



# Quarterly Production Report

For period ended 31 December 2017

Information presented throughout this report relates only to hydrocarbon exploration and production activities undertaken by Origin Energy Limited ("Origin"), its subsidiaries and the incorporated joint ventures in which it has interests. This report does not cover other business activities of Origin such as electricity generation, or energy retailing.

Origin's share of production from Lattice Energy assets is included in the information presented in this report and will cease to be recognised following completion of the sale of Lattice Energy to Beach Energy, scheduled for 31 January 2018.

Comparative performance at a glance – Origin's total proportional interests			
<b>Previous Quarter Comparison</b>	<b>December 2017</b>	<b>September 2017</b>	<b>Change %</b>
Production (PJe)	83.5	89.1	(6)
Sales (PJe)	88.9	91.4	(3)
Revenue (A\$m) <sup>1</sup>	686.3	678.6	1
<b>Prior Year Corresponding Quarter Comparison</b>	<b>December 2017</b>	<b>December 2016</b>	<b>Change %</b>
Production (PJe)	83.5	80.1	4
Sales (PJe)	88.9	82.2	8
Revenue (A\$m) <sup>1</sup>	686.3	544.3	26
<b>Year to Date Comparison</b>	<b>Jul - Dec 2017</b>	<b>Jul - Dec 2016</b>	<b>Change %</b>
Production (PJe)	172.6	154.3	12
Sales (PJe)	180.4	160.7	12
Revenue (A\$m) <sup>1</sup>	1,364.9	973.9	40

## Highlights

- In the six months to December 2017, production increased 12% to 172.6 PJe due to full six months' contribution of APLNG Train Two. Over the same period revenue has increased 40% to \$1,365 million due to increased sales volumes of LNG and higher realised prices across all products.
- During the December 2017 quarter, a total of 35 produced LNG cargoes were loaded and shipped from the APLNG facility on Curtis Island.
- On 1 January 2018, APLNG successfully loaded its 200th LNG cargo. To date APLNG has sent LNG cargoes to China, Japan, Argentina, South Korea, Malaysia, Mexico and Singapore.
- Planned maintenance was successfully completed in November with Train Two at half rates for ten days in line with expectations. During the shutdown, excess upstream gas volumes were directed into the domestic market, with Origin also able to complete additional upstream maintenance activities.
- As previously disclosed, the sale of Lattice Energy to Beach Energy for \$1,585 million is scheduled to complete on 31<sup>st</sup> January 2018.

<sup>1</sup> Revenue disclosed includes APLNG related amounts that have been capitalised prior to November 2016 as well as gains/(losses) on forward sales and hedging.

## Production and Sales

### **December Quarter 2017 compared with September Quarter 2017**

Production of 83.5 PJe in the December quarter was 5.6 PJe or 6% lower than the September 2017 quarter due to lower customer demand and a seven-day plant shutdown at Otway. Total APLNG production remained stable at 63.4 PJe as lower domestic volumes were offset by an increase in LNG production.

Revenue increased by \$7.7 million or 1% in the December quarter compared to September 2017 as lower volumes from Otway were more than offset by increased sales volumes by APLNG despite stable production reflecting inventory movements and the timing of LNG cargo shipments.

### **December Quarter 2017 compared with December Quarter 2016**

Production of 83.5 PJe in the December 2017 quarter was 3.4 PJe or 4% higher than the December 2016 quarter primarily due to increased volumes from APLNG (7.4 PJe) with two LNG trains on line and higher volumes in the Bass Basin (1.1 PJe) with the Yolla compressor on line, offset by decreased production at Otway (5.8 PJe) due to lower plant availability as a result of a planned shutdown and lower customer nominations.

Revenue increased by \$142 million or 26% from the December 2016 quarter primarily reflecting increased production at APLNG, with increased volumes sold as LNG and higher average realised prices across all products partially offset by lower production at Otway.

### **Financial year to date 2018 compared with financial year to date 2017**

Production of 172.6 PJe in the six months to December 2017 was 18.3 PJe or 12% higher than the prior comparable period primarily due to increases from APLNG (16.7 PJe) with two LNG trains on line and increased production at Bass Basin (1.1 PJe) with the Yolla compressor on line.

