospect.

Alaskan North Slope – Central blocks

Please note that OEL also has an 8.0-10.8% interest in 90 leases held by Great Bear Petroleum (recently acquired by Pantheon Resources plc in the UK). These total approximately 1,163 square klms. A well is planned to be drilled in 2020 by the JV. The acreage remains highly prospective and is geologically separate to the Winx target. We currently have a valuation of A$11.6m on this for OEL, or 0.5 cents per share.

Drilling update – Don Julio 2 & Hilcorp program

OEL has announced that the Don Julio 2 exploration well in on-shore Texas was drilled to target depth (11,900 feet or 3,600 metres) but was unsuccessful and would be plugged and abandoned. No hydrocarbons were encountered.

This was the third well in the 8 well program in joint venture with Hilcorp, a large private US exploration and production company. This well had a pre-drill probability of success of 44% according to the company, though we assumed a lower 33% chance of success. It was a small target of 2.5m to 4.0m barrels worth perhaps 0.3 cents to 0.9 cents per share if it had been successful.

OEL was paying 47.5% of the costs to earn a 35.625% working interest. A minor plus is that OEL's share of the drill costs is expected to be significantly lower than the pre-drill estimate of US$3.53m (Well cost was US$5m Vs US$7.5m budget, so only about US$2.4m cost to OEL).

So the scoresheet for the Hilcorp JV is now 1 discovery (Lightning) from three wells. Big Tex in Louisiana and Don Julio 2 were unsuccessful.

Mustang

The next exploration well in the program is Mustang, an on-shore well in the same Chambers county in Texas as Don Julio 2, but geologically independent. This is the second largest target in the program at 6.7 to 8.5m barrels (P50 & Mean prospective resource estimates). Hilcorp / OEL and their geo-technical consultants estimate a 56% technical probability of success. Target depth is 17,500-18,000 feet (5,300 metres) which is the deepest in the program. However OEL says wells of 17,000 to 20,000 feet are common in the region. Estimated cost is US$10m with OEL contributing 50% of the costs to earn a 37.5% working interest (est cost to OEL US$5.0m). Hilcorp is currently looking for a suitable drill rig and expects to spud the well within 60 days.

OEL also has "ground floor rights" with respect to the Mustang and Tarpon prospects. Should either of these be successful, OEL can elect to participate in nearby Damsel and Corsair / Hellcat prospects by paying its working interest share of the costs (ie 37.5% rather than 50%, to earn 37.5%). These are additional to the 8 well program detailed below.

Prospect	Planned Spud Date	Result	Target Depth (TVD) Feet	Rig Type	Working Interest (WI)	Net Revenue Interest	Probability of Success	Prospective Resource P50(mmbbls)	Prospective Resource Mean(mmbbls)	County / Parish	Stratigraphic Interval
Hilcorp / Gulf Coast farm-in								**(100% basis)**	**(100% basis)**		
Drilled:											
Big Tex, Louisiana	Sep-18	Duster x	13,500	Barge	37.5%	29.51%	54.0%	3.3	6.8	Plaquemines	Tex
Lightning, Texas	Oct-18	Discovery w	14,500	Land	37.5%	28.50%	45.0%	3.2	4.4	Matagorda	Frio Tex Miss
Don Julio 2, Texas	43435	Duster x	11,500	Land	37.5%	28.50%	44.0%	2.5	4.0	Chambers	Oligocene
Still to come :											
Mustang, Texas	Jan-19		17,500	Land	37.5%	30.00%	56.0%	6.7	8.5	Chambers	Oligocene
Beluga, Texas	May-19		13,000	Barge	37.5%	28.50%	45.0%	2.9	4.7	Galveston Bay	Oligocene
Oil Lake, Louisiana	Jul-19		14,500	Land	37.5%	29.06%	45.0%	3.3	4.4	Cameron	Frio
Tarpon, Texas	Jul-19		14,000	Barge	37.5%	29.06%	34.0%	24.0	35.6	Galveston Bay	Oligocene
Mallard, Louisiana	Nov-19		11,000	Barge	37.5%	29.63%	64.0%	0.9	3.3	Assumption	Mid Miocene
Sub-Total - Wells still to be drilled						29.13%	48.0%	37.8	56.5		
Total (incl Big Tex, Lightning & Don Julio)						29.10%	48.4%	**46.8**	**71.7**		
Hilcorp / OEL risked Volumes (p 8, 31/7/18 preso)								**19.9**			
Hilcorp / OEL implied overall probability of success							42.4%				
Expected drill costs & land costs (100% basis)								**$ 75.0**			
Great Bear / Alaskan farm-in								**Best Estimate**			
Winx-1, Alaska (Western blocks)	Feb-19	Duster x	Shallow	Land	22.5%	18.75%	25-30%	400.0		North slope	
Talitha (or others in Central blocks)	2020		Shallow	Land	8% to 10.8%			500.0		North slope	

