

## Horizon Oil Ltd

HZN-ASX A\$0.14

TARGET PRICE A\$0.30

## Energy

BUY

Horizon Oil Ltd. is an oil and petroleum exploration, development and production company. It operates through the following segments: New Zealand Development, New Zealand Exploration, China Exploration and Development and PNG Exploration and Development.

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## Solid 3Q18 results in strong cash flow and continued debt reduction

## Key points to note:

Financial Sales year to date (ytd) up 22% to US\$60.5m. 3Q sales of US\$24m. Upon completion of the Maari acquisition an additional US\$8.0m of revenue will be included.

Net operating cash flow up 23% for the quarter to US\$20m and US\$46.8m ytd. Free cash flow breakeven (post financing, corporate and capital expenditure) of US\$36/bbl ytd.

Net debt reduced by US\$9.7m to US\$85.6m (US\$94.3m as at 2Q).

As at 31 March 2018 HZN has 0.85 M bbl hedged at an average of US\$59/bbl (~US\$50m).

## Additional 16% acquisition in Maari

The acquisition (effective 31 December 2017) has satisfied all conditions precedent with completion scheduled for May. Once the US\$8.0m in oil sales revenue for the March quarter is set off against production and one-off oil inventory acquisition costs, the net payment for the 16% stake will reduce from US\$17.6m to US\$13.0m.

**Beibu Gulf** production lifted to ~10,000 bopd (from ~9,000) post a three well workover program completed in April. Remaining entitlement to cost recovery as at 31 March 2018 was US\$63.5m

**Western LNG** – Pre-FEED results now completed. No other key developments to date. However, industry wide development activity in Papua New Guinea continues to support our positive view of the value of HZN's assets located there.

## Valuation and Investment View

Our base case sum of the parts valuation for HZN is \$0.30, using US\$0.45/mcf for HZN's share of the WLNG contingent 2C resource. If a sale of Repsol's stake inferred US\$0.60/mcf our valuation would lift to A\$0.43.

Since FY10, HZN has traded at an average EV/EBITDAX multiple of 7.6x (yearend market capitalisation [range of 3.0x to 10.7x]). At 7.5 times our forecast EBITDAX in FY18F, a share price of \$0.32 is implied on a fully diluted basis.

**We base our 12-month price target on a blend of the two valuation techniques, thus our \$0.30 price target.**

We continue to believe HZN looks attractive and retain our BUY rating and A\$0.30 price target. See our initiation on 19 January 2018 (Link below).<sup>1</sup>

**Horizon Oil Website** <sup>2</sup>

## Company Data

Effective shares outstanding (m)	1,303
Price (A\$)	0.140
Market Capitalisation (A\$m)	182.5
Free Float (%)	66%
Free Float Market Capitalisation (A\$m)	120.4
12 month low (A\$)	0.04
12 month high (A\$)	0.15
Average daily volume (3 month) ('000)	n/m
Target Price (\$)	0.30
Forecast Stock Capital Return	114%
<b>Forecast Total Stock Gross Return</b>	<b>114%</b>

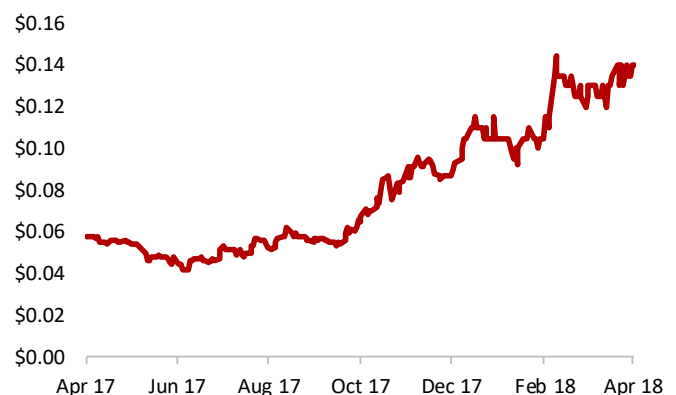
Data Source: FactSet

## Earnings Summary (US\$m)

Year end June	FY17	FY18F	FY19F	FY20F
<b>Sales revenue</b>	<b>68.5</b>	<b>86.7</b>	<b>101.8</b>	<b>96.4</b>
<b>EBITDAX</b>	<b>45.9</b>	<b>59.4</b>	<b>66.7</b>	<b>61.4</b>
PBT	4.9	15.0	18.2	14.2
<b>Underlying NPAT</b>	<b>3.0</b>	<b>8.1</b>	<b>9.4</b>	<b>7.1</b>
Reported NPAT	(0.3)	0.7	8.0	5.8
Reported EPS (c)	(0.0)	0.1	0.6	0.4
<b>Underlying EPS (c)</b>	<b>0.2</b>	<b>0.6</b>	<b>0.7</b>	<b>0.5</b>
<b>Underlying P/E (x)</b>	<b>22.0</b>	<b>28.8</b>	<b>24.9</b>	<b>33.1</b>
DPS (c)	0.00	0.00	0.00	0.00
<b>Payout ratio (%)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Franking (%)	0.00	0.00	0.00	0.00
Dividend yield (%)	0.0%	0.0%	0.0%	0.0%
<b>Gross Yield (%)</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

Data Source: Company, APP Securities

## Share Price Performance



Source: FactSet

APP Securities contributes all company estimates to Bloomberg, Thomson Reuters, FactSet and Capital IQ.