Revenue increased by \$391 million or 40% from the prior comparable period primarily reflecting increased production at APLNG, with increased volumes sold as LNG and higher average realised prices across all products.

# 1. PRODUCTION, SALES AND REVENUE

## 1.1 Production by product and area (including interest in APLNG)

Natural Gas and Ethane	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
<b>Natural Gas</b>	PJ						
APLNG domestic <sup>2</sup>		10.4	16.6	(37)	15.9	27.0	41.8
SA Cooper & SWQ		2.8	2.7	7	2.7	5.5	5.5
Otway Basin (offshore)		6.4	11.7	(45)	11.6	18.1	18.0
Bass Basin		2.1	1.9	13	1.3	4.0	3.2
Perth Basin		1.1	1.3	(13)	1.2	2.4	2.1
Taranaki Basin (onshore)		-	-	-	-	-	0.2
Taranaki Basin (Kupe)		3.2	3.4	(6)	2.7	6.6	6.1
<b>Ethane</b>	PJ						
SA Cooper & SWQ		0.4	0.4	-	0.4	0.8	0.9
<b>Total Production</b>		26.4	38.0	(30)	35.8	64.4	77.8
<b>Total Sales Volume</b>		32.3	41.7	(22)	39.8	74.0	85.3
<b>Total Commodity Revenue<sup>3,4</sup></b>	<b>\$M</b>	157.4	223.3	(30)	176.9	380.8	340.9
<b>Average Gas Price – Total<sup>3,4</sup></b>	<b>\$/GJ</b>	4.87	5.36	(9)	4.44	5.14	4.00
Average Gas Price – APLNG <sup>3,4</sup>		3.78	4.42	(15)	3.18	4.13	2.55
Average Gas Price – ex APLNG		5.94	6.24	(5)	5.50	6.11	5.62

Liquefied Natural Gas (LNG)	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
<b>LNG</b>	Kt						
<b>Total Production</b>		885.7	825.9	7	656.7	1,711.6	1,117.8
<b>Total Sales Volume</b>		922.3	788.0	17	660.5	1,710.3	1,157.3
<b>Total Commodity Revenue<sup>3</sup></b>	<b>\$M</b>	449.3	385.2	17	297.7	834.5	484.1
<b>Average LNG Price<sup>3</sup></b>	<b>US\$/mmbtu</b>	7.14	7.34	(3)	6.43	7.23	5.97

Crude Oil	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
<b>Crude Oil</b>	kbbbls						
SA Cooper & SWQ		56.7	56.6	-	69.4	113.4	139.7
Taranaki Basin (onshore)		-	-	-	6.2	-	22.3
<b>Total Production</b>		56.7	56.6	-	75.6	113.4	162.0
<b>Total Sales Volume</b>		297.5	306.9	(3)	322.2	604.4	695.2
<b>Total Commodity Revenue</b>	<b>\$M</b>	25.3	20.2	26	22.7	45.5	47.1
<b>Average Crude Price</b>	<b>\$/bbl</b>	85	66	29	70	75	68

<sup>2</sup> Refers to production to meet domestic supply requirements and excludes production directed towards the LNG facility on Curtis Island.

<sup>3</sup> Prior periods include capitalised revenue related to APLNG ramp gas and LNG sales volumes up to November 2016.

<sup>4</sup> Includes gas sold by APLNG to Origin under long term contract.