Source: OEL presentations & announcements dated 31/7/18, 25/6/18 & 31/1/19; Pantheon Resources plc / Great Bear Petroleum presentation 22/1/19

Hilcorp JV – Lightning discovery & flow test

Lightning was announced as a "significant discovery" by OEL on 4/2/19 with a minimum net pay of 180 feet across several zones and with potential for an additional 150 feet depending on porosity and water saturation cut offs (making a possible 330 feet pay zone). The well is now due to be connected to a nearby pipeline and commence production in Q2 (previously end March).

The pre-drill estimates (P50 & P10) were for a 3.19 to 10.06m boe (barrels of oil equivalent, 100% basis) from 31 to 75 feet of estimated pay, with a 45% probability of success. This implied potential reserves of 0.91 to 2.87m boe for OEL's 28.5% net revenue interest after royalties.

With the 180 feet of pay being 5.8x the P50 estimate and 2.4x the P10 pre-drill estimate, the well had already been deemed a commercial success before the production test. Simply grossing up the P50 and P10 estimates for the reservoir thickness would imply an **18.5 to 24.1 boe field** (100% basis) or **5.3-6.9 m boe for OEL's 28.5% net revenue interest.**

OEL has announced the results of a 15 hour flow test, with 1.1 MMscf of gas and 50 barrels of 46 degree API oil condensate produced through an 8/64" choke (a very tight choke). Only the lowest 28 feet pay zone was tested (being the Tex Miss 3 interval) at this stage. Hilcorp / OEL plan to do further analysis to optimise the full field development, which could involve perforating the higher zones in the current well once the lower zone in fully depleted, or drilling further wells in the field. Preliminary estimates are that the field size could be ~600 acres of the 1,300 acres of the permit. OEL thinks it has a discovery that could be at least as good as **SM71 which has reserves of 6.6m boe (OEL share)** and production of 2,000 boe per day (OEL share). An initial Reserves assessment for Lightning is expected in Q2.

According to OEL, the liquids content yield of 40-45 barrels per MMscf of gas is some 4.0-4.5 times higher than the liquids yield from other wells in the same Freo Tex Mis structure. This higher liquids content is similar to SM-71's performance in the December quarter of 43 bbls per MMscf of gas and should make the economics of the field much more profitable.

Further, condensate prices are generally higher than the West Texas intermediate oil price (WTI). Nearby Freo Tex Mis wells have produced between 8 and 13 MMscf per day. Since discovery in 2013, the Baer-Franklin field has produced 13 Bcf of gas and 109,000 barrels of condensate from three wells (2.3m boe to date). The liquids content represents 8.4 barrels per mmcf of gas. Lightning could be several times bigger than these wells combined.

Although it is still early days, and more information will be forthcoming, we have increased our model assumptions to 100 Bcf of gas and 4.0 MMbbls of liquids for 20.7 MMBoe (100% basis). This uses the higher liquids content figure from the production test of 40bbls per 1 mmcf of gas. We also assume that the liquid condensate production is sold at the WTI price (OEL expect a small premium to WTI). We assume that a second well is added in FY21 at a cost of US$10m (US$3.75m to OEL). This generates an unrisked valuation of A$70m (2.7 cents per share)(Vs A$33.7m or 1.8 cps previously).

We continue to apply a 60% risk weighting until we see the Reserves statement (expected next quarter) and consider the first few quarters of production data.

Lightning - Resource estimate (100% basis)	Pay (feet)	Oil MMbbl	Gas Bcf	MMBoe
PreDrill est - P50	31	0.190	17.97	3.19
PreDrill est - P10	75	0.930	54.80	10.06
Post Test on P50	180	1.103	104.34	18.49
Post Test on P10	180	2.232	131.52	24.15
Using higher oil content		4.000	100.00	20.67
Using higher oil content		4.500	100.00	21.17
SM-71 (100%) 2P Reserves		14.509	10.35	16.23

Source: OEL data; PhillipCapital estimates

Interim Results

OEL's results for the six months ended December 2018 showed a dramatic change over the prior period with a full 6 months production from SM-71 in Louisiana versus no production in the pcp.