<sup>1</sup> <http://intranet.appsecurities.com.au/research/download/attachment/MjAxOC0wNC0zMHxSZXNlYXJjaE5vdGV8MTA5ODZ8ZW4yYyNWZkMmVjOGMyZWVlYmFmNWRkYiVmZDZhNTA>

<sup>2</sup> <https://horizonoil.com.au/>

Horizon Oil					HZN-ASX										
<b>Summary</b>					<b>Profit and Loss US\$m</b>										
<b>Recommendation</b>	<b>BUY</b>				<b>Sales revenue</b>	<b>76.0</b>	<b>68.5</b>	<b>86.7</b>	<b>101.8</b>	<b>96.4</b>					
<b>Price (A\$)</b>	<b>0.140</b>				<i>Growth</i>	(27%)	(10%)	27%	17%	(5%)					
<b>Target Price (A\$)</b>	<b>0.30</b>				<b>Operating costs</b>	(30.3)	(22.7)	(27.3)	(35.1)	(35.0)					
Upside (Downside) (%)	114%				<b>EBITDAX</b>	<b>45.6</b>	<b>45.9</b>	<b>59.4</b>	<b>66.7</b>	<b>61.4</b>					
Gross Yield (%)	0.0%				<i>Growth</i>	-39%	1%	30%	12%	-8%					
<b>Total Stock Return (%)</b>	<b>114%</b>				<b>Exploration &amp; Development</b>	(1.9)	(1.3)	(1.4)	(1.7)	(1.9)					
Shares (m)	1,303				<b>EBITDA</b>	<b>43.8</b>	<b>44.6</b>	<b>58.0</b>	<b>65.1</b>	<b>59.5</b>					
Effective shares outstanding (m)	1,702				<b>D&amp;A</b>	(37.1)	(26.7)	(30.7)	(36.5)	(38.5)					
Market Capitalisation (\$m)	182				<b>EBIT</b>	6.7	17.9	27.3	28.6	21.0					
Free Float Market Capitalisation (\$m)	120				<b>Net interest</b>	(17.6)	(13.1)	(12.3)	(10.4)	(6.8)					
<b>Sum of the Parts Valuation</b>					<b>PBT</b>	<b>(10.9)</b>	<b>4.9</b>	<b>15.0</b>	<b>18.2</b>	<b>14.2</b>					
<b>US\$m</b>	<b>Low</b>	<b>Base</b>	<b>High</b>		<b>New Zealand royalty tax</b>	(1.0)	(0.5)	(3.4)	(4.7)	(4.1)					
China (Beibu Gulf) (FY18 DCF @ 9%, 10%, 11%)	165	169	174		<b>Tax</b>	3.6	(1.3)	(3.5)	(4.0)	(3.0)					
New Zealand (Maari) (FY18 DCF @ 9%, 10%, 11%)	49	50	52		<b>Profit</b>	(8.3)	3.0	8.1	9.4	7.1					
<b>US\$/mcf</b>	<b>0.30</b>	<b>0.45</b>	<b>0.60</b>		<b>Minority interests</b>	0.1	0.0	0.0	0.0	0.0					
Papua New Guinea	199	334	492		<b>Underlying NPAT</b>	<b>(8.3)</b>	<b>3.0</b>	<b>8.1</b>	<b>9.4</b>	<b>7.1</b>					
Corporate Costs	(75)	(75)	(75)		<b>Non-recurring items</b>	(136.2)	(3.4)	(7.4)	(1.4)	(1.2)					
<b>Enterprise Value</b>	<b>337</b>	<b>478</b>	<b>643</b>		<b>Reported NPAT</b>	<b>(144.5)</b>	<b>(0.3)</b>	<b>0.7</b>	<b>8.0</b>	<b>5.8</b>					
Net Debt (FY17 Face Value)	(108)	(108)	(108)		<b>Cashflow US\$m</b>										
Option Exercise	14	14	14		<b>Operating EBITDAX</b>	<b>45.6</b>	<b>45.9</b>	<b>59.4</b>	<b>66.7</b>	<b>61.4</b>					
<b>Equity</b>	<b>243</b>	<b>383</b>	<b>548</b>		<b>Change in working capital</b>	(0.4)	(0.4)	0.6	(0.9)	0.5					
Diluted Shares on Issue	1,702	1,702	1,702		<b>Net interest</b>	(9.8)	(9.4)	(9.0)	(7.4)	(4.1)					
<b>Per Share US\$</b>	<b>0.14</b>	<b>0.23</b>	<b>0.32</b>		<b>Royalties &amp; Tax paid</b>	0.9	(0.1)	(3.4)	(4.7)	(4.7)					
AUDUSD	0.76	0.76	0.76		<b>Other</b>	7.9	(0.4)	0.0	0.0	0.0					
<b>Per Share A\$</b>	<b>0.19</b>	<b>0.30</b>	<b>0.42</b>		<b>Operating cashflow</b>	<b>44.2</b>	<b>35.6</b>	<b>47.6</b>	<b>53.7</b>	<b>53.0</b>					
<b>Reserves (adjusted for PNG &amp; Maari transactions)</b>					<b>Capital expenditure</b>	(30.1)	(7.5)	(12.4)	(16.5)	(18.6)					
<b>FY17 (Pro forma)</b>	<b>Gas (bcf)</b>	<b>Liquids (mmbbl)</b>	<b>Total (mmboe)</b>		<b>Net Divest/ (Acquisitions)</b>	0.0	(0.2)	(17.6)	0.0	0.0					
Beibu Gulf	0.0	4.1	4.1		<b>Other</b>	0.0	0.0	0.0	0.0	0.0					
New Zealand	0.0	2.3	2.3		<b>Investing cashflow</b>	<b>(30.1)</b>	<b>(7.7)</b>	<b>(30.0)</b>	<b>(16.5)</b>	<b>(18.6)</b>					
Papua New Guinea	0.0	0.0	0.0		<b>Change in Debt</b>	(58.3)	(19.5)	(15.9)	(33.4)	(31.0)					