Condensate/Naphtha	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
<b>Condensate/Naphtha</b>	<b>kbbbls</b>						
APLNG		-	-	-	-		0.3
SA Cooper & SWQ		53.9	46.6	16	45.3	100.5	90.3
Otway Basin (offshore)		81.8	128.4	(36)	130.3	210.3	211.5
Bass Basin		69.6	61.5	13	41.8	131.1	105.1
Perth Basin		0.6	0.6	-	0.7	1.2	1.2
Taranaki Basin (Kupe)		146.8	158.4	(7)	143.1	305.2	315.8
<b>Total Production</b>		<b>352.7</b>	<b>395.5</b>	<b>(11)</b>	<b>361.1</b>	<b>748.3</b>	<b>724.2</b>
<b>Total Sales Volume</b>		<b>404.9</b>	<b>376.0</b>	<b>8</b>	<b>388.8</b>	<b>780.9</b>	<b>714.5</b>
<b>Total Commodity Revenue</b>	<b>\$M</b>	<b>28.5</b>	<b>22.1</b>	<b>29</b>	<b>23.6</b>	<b>50.6</b>	<b>41.9</b>
<b>Average Condensate Price</b>	<b>\$/bbl</b>	<b>70</b>	<b>59</b>	<b>20</b>	<b>61</b>	<b>65</b>	<b>59</b>

LPG	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
<b>LPG</b>	<b>Kt</b>						
SA Cooper & SWQ		5.9	6.0	(2)	5.4	11.9	11.5
Otway Basin (offshore)		10.6	16.2	(34)	17.3	26.9	27.4
Bass Basin		6.4	5.9	7	3.3	12.3	9.2
Taranaki Basin (onshore)		-	-	-	0.1	-	0.3
Taranaki Basin (Kupe)		12.2	12.2	-	9.4	24.4	18.7
<b>Total Production</b>		<b>35.1</b>	<b>40.3</b>	<b>(13)</b>	<b>35.5</b>	<b>75.5</b>	<b>67.0</b>
<b>Total Sales Volume</b>		<b>33.1</b>	<b>46.3</b>	<b>(28)</b>	<b>35.5</b>	<b>79.4</b>	<b>66.8</b>
<b>Total Commodity Revenue</b>	<b>\$M</b>	<b>21.9</b>	<b>23.0</b>	<b>(5)</b>	<b>16.4</b>	<b>44.9</b>	<b>28.5</b>
<b>Average LPG Price</b>	<b>\$/t</b>	<b>662</b>	<b>497</b>	<b>33</b>	<b>461</b>	<b>566</b>	<b>426</b>

## 1.2 Production by basin (including interest in APLNG)

Production by Basin (All products, PJe)	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
<b>Production by Basin</b>	PJe						
APLNG <sup>5</sup>		63.4	63.5	-	56.0	126.8	110.1
SA Cooper & SWQ		4.1	3.9	6	4.0	8.1	8.2
Otway Basin (offshore)		7.4	13.1	(44)	13.2	20.5	20.5
Bass Basin		2.8	2.5	12	1.7	5.3	4.2
Perth Basin		1.2	1.3	(9)	1.2	2.4	2.1
Taranaki Basin (onshore)		-	-	-	0.1	-	0.3
Taranaki Basin (Kupe)		4.6	4.8	(4)	4.0	9.5	8.7
<b>Total Production Volume</b>		83.5	89.1	(6)	80.1	172.6	154.3
<b>Total Sales Volume</b>		88.9	91.4	(3)	82.2	180.4	160.7
<b>Total Commodity Revenue</b>	\$M	682.4	673.8	1	537.3	1,356.2	942.6
Gain / (Loss) on forward sale <sup>6</sup> and oil hedging <sup>7</sup>	\$M	3.9	4.9	(21)	7.1	8.7	31.3
<b>Total Revenue</b>	\$M	686.3	678.6	1	544.3	1,364.9	973.9
<b>Average Commodity Price</b>	\$/GJe	7.72	7.42	4	6.63	7.57	6.06

## 1.3 Production, Sales Volumes and Revenue Summaries

### 1.3.1 Origin excluding interest in APLNG

Total All Products	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
Production Volume	PJe	20.1	25.7	(22)	24.1	45.8	44.2
Sales Volume	PJe	21.8	27.6	(21)	27.4	49.4	51.5
Sales Revenue	\$M	172.6	199.2	(13)	181.7	371.8	343.6
Gain / (loss) – forward sale <sup>5</sup>	\$M	3.9	4.9	(21)	7.1	8.7	16.8
<b>Total Revenue</b>	\$M	176.5	204.1	(14)	188.7	380.5	360.3
<b>Average Commodity Price</b>	\$/GJe	8.09	7.40	9	6.90	7.71	7.00

<sup>5</sup> Refers to production to meet domestic supply requirements and production directed to the LNG facility on Curtis Island (including liquefaction gas).