Otto Energy (OEL) - Interims						
Year end June US$m	**1H18**	**2H18**	**1H19A**	**Change Vs pcp**	**1H19e**	**Difference Vs PCR**
Production (Mboe)(WI share)	0.0	194	376.0	Nm	376.0	0.0%
Revenue	0.1	9.5	17.3	Nm	17.3	0.2%
EBITDAX	**-1.6**	**6.4**	**13.3**	**-915%**	**12.9**	**2.6%**
Exploration	-3.7	-1.1	-17.5	373%	-19.6	-10.4%
EBITDA	**-5.3**	**5.3**	**-4.3**	**-20%**	**-6.6**	**-35.6%**
EBIT	-5.3	4.4	-6.0	13%	-9.2	-34.3%
PreTax Profit	-6.2	3.4	-7.1	15%	-9.8	-27.4%
NPAT (Reported Incl NRIs)	**-8.3**	**3.1**	**-4.5**	**-46%**	**-9.8**	**-54.2%**
NPAT (Adjusted)	**-6.3**	**3.5**	**-7.1**	**14%**	**-9.8**	**-27.3%**
EPS (adjusted)(cents)	**-0.5**	**0.3**	**-0.4**	**-17%**	**-0.6**	**-27.3%**
DPS (cents)	0.0	0.0	0.0		0.0	

Source: OEL for actuals; Phillip Capital research estimates

- Oil & gas production was 376,000 barrels of oil equivalent from SM-71 (Vs nil pcp).
- OEL reports in US dollars.
- Revenue was US$17.3m
- Ebitdax was a profit of $13.3m, slightly better than we had expected.
- Exploration expense was $17.5m reflecting an active six months with drilling at Bivouac Peak (unsuccessful), Big Tex (unsuccessful) and the commencement of the Lightning well on 3/12/18 (announced as a significant discovery in February). Preparatory work for the Winx-1 well in Alaska was also included. Overall this was $2.1m lower than we expected partly due to $1.1m of costs being capitalised to the balance sheet.
- Net interest expense was $1.1m excluding a $2.6m credit "fair value adjustment on embedded derivative element of convertible note" which we treat as an abnormal item.
- There was no tax expense.
- NPAT adjusted to exclude the fair value item was a loss of $7.1m (Vs NLoss of $6.3m in the pcp).

Cash Flow Statement

- Operating cash flow was a positive $12.4m (Vs negative 1.9m in the pcp) due to strong sales revenues from SM-71 now in production.
- US$18.7m spent on exploration and a further $2.1m on development and $0.75m bond for a development asset.
- Free cash flow after exploration and development spend was a negative US$9.1m.
- OEL raised US$13.8m (net of costs) in the half in new equity issues.

Balance Sheet

- Net cash at 31/12/18 was US$1.9m, comprising cash of $10.3m and a convertible note of $8.4m issued to OEL's major shareholder Molton Holdings Ltd (US$8.0m) and US$200k with Chairman John Jetter, plus accrued charges. The notes are due to mature on 30/6/19 but OEL has negotiated an option to extend this by a further year. We have assumed a conversion in June 2019 at the adjusted conversion price of A5.484 cents per share.
- OEL does not have any bank debt facilities at this stage. We have forecast a US$15m capital raising during 2H19 to enable OEL to fund its drilling commitments with Hilcorp.

Changes in Estimates

We have now incorporated our preliminary forecasts for the successful Lightning well which should commence production in the next quarter. A reserves statement is also expected next quarter. At this stage, we are assuming a two well development and estimating Lightning at 100 Bcf of gas plus 4 mmbbls of liquids (20.7 MMboe on a 100% basis; 7.8 MMboe for OEL's 37.5% working interest). We will refine our estimates as further information is released. On our current assumptions, revenue doubles in FY20 due to the inclusion of Lightning.

We have also pushed some exploration expenditure back from FY19 into FY20 as the Hilcorp program is taking longer than expected.