<b>Total Reserves (1P)</b>	<b>0.0</b>	<b>6.4</b>	<b>6.4</b>		<b>Change in Equity</b>	0.0	0.0	0.0	0.0	0.0					
Beibu Gulf	0.0	5.8	5.8		<b>Dividends paid</b>	0.0	0.0	0.0	0.0	0.0					
New Zealand	0.0	5.5	5.5		<b>Other</b>	0.0	0.0	0.0	0.0	0.0					
Papua New Guinea	0.0	0.0	0.0		<b>Financing cashflow</b>	<b>(58.3)</b>	<b>(19.5)</b>	<b>(15.9)</b>	<b>(33.4)</b>	<b>(31.0)</b>					
<b>Total Proven &amp; Probable (2P)</b>	<b>0.0</b>	<b>11.3</b>	<b>11.3</b>		<b>Net cashflow</b>	(44.2)	8.4	1.8	3.7	3.4					
Beibu Gulf	0.0	3.2	3.2		<b>Balance Sheet US\$m</b>										
New Zealand	0.0	17.9	17.9		<b>Cash</b>	16.1	24.5	26.3	30.0	33.4					
Papua New Guinea	603.0	18.7	3,636		<b>Receivables</b>	9.9	6.4	6.4	7.5	7.1					
<b>Total Contingent Resources (2C)</b>	<b>603.0</b>	<b>39.8</b>	<b>3,657</b>		<b>Inventory</b>	1.8	1.5	1.5	1.7	1.7					
Beibu Gulf	0.0	53.0	53.0		<b>Other</b>	2.3	3.2	3.2	3.2	3.2					
New Zealand	0.0	0.0	0.0		<b>Total Current Assets</b>	<b>30.1</b>	<b>35.6</b>	<b>37.4</b>	<b>42.5</b>	<b>45.4</b>					
Papua New Guinea #	1,300.0	38.0	7,836		<b>Exploration phase expenditure</b>	53.6	51.9	55.0	59.2	63.8					
<b>Prospective Resources #</b>	<b>1,300.0</b>	<b>91.0</b>	<b>7,889</b>		<b>Oil and Gas assets</b>	194.6	179.1	158.1	134.5	110.4					
# Pre PNG transaction					<b>Other</b>	8.4	5.0	4.6	5.1	6.7					
<b>US\$/bbl</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18F</b>	<b>FY19F</b>	<b>FY20F</b>	<b>Total Non Current Assets</b>	<b>256.6</b>	<b>236.1</b>	<b>217.7</b>	<b>198.8</b>	<b>180.9</b>				
Brent Oil	44.7	51.0	63.4	70.1	64.8	<b>Total Assets</b>	<b>286.7</b>	<b>271.7</b>	<b>255.1</b>	<b>241.3</b>	<b>226.3</b>				
<b>Financial Metrics</b>					<b>FY16</b>	<b>FY17</b>	<b>FY18F</b>	<b>FY19F</b>	<b>FY20F</b>	<b>Payables</b>	12.5	10.0	10.5	11.0	11.0
Reported EPS (c)	(11.1)	(0.0)	0.1	0.6	0.4	<b>Short Term Debt</b>	76.9	22.1	22.1	22.1	22.1	22.1	22.1	22.1	
Underlying EPS diluted (c)	(0.5)	0.2	0.5	0.6	0.4	<b>Other</b>	1.1	0.4	0.4	0.4	0.4	0.4	0.4		
Underlying P/E (diluted) (x)	(10.3)	22.3	29.3	25.3	33.7	<b>Total Current Liabilities</b>	<b>90.5</b>	<b>32.4</b>	<b>33.0</b>	<b>33.5</b>	<b>33.5</b>	<b>33.5</b>	<b>33.5</b>		
<b>DPS (Ac)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>Long term debt</b>	67.4	102.7	86.8	53.3	22.4				
Dividend yield (%)	0%	0%	0%	0%	0%	<b>Deferred tax</b>	15.9	20.3	0.0	0.0	0.0	0.0	0.0		
<b>Gross Yield (%)</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>Other</b>	8.2	9.6	9.6	9.6	9.6	9.6	9.6		
<b>Multiples</b>					<b>FY16</b>	<b>FY17</b>	<b>FY18F</b>	<b>FY19F</b>	<b>FY20F</b>	<b>Total Non Current Liabilities</b>	<b>91.6</b>	<b>132.5</b>	<b>96.4</b>	<b>63.0</b>	<b>32.0</b>
Net Debt	128	108	91	54	19	<b>Total Liabilities</b>	<b>182.1</b>	<b>165.0</b>	<b>129.4</b>	<b>96.4</b>	<b>65.5</b>				
Market Equity (Y/E)	65	52	182	182	182	<b>Shareholders Equity</b>	174.8	174.8	174.8	174.8	174.8	174.8	174.8		
<b>EV</b>	<b>193</b>	<b>161</b>	<b>273</b>	<b>236</b>	<b>202</b>	<b>Retained Earnings/(Losses)</b>	(82.2)	(82.6)	(81.9)	(73.9)	(68.1)	(68.1)	(68.1)		
<b>EV/EBITDAX (x)</b>	<b>3.9</b>	<b>3.2</b>	<b>3.9</b>	<b>2.9</b>	<b>2.6</b>	<b>Reserves/Other</b>	12.0	14.6	32.9	43.9	54.2	54.2	54.2		
<b>Net Debt/EBITDAX (x)</b>	<b>2.8</b>	<b>2.4</b>	<b>1.5</b>	<b>0.8</b>	<b>0.3</b>	<b>Minority Interests</b>	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0		
						<b>Total Equity</b>	<b>104.5</b>	<b>106.7</b>	<b>125.7</b>	<b>144.8</b>	<b>160.9</b>				