<sup>6</sup> Refers to Origin's oil and condensate forward sale agreements. In FY2013 Origin entered into agreements to sell the majority of its future oil and condensate production over a 72 month period commencing 1 July 2015. The fixed price of US\$62.40/bbl represents the forward oil price at the time of US\$89/bbl, discounted to reflect the receipt of the proceeds upfront. Upon entry into the agreements, Origin received A\$482 million. Origin intends to close out these agreements following the completion of the sale of Lattice Energy to Beach Energy, scheduled for 31 January 2018.

<sup>7</sup> Refers to hedge payouts associated with Origin's hedging of its APLNG related JCC oil price exposure.

## 1.3.2 Origin's interest in APLNG

Total All Products	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
Production APLNG 100%	PJe	169.0	169.2	-	149.3	338.3	293.6
<u>Origin's 37.5% interest</u>							
Production (all products)	PJe	63.4	63.5	-	56.0	126.8	110.1
Sales (all products)	PJe	67.1	63.9	5	54.8	131.0	109.2
Revenue <sup>8</sup>	\$M	509.8	474.5	7	355.6	984.3	599.1
Gain/(loss) on oil hedging (Origin only) <sup>9</sup>		-	-	-	-	-	14.6
Total Revenue		509.8	474.5	7	355.6	984.3	613.7
Average Commodity Price	\$/GJe	7.59	7.43	2	6.49	7.51	5.62

## 1.4 Internal and External Purchase and Sales Summary

### 1.4.1 Internal and External Sales (Origin excluding interest in APLNG)

Internal & External Sales Volumes	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
<b>Sales Volume</b>	PJe						
Sales to Energy Markets business		9.2	14.0	(34)	13.5	23.2	22.6
Sales to external parties		12.6	13.6	(7)	13.8	26.2	28.8
<b>Total</b>		21.8	27.6	(21)	27.4	49.4	51.5

### 1.4.2 External Purchases

Product Purchase Volumes included in above sales	Unit	This Quarter	Previous Quarter	% Change	Dec Quarter 2016	YTD 2017/18	YTD 2016/17
Origin (excluding interest in APLNG)	PJe	1.5	1.1	36	1.6	2.6	3.4
Origin's 37.5% interest in APLNG	PJe	4.0	6.0	(35)	1.4	10.0	2.5
<b>Total</b>	PJe	5.5	7.2	(24)	3.0	12.6	6.0

<sup>8</sup> Prior periods include capitalised revenue related to APLNG ramp gas and LNG sales volumes up to November 2016.

<sup>9</sup> Refers to hedge payouts associated with Origin's hedging of its APLNG related JCC oil price exposure.

## **2. DEVELOPMENT AND EXPLORATION OPERATIONS**

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### **2.1 Origin's interests held through Australia Pacific LNG (APLNG)**

#### **2.1.1 Operations Update**

APLNG production (100%) was 169.0 PJe during the quarter in line with the September 2017 quarter (169.2 PJe).

APLNG sales volume (100%) was up 8.5 PJe to 178.9 PJe during the quarter primarily reflecting inventory movements and timing of LNG cargoes.

During the quarter, production from operated fields increased to an average of 1,406 TJ/d from 1,375 TJ/d in the September 2017 quarter (APLNG share), reflecting ongoing commissioning of new wells in the Surat Basin, with a focus on Reedy Creek/Combabula, and improving production from existing wells and facilities.

Average production from non-operated assets decreased to 431 TJ/d in the December 2017 quarter from 465 TJ/d in the September 2017 quarter (APLNG share). Production from QGC operated fields decreased to 319 TJ/d from 349 TJ/d due to the planned gas processing facility shutdown in October.

Planned maintenance was successfully completed in November, with Train 2 at half rates for ten days, in line with expectations. During the shutdown, excess upstream gas volumes were directed into the domestic market, with Origin also able to complete additional upstream maintenance activities.