Otto Energy (OEL) - Changes in Estimates						
Year end June	**FY19e**	**FY19e**	**FY19**	**FY20e**	**FY20e**	**FY20e**
US$m	**Old**	**New**	**Change**	**Old**	**New**	**Change**
Production (Mmboe)(WI share)	**0.716**	**0.788**	**10.1%**	**0.573**	**1.154**	**101.4%**
Revenue	29.6	31.1	5.1%	22.0	33.6	53.3%
EBITDAX	**20.4**	**21.5**	**5.5%**	**12.7**	**24.0**	**89.7%**
Exploration	-42.0	-34.0	-19.0%	-5.0	-19.0	280.0%
EBITDA	**-21.6**	**-12.5**	**-42.3%**	**7.7**	**5.0**	**-34.6%**
EBIT	-26.7	-16.7	-37.5%	3.5	0.4	-88.4%
PreTax Profit	-27.9	-18.9	-32.3%	2.4	-0.7	-128.1%
NPAT (Reported incl NRIs)	**-27.9**	**-16.2**	**-41.8%**	**2.4**	**-0.7**	**-128.1%**
NPAT (Adjusted)	**-27.9**	**-18.9**	**-32.3%**	**2.4**	**-0.7**	**-128.1%**
EPS (adjusted)(cents)	**-1.4**	**-1.0**	**-32.4%**	**0.1**	**0.0**	**-128.1%**
DPS (cents)	0.0	0.0		0.0	0.0	
12-mth Price Target				$ 0.090	0.070	**-22.2%**

Source: Phillip Capital estimates

Forecasts

We show below our revised forecasts. In our opinion, OEL is well on its way to achieving its medium term target of 5,000 barrels of oil equivalent per day, to become self sustaining.

Otto Energy Limited - Forecasts Years ended June 30	US$m	FY18	FY19e	FY20e	FY21e
Oil price - realised / assumed	US$/bbl	$ 64.90	$ 60.46	$ 55.87	$ 55.70
Gas price - realised / assumed	US$/mcf	$ 3.37	$ 3.19	$ 3.00	$ 3.00
Net production (OEL working Interest share)					
Oil & liquids	mmbbls	0.174	0.555	0.545	0.541
Gas	mmscf	0.120	1.400	3.651	5.546
Oil & Gas equivalents	**mmboe**	**0.194**	**0.788**	**1.154**	**1.466**
Oil & Gas equivalents (per day)	**boepd**	**1,943**	**2,160**	**3,161**	**4,015**
Revenue (OEL working interest share)					
Oil & liquids	US$m	11.3	33.6	30.5	30.1
Gas		0.4	4.9	11.9	18.1
Less: Royalties		-2.2	-7.3	-8.8	-10.5
Net Field Revenue		**9.6**	**31.1**	**33.6**	**37.8**
Other income		0.1	0.0	0.0	0.0
Total Income	**US$m**	**9.6**	**31.1**	**33.6**	**37.8**
Field cash costs	US$m	-0.7	-3.9	-3.7	-3.6
Administration		-4.0	-5.7	-5.9	-6.2
EBITDAX	**US$m**	**4.8**	**21.5**	**24.0**	**28.1**
Exploration		-4.8	-34.0	-19.0	-5.0
EBITDA		**0.0**	**-12.5**	**5.0**	**23.1**
Depreciation		-0.9	-4.3	-4.6	-4.7
EBIT		**-0.9**	**-16.7**	**0.4**	**18.4**
Interest Expense		-1.8	-2.1	-1.1	0.0
Pre-Tax Profit		**-2.8**	**-18.9**	**-0.7**	**18.4**
Tax credit (expense)		0.0	0.0	0.0	-3.7
NPAT (normalised)	**US$m**	**-2.8**	**-18.9**	**-0.7**	**14.7**
Abnormals		-2.4	2.6	0.0	0.0
NPAT (reported)	**US$m**	**-5.2**	**-16.2**	**-0.7**	**14.7**
Shares on issue (WAV)	m	1,403.1	1,946.6	2,261.4	2,524.2
EPS (normalised)	**US cents**	**-0.20**	**-0.97**	**-0.03**	**0.58**
EPS (norm) AUD equivalent	**AUD cents**	**-0.3**	**-1.4**	**0.0**	**0.8**
FX rate		0.7752	0.706	0.706	0.706

Source: Phillip Capital estimates

Valuation & Recommendation

We have updated our Sum of the Parts valuation for the following:

1. Improved data on Lightning discovery – Now A$42m or 1.6 cents per share, applying a 60% risk weighting. Previously A$20m or 0.8 cents per share.
2. We have removed altogether our valuation for Winx (previously A$67.6m or 2.7 cents per share, applying a 20% probability of success).
3. Other minor changes.
4. Our revised valuation is A$149m or 5.8 cents per share (previously A$195m or 7.7 cps).
5. Please note that we continue to forecast a US$15m capital raising in 2H19 which we believe is necessary to fund the drilling commitments under the Hilcorp JV exploration program (5 wells to go, plus 2 possible follow-on wells if Mustang or Tarpon are successful).