## 3Q18 Quarterly Report

HZN has released its 3Q report.

### Beibu

Gross oil production for the quarter averaged 9,070 bopd. HZN sales entitlement for the quarter averaged 3,554 bopd, taking into account the cost recovery oil entitlement received in the quarter. Average cash operating costs in the quarter were ~ US\$9.30/bbl (produced). As at 31 March 2018, Horizon Oil's remaining cost recovery oil entitlement under the Petroleum Contract was US\$63.5m.

Production increased 2.9%, and sales volumes increased 9.4% from the previous quarter following the completion of the workover program involving six wells in the WZ 6-12 producing fields. The workover program utilised the Haiyang 943 drilling rig, enhancing production through the replacement of downhole electrical submersible pumps and re-perforation of non-producing zones in one well. Following the workovers, gross production from the fields has increased from 7,800 bopd to approximately 9,300 bopd. A workover program involving three wells in the WZ 12-8W producing fields was completed in April 2018, increasing production to about 10,000 bopd. Two infill wells planned to be drilled on the WZ 12- 8W field to further enhance production are expected to spud in mid-2018 on receipt of necessary environmental permits by operator CNOOC.

The Overall Development Plan for the WZ 12-8E field in Beibu Gulf progressed with the CNOOC-led joint venture nearing finalisation of the core commercial terms for leasing of the mobile production platform. CNOOC targets final investment decision during Q3 of calendar year 2018. The development has been planned as a phased development, with an initial three wells being drilled from the leased platform to be tied back to the existing Block 22/12 infrastructure with a flexible flow line. Further production wells will be added later, with well design and location to be determined by the performance of the initial wells.