APLNG expects to complete two downstream maintenance shutdowns, one in Q3 FY2018 and one in Q4 FY2018 each involving one train shutdown for approximately sixteen days.

During the December 2017 quarter, a total of 35 produced LNG cargoes were loaded and shipped from the APLNG facility on Curtis Island. On 1 January 2018, APLNG successfully loaded its 200th LNG cargo. To date APLNG has sent LNG cargoes to China, Japan, Argentina, South Korea, Malaysia, Mexico and Singapore. APLNG participated in the drilling of 74 operated development wells and 25 non-operated development wells during the December 2017 quarter.

## APLNG Operated Production Wells

		Avg daily production (APLNG share)		Development Wells	
				Wells drilled	Wells commissioned
Bowen	Spring Gully	276.9 TJ/d	This Quarter	7	13
			YTD 2017/18	16	13
	Peat	6.7 TJ/d	This Quarter	-	-
			YTD 2017/18	-	-
	Denison	0.2 TJ/d	This Quarter	-	-
			YTD 2017/18	-	-
Surat	Talinga	193.9 TJ/d	This Quarter	10	4
			YTD 2017/18	10	4
	Orana	185.6 TJ/d	This Quarter	4	-
			YTD 2017/18	4	-
	Condabri	374.1 TJ/d	This Quarter	15	10
			YTD 2017/18	23	35
	Combabula / Reedy Creek	369.0 TJ/d	This Quarter	38	48
			YTD 2017/18	84	78
	<b>TOTAL</b>	<b>1,406.4 TJ/d</b>	<b>This Quarter</b>	<b>74</b>	<b>75</b>
			<b>YTD 2017/18</b>	<b>137</b>	<b>130</b>

## APLNG Non-Operated Production Wells

		Avg daily production (APLNG share)		Development Wells	
				Wells drilled	Wells commissioned
GLNG	Fairview / Arcadia	112.2 TJ/d	This Quarter	-	31
			YTD 2017/18	10	34
QGC	Anya	-	This Quarter	14	-
			YTD 2017/18	14	-
	Kenya East	143.4 TJ/d	This Quarter	11	-
			YTD 2017/18	12	-
	Kenya	166.3 TJ/d	This Quarter	-	2
YTD 2017/18			19	3	
Bellevue	9.0 TJ/d	This Quarter	-	-	
		YTD 2017/18	-	-	
	<b>TOTAL</b>	<b>430.9 TJ/d</b>	<b>This Quarter</b>	<b>25</b>	<b>33</b>
			<b>YTD 2017/18</b>	<b>55</b>	<b>37</b>



### 3. DRILLING ACTIVITY

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#### 3.1 Exploration/Appraisal

The table below summarises the exploration and appraisal drilling in which Origin had an interest during the Quarter:

Exploration/Appraisal Wells	Basin / Area	Target	Origin Effective Interest %	Well Status
Isoptera 1	Cooper - SA	Oil	13.19%	C&S
Warumpi 1	Cooper - SA	Oil	13.19%	C&S
Gooranie 1DW1	Cooper - SA	Gas	13.19%	P&A
Caraka 3	Cooper - SA	Gas	13.19%	C&S
Namur 5	Cooper - SA	Gas	13.19%	C&S
Namur 6	Cooper - SA	Gas	13.19%	C&S
Namur 7	Cooper - SA	Gas	13.19%	C&S

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\* Denotes Origin operatorship

## 3.2 Development

The table below summarises development drilling in which Origin had an interest during the December 2017 quarter. Origin participated in 99 CSG development wells across the Bowen and Surat Basins, 4 conventional gas development wells and 7 oil development wells in the Cooper Basin during the December 2017 quarter.