Valuation Summary	Method & Assumptions	Risk Weighting	Unrisked US$m	Unrisked A$m	Unrisked A$ ps	Risked A$m	Risked A$ ps
	AUD / USD FX rate			0.7063		0.7063	
Producing Assets:							
SM 71 (OEL WI 50%)	Field model & DCF	100%	45.5	64.5	0.025	64.5	0.025
Lightning (OEL WI 37.5%)	Field model & DCF	60%	49.5	70.1	0.027	42.1	0.016
Subtotal			**95.1**	**134.6**	**0.052**	**106.5**	**0.041**
Non Producing Assets:							
Vermillion 232 (OEL WI 50%)	Value at 5% of SM71	10%	2.3	3.2	0.001	0.3	0.000
Hilcorp JV (OEL WI 37.5%) - 5 wells to go	Field model & DCF	33%	26.9	38.1	0.015	12.6	0.005
Alaska - Western blocks (OEL WI 20% after BI)	OSH/ Armstrong trans US$3bbl	0%	0.0	0.0	0.000	0.0	0.000
Alaska - Central blocks (OEL WI 8.0 & 10.8%)	50% of OSH/ Armstrong trans	10%	82.3	116.5	0.045	11.7	0.005
Subtotal			**111.5**	**157.8**	**0.061**	**24.5**	**0.010**
Corporate Costs	3x P/E	100%	-17.1	-24.2	-0.009	-24.2	-0.009
Net Cash (Net Debt) at 31/12/18		100%	1.9	2.7	0.001	2.7	0.001
Dilutory adjustments:							
Assumed capital raise in 2H19		100%	15.0	21.2	0.008	21.2	0.008
Convertible note conversion by 30/6/20		100%	10.2	14.4	0.006	14.4	0.006
Options & performance rights		100%	2.3	3.3	0.001	3.3	0.001
Total Valuation - Fully Diluted			**218.9**	**309.9**	**0.121**	**148.6**	**0.058**
Shares on issue - Basic		**1,875.3**					
Assumed raise in 2H19		386.1					
Convertible note conversion by 30/6/20 at A5.484c		262.8					
Options & performance rights		46.8					
Shares on Issue - Fully Diluted		**2,571.0**					

Source: Phillip Capital estimates

Recommendation

Our Sum of the Parts "risked" valuation is 5.8 cents per share. So we believe that OEL is slightly under-valued at 5.6 cents currently. However, we can see clear scope for further upside should any of the exploration targets come in ahead of our conservative assumptions, or if SM-71 production, or Lightning production and oil content are significantly better than our assumptions.

With five high probability / low risk wells to be drilled this year with Hilcorp, there should be no shortage of newsflow from OEL this year. We would not be surprised to see OEL re-test its 12-month high of 8.3 cents.

With a current market cap of A$105m, there seems to be room for significant upside upon exploration success, and a positive re-rating should also follow as OEL goes from one production asset to potentially several, reducing risk.

We like the strategy of a) pure US focus and b) having multiple bets of manageable size with several experienced JV partners, and the diversified portfolio of different projects.

We maintain our "Speculative Buy" recommendation and set a revised 12-month price target at $0.07 per share, a 20% premium to our risked valuation to recognise the latent upside potential. Our price target represents a potential 12-month TSR of 25%. Our risk rating is very high.

Catalysts

We have identified over 10 catalysts for the share price over the next 1-2 years.

	Otto Energy (OEL) 10 Direct Catalysts - Plus 3 more from its neighbours	Byron JV	Hilcorp JV (Gulf of Mexico	Alaska (central blocks)	Drilling by Others nearby, etc
1	**March Quarterly - Possible improvement in SM-71 production**		April		
2	**Lightning, Texas - On-shore discovery into production** (Becomes OEL's 2nd production asset, so diversifies risk) (We value currently at 60% risked = A$42m or 1.6c) (Potential value A$70m or 2.7 c per share unrisked)		June Qtr		
3	**Lightning, Texas - Reserves statement** (Possible upside)		June Qtr		
4	**Mustang, Texas on-shore exploration well** 6.7-8.5 mmbbls target, 56% probability of success; Possible option on a 2nd well		April - May		
	Pantheon Resources plc (PANR.L) / Great Bear to test Alkaid 2015 discovery by May *Alkaid is adjacent to OEL's central blocks, so indirectly relevant* *(preparations underway, to commence drilling in March; Testing must be done by end May - a licence condition)*			*Indirect Benefit*	*Alkaid (Mar-May)*
	Oil Search to exercise US$450m Armstrong option by June; Possibly bring in a new partner			*Indirect Benefit*	*OSH*
5	**Beluga, Texas - barge drilling in shallow water** 2.9-4.7mmbbl target, 45% probability of success		2019		
6	**Oil Lake, Louisiana on-shore** 3.3-4.4 mmbbl target, 45% probability of success		2019		
7	**Tarpon, Texas - barge drilling in shallow water** 24.0-35.6 mmbbls target, 34% probability of success; Possible option on a 2nd well		2019		
8	**Mallard, Louisiana - barge drilling in shallow water** 0.9-3.3 mmbbl target, 64% probability of success		2019		
	2020				
9	Possibly drill acreage adjacent to SM71 discovery with Byron	VR232			
10	Talitha, Alaska North Slope 500 mmbbl target			2020	*Greater Grizzly (OSH / Repsol)*
10	**Total**	1	8	1	3