**Figure 1. Horizon Oil Beibu Quarterly Results**

US\$m	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18
<b>Block 22/12 (Beibu Gulf) (26.95%)</b>							
Crude Oil Production ('000 bbls) Gross	785.0	698.5	749.3	743.3	752.7	793.5	816.3
Crude Oil Production (bopd) Gross	8,533	7,592	8,326	8,168	8,181	8,625	9,070
Crude Oil Production ('000 bbls) (HZN)	211.6	188.2	201.9	200.3	202.8	213.9	220.0
Crude Oil Sales ('000 bbls)	278.3	245.7	294.1	284.7	237.4	292.4	319.9
<b>Revenue</b>	<b>11.5</b>	<b>11.6</b>	<b>15.2</b>	<b>13.6</b>	<b>11.8</b>	<b>17.8</b>	<b>20.7</b>
Operating expenses	(2.3)	(2.6)	(1.5)	(1.9)	(1.9)	(2.2)	(2.0)
Workover expenditure / Other	0.0	0.0	0.0	0.0	(1.6)	(0.0)	(0.1)
<b>EBITDAX</b>	<b>9.1</b>	<b>9.0</b>	<b>13.7</b>	<b>11.7</b>	<b>8.3</b>	<b>15.6</b>	<b>18.6</b>
Exploration & Development	0.0	0.0	(1.0)	0.0	(1.5)	(1.8)	(0.1)
Amortisation	(4.5)	(4.0)	(4.3)	(4.3)	(4.5)	(4.7)	(4.9)
US\$/bbl (realised excluding hedging)	41.2	47.3	51.6	47.6	49.8	61.0	64.8
Cash operating costs (production)/bbl	11.0	13.7	7.4	9.5	9.6	10.2	9.3

Source: Company data, APP Securities

### Maari

Gross oil production for the quarter averaged 6,939 bopd (Horizon Oil net 10%: 694 bopd; 1,804 bopd economic interest on completion of acquisition of additional 16% interest). Average cash operating costs in the quarter were US\$30.42/bbl (produced); US\$27.83/bbl (HZN sales)

Production and operating costs were impacted by scheduled shut-ins for the installation and commissioning of surface pumps as part of the ongoing production improvement program. The pumps were successfully commissioned during a five day shut down in late February, commencing operation in early April 2018, reducing back pressure, as designed. The ongoing elements of the production improvement program, which will continue throughout 2018, include further workovers, re-perforations and water injection enhancement.

The Company advised on 6 November 2017 it had entered into an agreement with Todd Maari Limited (Todd) to acquire Todd's 16% interest in PMP 38160, which contains the producing Maari and Manaia fields. On completion of the transaction, Horizon Oil will hold a 26% interest in the PMP 38160 joint venture.

The transaction has received requisite regulatory consents and joint venture transfer documentation is in the process of being finalised.

On completion (expected in May 2018) the consideration of US\$17.6m will be paid to Todd. After accounting for customary working capital and purchase price adjustments based on the effective date of 31 December 2017, the net payment will reduce to approximately US\$15.9 million.

At Completion, Horizon Oil will consolidate in the Group's results the incremental oil sales from 31 December 2017 of 117,866 bbls, composed of production over the period and oil inventory acquired as part of the transaction, which has generated additional revenue of US\$8.0m. Additional sales revenue in respect of the acquired interest from pre-completion liftings of approximately US\$2.9m (net of royalties) will be received by the Company in late May.

**Figure 2. Horizon Oil Maari Quarterly Results**

US\$m	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18
<b>PMP 38160 (Maari &amp; Manaia) (10.0%) to (26.0%)</b>							
Crude Oil Production ('000 bbls) Gross	965	529	718	831	697	697	624
Crude Oil Production (bopd) Gross	10,491	5,748	7,975	9,135	7,572	7,576	6,939
HZN Share	10%	10%	10%	10%	10%	10%	10%
Crude Oil Production ('000 bbls)	96.5	52.9	71.8	83.1	69.7	69.7	62.4
Inventory on hand ('000 bbls)	4.7	11.9	28.2	17.9	11.2	24.5	18.9
Crude Oil Sales ('000 bbls)	124.8	45.3	55.5	93.6	76.1	56.2	68.3
<b>Revenue</b>	<b>5.8</b>	<b>2.3</b>	<b>3.2</b>	<b>4.9</b>	<b>4.1</b>	<b>3.6</b>	<b>4.8</b>
Operating expenses	(1.3)	(1.7)	(1.6)	(1.7)	(1.9)	(1.7)	(1.9)
Inventory adjustment	(1.2)	0.3	0.7	(0.4)	(0.3)	0.6	(0.2)
Repairs and Refurbishment Expenditure / Other	(2.7)	(1.4)	(0.3)	(0.5)	(0.3)	(0.0)	(0.0)
<b>EBITDAX</b>	<b>0.6</b>	<b>(0.5)</b>	<b>1.9</b>	<b>2.3</b>	<b>1.6</b>	<b>2.4</b>	<b>2.6</b>
Exploration & Development	(0.1)	(0.8)	(0.5)	(0.4)	(0.5)	(0.9)	(0.8)
Amortisation	(2.7)	(1.5)	(2.0)	(3.1)	(2.1)	(2.1)	(1.9)
US\$/bbl (realised excl. hedging)	46.3	51.1	56.8	52.5	53.5	64.7	69.9
Cash operating costs (production)/bbl	13.2	33.0	22.9	20.6	27.1	24.9	30.4