Basin / Area Development Wells	Origin Effective Interest %	Well Status	Basin / Area Development Wells	Origin Effective Interest %	Well Status
<b>Cooper Basin – SA</b>			Combabula 213	35.44%*	Development
<b>Target – Gas</b>			Combabula 222	35.44%*	Development
Namur 8	13.19%	C&S	Combabula 223	35.44%*	Development
Namur 9	13.19%	C&S	Combabula 440	35.44%*	Development
Namur 10	13.19%	C&S	Combabula 441	35.44%*	Development
<b>Target – Oil</b>			Combabula 443	35.44%*	Development
McKinlay 12	13.19%	C&S	Combabula 447	35.44%*	Development
McKinlay 13	13.19%	C&S	Combabula 449	35.44%*	Development
McKinlay 14	13.19%	C&S	Combabula 454	35.44%*	Development
McKinlay 15	13.19%	C&S	Combabula 461	35.44%*	Development
McKinlay 16	13.19%	C&S	Combabula 463	35.44%*	Development
McKinlay 17	13.19%	C&S	Combabula 464	35.44%*	Development
Odonata 2	13.19%	C&S	Condabri 403	37.50%*	Development
<b>Cooper Basin – SWQ</b>			Condabri 404	37.50%*	Development
<b>Target – Gas</b>			Condabri 407	37.50%*	Development
Costa 2	16.74%	C&S	Condabri 408	37.50%*	Development
<b>Bowen</b>			Condabri 409	37.50%*	Development
<b>Target – CSG</b>			Condabri 410	37.50%*	Development
Durham Ranch 169	35.44%*	Development	Condabri 411	37.50%*	Development
Durham Ranch 170	35.44%*	Development	Condabri 412	37.50%*	Development
Durham Ranch 184	35.44%*	Development	Condabri 413	37.50%*	Development
Durham Ranch 188	35.44%*	Development	Condabri 414	37.50%*	Development
Durham Ranch 840	35.44%*	Development	Condabri North 354	37.50%*	Development
Durham Ranch 846	35.44%*	Development	Condabri North 355	37.50%*	Development
Spring Gully 506	35.44%*	Development	Condabri North 357	37.50%*	Development
<b>Surat</b>			Isabella 222	11.72%	Development
<b>Target – CSG</b>			Jen 156	11.72%	Development
Anya 101	11.72%	Development	Jen 189	11.72%	Development
Anya 102	11.72%	Development	Jen 202	11.72%	Development
Anya 103	11.72%	Development	Jen 205	11.72%	Development
Anya 104	11.72%	Development	Jen 210	11.72%	Development
Anya 105	11.72%	Development	Jen 215	11.72%	Development
Anya 106	11.72%	Development	Jen 216	11.72%	Development
Anya 107	11.72%	Development	Jen 222	11.72%	Development
Anya 108	11.72%	Development	Orana North 426	37.50%*	Development
Anya 113	11.72%	Development	Orana North 427	37.50%*	Development
Anya 116	11.72%	Development	Orana North 428	37.50%*	Development
Anya 117	11.72%	Development	Orana North 429	37.50%*	Development
Anya 123	11.72%	Development	Pine Hills 26	35.44%*	Development
Anya 124	11.72%	Development	Pine Hills 27	35.44%*	Development
Anya 125	11.72%	Development	Pine Hills 28	35.44%*	Development
Broadwater 101	11.72%	Development	Pine Hills 46	35.44%*	Development
Broadwater 224	11.72%	Development	Pine Hills 47	35.44%*	Development
Combabula 25	35.44%*	Development	Pine Hills 49	35.44%*	Development
Combabula 50	35.44%*	Development	Pine Hills 66	35.44%*	Development
Combabula 51	35.44%*	Development	Pine Hills 67	35.44%*	Development
Combabula 67	35.44%*	Development	Pine Hills 88	35.44%*	Development
Combabula 80	35.44%*	Development	Pine Hills 89	35.44%*	Development
Combabula 81	35.44%*	Development	Pine Hills 90	35.44%*	Development
Combabula 99	35.44%*	Development	Pine Hills 111	35.44%*	Development
Combabula 113	35.44%*	Development	Pine Hills 112	35.44%*	Development
Combabula 145	35.44%*	Development	Pine Hills 134	35.44%*	Development
Combabula 146	35.44%*	Development	Pine Hills 156	35.44%*	Development
			Reedy Creek 180R	35.44%*	Development
			Riley 36	37.50%*	Development