Sources: OEL, OSH, Pantheon Resources plc PANR, Phillip Capital estimates

Description of Business

Otto Energy Limited (OEL) is an ASX listed oil and gas exploration and production company, now based in Houston Texas. A timely exit of its 33% stake and operatorship in Galoc (offshore Philippines) in 2015 as oil prices fell saw OEL cashed up and searching for new, lower sovereign risk opportunities in the US market. The company's strategy is to build production to 5,000 barrels per day in the Gulf of Mexico by 2020, the cash flows from which should then allow OEL to be self sustaining and form a solid base to allow the company to grow substantially.

Today, OEL has stakes in three interesting joint ventures, all operated by OEL's JV partners. The assets are in two areas of prolific historical oil production and exploration success being the US Gulf of Mexico coastal shelf, and the Northern Slope in Alaska, USA.

Byron (BYE) farm-in (originally announced 10/12/15; Continuing)

Production assets:

- **SM-71 - South Marsh Island, offshore Louisiana in the Gulf of Mexico shelf** – 50% working interest with Byron Energy Ltd (BYE)(Operator) in shallow water (42 metres) approximately 100 klms offshore on the Gulf Coast shelf. The field was discovered by the partners in April 2016 and entered production in March 2018. 2P Reserves 6.6MMboe (OEL share). Currently producing 2,000 boepd (barrels of oil equivalent per day)(OEL share).

Exploration:

- OEL has the right to participate for a **50% working interest in VR 232**, which is adjacent to BYE/ OEL's SM 71 oil field. There are no current plans to drill, but this adds a development pathway for BYE / OEL for the future, partly de-risked by SM-71 data.

Hilcorp farm-in (originally announced 31/7/18; Continuing)

- OEL earning a 37.5% working interest by paying 50% of the costs to drill eight prospects on the US Gulf coast (US$75m total; OEL share $37.5m). Hilcorp is one the largest private companies in the USA with annual oil production bigger than Woodside (WPL).
- The first well "Big Tex" was unsuccessful (announced 15/10/18).
- The second well "Green#1" in the Lightning prospect, Matagorda County Texas - was announced as a discovery on 4/2/19 with 180 feet (55 metres) of hydrocarbon pay (and possibly up to 330 feet (101 metres) depending on further testing). This well is expected to commence production in Q2 this year.
- The third well "Don Julio 2" was unsuccessful (announced 11/3/19).
- 5 more wells to be drilled under the program during 2019 (2 on dry land, and 3 from drilling barges in shallow water), with "Mustang", a 6.7-8.5m barrel target on-shore Texas to spud in the next 60 days.

Production assets: Nil currently, but Lightning expected to enter production in Q2.

Alaskan farm in (originally announced 21/7/15, and modified 6/8/15 and 30/7/18; Continuing)-

- Western blocks (Area: 91.9 sq klms) - OEL earning a 22.5% interest (20.0% after Great Bear back-in rights) in four blocks on the Alaskan North Slope held by Great Bear Petroleum by paying 25.0% of the costs of one well by May 2019. This was the Winx-1 well which was unsuccessful.
- Central blocks (Area: 1,163 sq klms) - OEL has between an 8.0% to an 10.8% interest in 90 leases on the Alaskan North Slope held by Great Bear Petroleum (recently acquired by Pantheon Resources plc in the UK). We understand the OEL interests include the "Talitha" prospect which is near the "Pipeline Discovery #1" well drilled 31 years ago in 1988 by ARCO (Atlantic Richfield Co – acquired by BP in 2000). However it does not include the block containing Great Bear's 2015 "Alkaid-1" discovery and "Phecda" prospect, as OEL has not exercised a US$25m option over that acreage.