Source: Company data, APP Securities

**Figure 3. Horizon Oil Operating Assets Quarterly Results**

US\$m	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18
<b>Total Production ('000 bbls)</b>	<b>308.1</b>	<b>241.1</b>	<b>273.7</b>	<b>283.4</b>	<b>272.5</b>	<b>283.6</b>	<b>282.4</b>
<b>Total Sales ('000 bbls)</b>	<b>403.1</b>	<b>291.0</b>	<b>349.6</b>	<b>378.3</b>	<b>313.5</b>	<b>348.6</b>	<b>388.1</b>
Sales Revenue	17.3	13.9	18.3	18.5	15.9	21.5	25.5
Oil hedging gains (losses)	0.4	0.0	(0.4)	0.5	0.3	(1.3)	(1.5)
<b>Total Revenue</b>	<b>17.6</b>	<b>14.0</b>	<b>17.9</b>	<b>19.0</b>	<b>16.2</b>	<b>20.2</b>	<b>24.0</b>
Operating expenditure	(3.6)	(4.3)	(3.1)	(3.6)	(3.8)	(3.9)	(3.9)
Workovers, Repairs & Refurbishments	(2.7)	(1.4)	(0.3)	(0.5)	(1.9)	(0.0)	(0.1)
<b>EBITDAX</b>	<b>11.3</b>	<b>8.3</b>	<b>14.5</b>	<b>14.9</b>	<b>10.5</b>	<b>16.2</b>	<b>20.0</b>
Exploration & Development	(1.9)	(1.7)	(2.9)	(1.1)	(3.7)	(6.6)	(1.9)
Amortisation	(7.2)	(5.5)	(6.3)	(7.4)	(6.6)	(6.8)	(6.7)
US\$/bbl (realised excluding hedging)	42.80	47.91	52.40	48.85	50.70	61.57	65.70
US\$/bbl (realised including hedging)	43.78	47.96	51.31	50.20	51.79	57.92	61.89
Cash operating costs (production)	11.7	18.0	11.5	12.7	14.1	13.8	14.0
Beibu Cost Recovery Oil Entitlement (US\$m)	110.0	104.3	98.6	89.6	86.6	76.7	63.5
<b>Exploration &amp; Development Capex (US\$m)</b>							
Papua New Guinea Exploration & Development	(1.8)	(0.8)	(1.4)	(0.7)	(1.7)	(3.8)	(1.0)
PMP 38160 (Maari & Manaia) & Other NZ	(0.1)	(0.8)	(0.5)	(0.4)	(0.5)	(0.9)	(0.8)
Block 22/12 (Beibu Gulf)	0.0	0.0	(1.0)	0.0	(1.5)	(1.8)	(0.1)
<b>Total Exploration &amp; Development</b>	<b>(1.9)</b>	<b>(1.7)</b>	<b>(2.9)</b>	<b>(1.1)</b>	<b>(3.7)</b>	<b>(6.6)</b>	<b>(1.9)</b>

Source: Company data, APP Securities

## Valuation

We have a blended valuation for Horizon Oil using two techniques:

- Sum of the parts (SOP) valuation, and
- Capitalised EBITDAX.

## Outstanding shares

We have assumed:

- outstanding options (with an exercise price below our price target) issue including all the IMC Investments Ltd (IMC) options (NB: IMC have Foreign Investment Review Board (FIRB) approval to go to 85% ownership),
- all (100%) the Share Appreciation Rights (SARS) issue; i.e.: If the stock reaches our price target the HZN performance is likely to be greater than the 14% over the S&P/ASX200 Energy Index hurdle rate.

This results in a diluted number of shares on issue of ~1,706m. We note if all options exercised (highest strike price is \$0.434), the diluted number of shares on issue would be ~1,713m (dependent on the issue price of the SARS and whether SARS holders take cash or scrip).