Riley 37	37.50%*	Development	Talinga 316	37.50%*	Development
Talinga 45	37.50%*	Development	Talinga 328	37.50%*	Development
Talinga 70	37.50%*	Development	Talinga 329	37.50%*	Development
Talinga 97	37.50%*	Development	Talinga 330	37.50%*	Development
Talinga 101	37.50%*	Development	Talinga 331	37.50%*	Development
Talinga 103	37.50%*	Development			

Note: \*denotes Origin operatorship

## 4. EXPLORATION, EVALUATION AND CAPITAL EXPENDITURE

The tables below include total expenditure incurred on exploration and evaluation activities and capital expenditure on development and production activities. They include expenditure committed under farm-in agreements and capitalised interest and exclude expenditure on acquisitions. Expenditure in the current financial year is preliminary and is subject to audit review.

### Lattice Energy

	This Quarter	Previous Quarter	December Qtr 2016	YTD 2017/18	YTD 2016/17
<b>A\$m</b>					
Exploration/Evaluation	1	4	17	5	18
Development/PP&E	29	31	34	60	71
<b>Total</b>	<b>30</b>	<b>35</b>	<b>51</b>	<b>65</b>	<b>89</b>

### Other Origin Energy upstream assets

	This Quarter	Previous Quarter	December Qtr 2016	YTD 2017/18	YTD 2016/17
<b>A\$m</b>					
Exploration/Evaluation	3	2	5	5	14

### APLNG (100%)

The table below includes total expenditure incurred by APLNG on exploration and evaluation activities and capital expenditure on development and production activities. This does not reflect capital expenditure by Origin.

	This Quarter	Previous Quarter	December Qtr 2016	YTD 2017/18	YTD 2016/17
<b>A\$m</b>					
Exploration/Evaluation	15	12	10	27	25
Development/PP&E	264	314	333	578	732
<b>Total Capex</b>	<b>279</b>	<b>326</b>	<b>343</b>	<b>605</b>	<b>757</b>

## 5. CONVERSION FACTORS AND ABBREVIATIONS

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### 5.1 Conversion Factors

<b>Crude oil</b>	0.00583	PJ/kbbls
<b>Condensate</b>	0.00541	PJ/kbbls
<b>LPG</b>	0.0493	PJ/ktonnes
<b>Ethane</b>	0.0517	PJ/ktonnes
<b>LNG</b>	0.0554	PJ/ktonnes
<b>LNG</b>	1.0532	PJ/mmbtu

### 5.2 Abbreviations

<b>APLNG</b>	Australia Pacific LNG – an incorporated Joint Venture between Origin, ConocoPhillips and Sinopec
<b>barrels</b>	an international measure of oil production. 1 barrel = 159 litres
<b>Bopd</b>	barrels of oil per day
<b>bwpd</b>	barrels of water per day
<b>C&amp;C</b>	cased and completed
<b>C&amp;S</b>	cased and suspended
<b>CSG</b>	coal seam gas
<b>FID</b>	final investment decision
<b>GJ</b>	gigajoule = $10^9$ joules
<b>joule</b>	a measure of energy
<b>kbbls</b>	Kilo barrels = 1,000 barrels
<b>kT</b>	Kilo tonnes = 1,000 tonnes
<b>LNG</b>	liquefied natural gas
<b>LPG</b>	liquid petroleum gas
<b>mmbbl</b>	million barrels
<b>mmboe</b>	million barrels of oil equivalent
<b>mmbtu</b>	million British thermal units
<b>mmscf</b>	million standard cubic feet
<b>mtpa</b>	million tonnes per annum
<b>P&amp;A</b>	plugged and abandoned
<b>P&amp;S</b>	plugged and suspended
<b>pa</b>	per annum
<b>PJ</b>	petajoule = $10^{15}$ joules
<b>PJe</b>	petajoule equivalent, a measure used to express the volume of different petroleum products on the basis of the energy contained in the product
<b>QGC</b>	Queensland Gas Company
<b>Spudding</b>	to commence drilling a well
<b>SWQ</b>	South West Queensland
<b>t</b>	tonnes
<b>TJ</b>	terajoule = $10^{12}$ joules
<b>TJ/d</b>	terajoules per day
<b>YTD</b>	year to date