The Byron Energy and Hilcorp joint ventures are targeting relatively modest sized resources in locations judged by the operators and OEL to have a fairly high probability of success, and low costs to develop because of the location being very close to existing pipelines and infrastructure. The Alaskan joint venture is a much higher risk and reward situation. Drilling success here could be a company maker.

Otto Energy (OEL)	A$ share price:	$ 0.056		
	US$ equivalent	$ 0.040	FX rate:	$ 0.7063

Profit & Loss

Year end June	FY18	FY19e	FY20e	FY21e
	US$m	US$m	US$m	US$m
OP. REVENUE	**9.6**	**31.1**	**33.6**	**37.8**
Production Costs	(0.7)	(3.9)	(3.7)	(3.6)
Other Income	0.1	0.0	0.0	0.0
General & Admin	(4.0)	(5.7)	(5.9)	(6.2)
EBITDAX	**4.8**	**21.5**	**24.0**	**28.1**
Exploration	(4.8)	(34.0)	(19.0)	(5.0)
EBITDA	**0.0**	**-12.5**	**5.0**	**23.1**
Ebitda Margin	-0.1%	-40.0%	14.9%	61.0%
Depreciation & Amort	(0.9)	(4.3)	(4.6)	(4.7)
EBIT	**-0.9**	**-16.7**	**0.4**	**18.4**
Ebit Margin	-9.6%	-53.7%	1.2%	48.7%
Net Interest Income (Expense)	(1.8)	(2.1)	(1.1)	(0.0)
Share of Assoc NPAT	0.0	0.0	0.0	0.0
Pre-tax profit	**(2.8)**	**(18.9)**	**(0.7)**	**18.4**
Income Tax Credit (Expense)	(0.0)	0.0	0.0	(3.7)
Tax Rate	0.1%	0.0%	0.0%	-20.0%
Minorities (share of loss)	0.0	0.0	0.0	0.0
Abnormals	-2.4	2.6	0.0	0.0
NPAT (reported)	**(5.2)**	**(16.2)**	**(0.7)**	**14.7**
Adjustments (Abnormal)	2.4	0.0	0.0	0.0
NPAT (adjusted)	**(2.8)**	**(18.9)**	**(0.7)**	**14.7**

Balance Sheet

Cash	5.9	16.0	24.4	39.1
Receivables	4.0	2.9	3.1	3.5
Inventories	0.0	0.0	0.0	0.0
Other	0.3	1.2	1.2	1.2
Total current assets	**10.3**	**20.1**	**28.7**	**43.8**
PP&E	0.1	0.2	0.2	0.2
Oil & Gas Properties	27.2	31.2	32.2	36.9
Intangibles	0.0	0.0	0.0	0.0
Deferred tax assets	0.0	0.0	0.0	0.0
Other	0.4	1.1	1.1	1.1
Total non-current assets	**27.6**	**32.5**	**33.5**	**38.2**
Total Assets	**37.8**	**52.5**	**62.2**	**82.0**
Payables	-4.8	-2.1	-2.1	-2.1
Interest bearing liabilities - Current	-10.7	-10.7	-1.8	-1.8
Provisions	-0.2	-0.2	-0.2	-0.2
Other	0.0	0.0	0.0	0.0
Total Current Liabilities	**-15.7**	**-13.0**	**-4.2**	**-4.2**
Interest-bearing liabilities - Non-curr	0.0	0.0	0.0	0.0
Provisions	-1.1	-1.2	-1.2	-1.2
Other	0.0	-4.7	-9.6	-14.6
Total Non-current Liabilities	**-1.1**	**-5.9**	**-10.7**	**-15.7**
Total Liabilities	**-2.2**	**-18.9**	**-14.9**	**-19.9**
Total Shareholders' Equity	**21.0**	**33.6**	**47.3**	**62.1**

Interims

Year end June	1H18	2H18	1H19A	2H19e
Revenue	0.1	9.5	17.3	13.8
EBITDAX	**-1.6**	**6.4**	**13.3**	**8.3**
Exploration	-3.7	-1.1	-17.5	-16.5
EBITDA	**-5.3**	**5.3**	**-4.3**	**-8.2**
EBIT	-5.3	4.4	-6.0	-10.7
Equity Share of Assocs NPAT	0.0	0.0	0.0	0.0
NPAT (Reported)	**-8.3**	**3.1**	**-4.5**	**-11.7**
NPAT (Adjusted)	**-6.3**	**3.5**	**-7.1**	**-11.7**
EPS (adjusted)(cents)	**-0.5**	**0.3**	**-0.4**	**-0.6**
EPS Growth			n/m	n/m
DPS (cents)	0.0	0.0	0.0	0.0