**Figure 4. Horizon Oil Diluted Shares on Issue Calculation**

Type	Number (m)	SARS (m)	Strike / Vesting Price	SAR Value (\$)	SAR value (\$m)	Options	Option exercise	Option Cash Raised	Expiry / Exercisable
<b>Shares</b> (Includes 1.5m partly paid)	<b>1,303.5</b>								
<b>Share Appreciation Rights (SARS)</b>									
TSR>14% index, 100%; Equals index, 50%	0.0	8.5	0.330	0.000	0.0				19-Aug-18
Relevant to the S&P/ASX200 Energy Index	0.0	7.4	0.370	0.000	0.0				1-Jul-19
	17.6	25.1	0.090	0.210	5.3				1-Jul-20
	11.6	16.6	0.090	0.210	3.5				1-Jul-21
	20.3	24.4	0.050	0.250	6.1				1-Jul-21
	47.3	55.7	0.045	0.255	14.2				11-Sep-20
<b>Total Share Appreciation Rights</b>	<b>96.8</b>	<b>137.7</b>							
Assumed SAR vesting	100%								
<b>SARS issued</b>	<b>96.8</b>								
<b>IMC Options</b>	<b>300.0</b>					<b>300.0</b>	<b>0.061</b>	<b>18.3</b>	14-Sep-21
<b>EOS Options</b>	<b>0.0</b>					0.35	0.434	0.0	20-Feb-18
	0.0					0.35	0.404	0.0	16-Apr-18
	1.5					1.50	0.200	0.3	2-Nov-20
<b>Unissued shares under option</b>	<b>1.5</b>					<b>2.20</b>		<b>0.3</b>	
Assumed will issue	398.3								
<b>Diluted Shares on Issue</b>	<b>1,701.8</b>							<b>18.6</b>	

Source: Company data, APP Securities

## Sum of the Parts Valuation

For the two producing assets, we have discounted free cash flows at 10.0% out to EBITDAX break even or depletion of 2C reserves, whichever comes earliest.

For the WLNG project we have assumed valuations based on different US\$ gas prices per mcf referencing recent transactions in the market.

**Figure 5. Horizon Oil Assumed WLNG Resource (Tcfe) and implied Valuations**

	Low	Base	High
Tcf	2.00	2.25	2.50
mmbbl	60.0	65.0	70.0
Condensate (Tcfe)	0.36	0.39	0.42
<b>Total Tcfe</b>	<b>2.36</b>	<b>2.64</b>	<b>2.92</b>
HZN Share (boe)	28.1%	28.1%	28.1%
US\$/mcf	0.30	0.45	0.60
<b>US\$m</b>	<b>199</b>	<b>334</b>	<b>492</b>

Source: Company data, APP Securities

We have then adjusted for balance sheet net assets, option cash raised, ongoing corporate liability allocation and then subtracted our forecast FY18F net debt to determine an equity value.

**Figure 6. Horizon Oil Sum of the Parts Valuation**

US\$m	Low	Base	High
China (Beibu Gulf) (FY18 DCF @ 9%, 10%, 11%)	165	169	174
New Zealand (Maari) (FY18 DCF @ 9%, 10%, 11%)	49	50	52
Papua New Guinea	199	334	492
Assumed US\$/mcf for PNG	0.30	0.45	0.60
Net Assets / Corporate Costs	(75)	(75)	(75)
<b>Enterprise Value</b>	<b>337</b>	<b>478</b>	<b>643</b>
Net Debt (Face Value) (FY17)	(108)	(108)	(108)
Option Exercise	14	14	14
<b>Equity</b>	<b>243</b>	<b>383</b>	<b>548</b>
Diluted Shares on Issue	1,702	1,702	1,702
<b>Per Share US\$</b>	<b>0.14</b>	<b>0.23</b>	<b>0.32</b>
AUDUSD	0.760	0.760	0.760
<b>Per Share A\$</b>	<b>0.19</b>	<b>0.30</b>	<b>0.42</b>

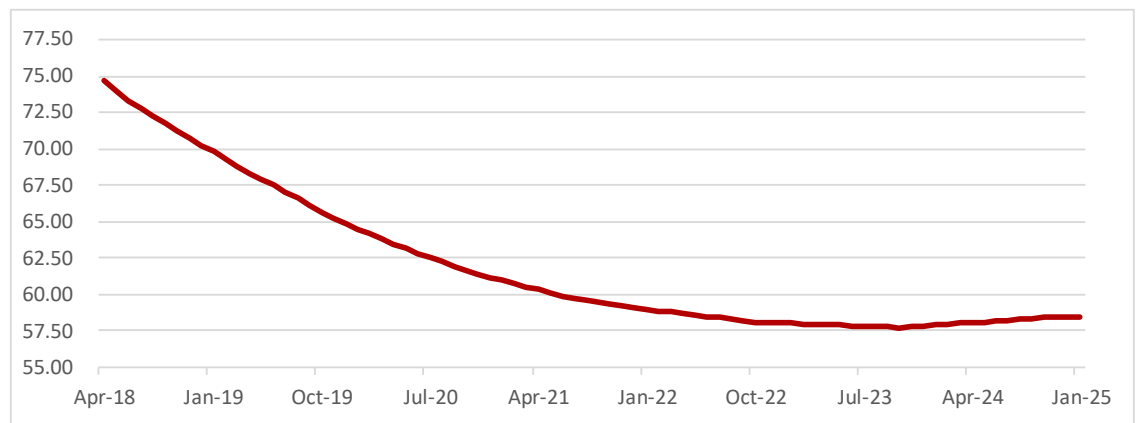
Source: Company data, APP Securities

#### Oil Price Assumptions

Post near term hedging we have used the Brent Oil forward curve (Source: FactSet) to derive our forward oil price assumptions out to FY24F and have then assumed the Brent Oil price appreciates up to US\$65/bbl by FY30F and then remains flat (see Data Table pg 2).

**As at November 2017, HZN had sold forward 750,000 bbls at an average of US\$58/bbl.**

**Figure 7. Brent Oil Forward Curve (US\$/bbl)**



Source: FactSet, APP Securities

Our valuation sensitivity analysis for our discounted cash flow valuations for the two operating assets assume a low case scenario of US\$55/bbl by FY30F (combined with an 11% discount rate) and a high case scenario of \$US\$75/bbl by FY30F (combined with a 9.0% discount rate).

We note the sensitivity is low given that in both assets, near term liquids production is high (compared with the outer years) when we start to vary oil price forecasts.

#### Foreign Exchange risk

HZN earn and report in US\$. The only major FX impacts are:

- New Zealand dollar operating costs (NB: Forecast New Zealand asset value is less than 10% of our estimated base case enterprise value so movement in USDNZD will not have a material impact), and
- the translation from our US\$ valuation to an Australian dollar price target.

**Capitalised EBITDAX**

Since FY10, HZN has traded at an average EV/EBITDAX multiple of 7.6x (based on year end market capitalisation [range of 3.0x to 10.7x]).

**Figure 8. Horizon Oil Multiples**

US\$m	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18F	FY19F	FY20F
Market Capitalisation A\$m	339	374	318	364	456	117	65	52	182	182	182
AUDUSD Year end	0.841	1.070	1.024	0.914	0.943	0.770	0.745	0.769	0.760	0.760	0.760
<b>Market Capitalisation US\$m</b>	<b>285</b>	<b>400</b>	<b>325</b>	<b>333</b>	<b>430</b>	<b>90</b>	<b>49</b>	<b>40</b>	<b>139</b>	<b>139</b>	<b>139</b>
Net debt reported (B/S) / Face Value	14	6	81	177	89	133	128	108	91	54	19
<b>Enterprise Value</b>	<b>299</b>	<b>405</b>	<b>407</b>	<b>509</b>	<b>519</b>	<b>223</b>	<b>177</b>	<b>149</b>	<b>230</b>	<b>192</b>	<b>158</b>
<b>EV/EBITDAX (x)</b>	<b>7.5</b>	<b>9.3</b>	<b>10.7</b>	<b>18.3</b>	<b>5.2</b>	<b>3.0</b>	<b>3.9</b>	<b>3.2</b>	<b>3.9</b>	<b>2.9</b>	<b>2.6</b>
<b>Net debt / EBITDAX</b>	<b>0.4</b>	<b>0.1</b>	<b>2.1</b>	<b>6.3</b>	<b>0.9</b>	<b>1.8</b>	<b>2.8</b>	<b>2.4</b>	<b>1.5</b>	<b>0.8</b>	<b>0.3</b>

Source: Company data, APP Securities

At 7.5 times our forecast EBITDAX in FY18F, a share price of \$0.29 is implied on a fully diluted basis.

**Figure 9. Horizon Oil Forecast Share Price at 7.5 times EV/EBITDAX**

12 month forward EV/EBITDAX	Jun-18	Apr-19	Jun-19	Apr-20	Jun-20
Underlying EBITDAX	59	66	67	62	61
EV/EBITDAX multiple	7.5	7.5	7.5	7.5	7.5
<b>Implied EV</b>	<b>446</b>	<b>491</b>	<b>500</b>	<b>468</b>	<b>460</b>
Net debt (Face Value)	(91)	(60)	(54)	(25)	(19)
Option Exercise	14	14	14	14	14
<b>Implied Equity</b>	<b>369</b>	<b>446</b>	<b>461</b>	<b>457</b>	<b>455</b>
HZN per US\$ share	\$0.22	\$0.26	\$0.27	\$0.27	\$0.27
AUDUSD	0.760	0.760	0.760	0.760	0.760
<b>HZN per A\$ share</b>	<b>\$0.29</b>	<b>\$0.34</b>	<b>\$0.36</b>	<b>\$0.35</b>	<b>\$0.35</b>

Source: Company data, APP Securities

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Contact with Horizon Oil has been made during the preparation of this report for assistance with the verification of facts.

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