Source: Phillip Capital estimates

Per share & Ratio data

Year end June	FY18	FY19e	FY20e	FY21e
Shares on issue - Wavge	1,403.1	1,946.6	2,261.4	2,524.2
Shares on issue - at year-end	1,530.9	2,261.4	2,524.2	2,524.2
Reported EPS (US cents)	(0.4)	(0.8)	(0.0)	0.6
Growth	-16.5%	125.2%	-96.4%	-2020.4%
P/E ratio (x)	-10.7x	-4.7x	-130.1x	6.8x
EPS (adjusted)(US cents)	**(0.2)**	**(1.0)**	**(0.0)**	**0.6**
Growth	-55.6%	392.5%	-96.9%	-2020.4%
P/E ratio (x)	**-20.1x**	**-4.1x**	**-130.1x**	**6.8x**
DPS (A$ cents)	0.0	0.0	0.0	0.0
Franking	0%	0%	0%	0%
Yield	**0.0%**	**0.0%**	**0.0%**	**0.0%**
OCF per share (US cents)	0.1	1.0	1.0	1.0
Price/OCF (x)	30.4x	4.0x	3.9x	4.1x
EV/ Sales	7.1x	2.7x	2.3x	1.7x
EV/EBITDA	**-5251.8x**	**-6.8x**	**15.4x**	**2.7x**
EV/EBIT	-74.5x	-5.0x	187.4x	3.4x

Liquidity & Leverage

Net Cash (Net Debt) $m	(4.8)	5.3	22.6	37.2
Net Debt / Equity %	23%	-16%	-48%	-60%
Net Debt / EBITDA	n/a	0.4x	n/a	n/a
ROA (EBIT / T.Assets) %	-2.4%	-31.8%	0.7%	22.5%
ROE (NPAT / T.Equity) %	-13.1%	-56.1%	-1.5%	23.7%
Interest Cover (EBIT)	-0.5x	-7.8x	0.4x	18426.6x
Dividend Payout % (of adj EPS)	n/a	n/a	n/a	n/a
Enterprise Value $m	68.3	84.2	77.3	62.6

Cash Flow

Oil & Gas Sales (net)	6.4	31.1	33.6	37.8
Payments to Suppliers	(4.7)	(9.6)	(9.6)	(9.7)
Interest Received (Paid)	0.2	(2.1)	(1.1)	(0.0)
Income Taxes Paid	(0.0)	0.0	0.0	(3.7)
Other	0.0	0.0	0.0	0.0
Operating cash flows	**1.8**	**19.4**	**22.9**	**24.4**
Exploration	(3.9)	(34.0)	(19.0)	(5.0)
Development	(20.8)	(4.0)	(1.0)	(4.8)
Free Cash Flow	**(23.0)**	**(18.6)**	**2.9**	**14.7**
Acquisitions / Divestments	0.0	(0.2)	0.0	0.0
Net investing cash flows	**(24.8)**	**(38.2)**	**(20.0)**	**(9.8)**
Dividends Paid	0.0	0.0	0.0	0.0
Equity Raised (Bought back)	8.8	28.8	14.4	0.0
Change in Debt	7.9	0.0	(14.4)	0.0
Financing Cash Flow	**16.7**	**28.8**	**0.0**	**0.0**
Change in Cash	**(6.3)**	**10.0**	**2.9**	**14.7**

Price Assumptions (Q4 only)

WTI oil price (US$ / bbl)	$ 68.34	$ 58.52	$ 55.00	$ 55.00
Received LLS price (US$ / bbl)	$ 64.90	$ 60.51	$ 56.10	$ 56.10
Gas price recd (US$ / mmbtu)	$ 3.37	$ 3.25	$ 3.00	$ 3.00

Production (OEL share) (Q4 only)

Oil (mmbbls)	0.174	0.555	0.545	0.541
Gas (mmscf)	0.120	1.400	3.651	5.546
Non-gas liquids (mmbbls)	0.000	0.000	0.000	0.000
Total production (mmboe)	0.194	0.788	1.154	1.466
Daily production (boepd)	2,001	2,160	3,161	4,015

	Risk	Unrisked		Risked	
Valuation Summary	Weight	**A$m**	**A$ps**	**A$m**	**A$ps**

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PhillipCapital Investment View is based on an absolute 1-year total return equal to capital appreciation plus yield.

Buy	Accumulate	Hold	Reduce	Sell
>20%	10% – 20%	0% – 10%	0% to -10%	>-10%

A Speculative recommendation is when a company has limited experience from which to derive a fundamental investment view.

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