

# September 2013 Quarterly Production Report

## Exploration and Production report for Quarter ended 30 September 2013

Comparative performance at a glance - Origin's total proportional interests			
Previous Quarter Comparison	September 2013	June 2013	Change %
Production (PJe)	37.5	32.1	17
Sales (PJe)	41.0	34.8	18
Revenue (A\$m)	306.7	222.6	38
Prior Corresponding Quarter Comparison	September 2013	September 2012	Change %
Production (PJe)	37.5	33.1	13
Sales (PJe)	41.0	36.2	13
Revenue (A\$m)	306.7	226.0	36

Note: Information presented in the table above and 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. The report does not cover other business activities of Origin such as electricity generation or energy retailing.

### Highlights

- Production 17% higher than the previous Quarter reflecting in particular increased availability at BassGas and commencement of production from Geographe 2
- Revenue 38% higher than the previous Quarter reflecting an increase in production, higher third party sales volumes and higher average commodity prices
- APLNG drilled 105 Phase 1 development wells during the Quarter, bringing the total to 448
- APLNG project work currently being progressed at the rate of 3-4 per cent per month. The Upstream component of the project is 50% complete and the Downstream component 54% complete

### Production and Sales

#### September Quarter 2013 compared with June Quarter 2013

Production of 37.5 PJe in the September Quarter 2013 was 5.4 PJe or 17% higher than the June Quarter 2013. This is primarily attributable to higher production at Otway (2.3 PJe) due to production commencing from the new Geographe 2 well, BassGas (1 PJe) following the Y4 wire-line well intervention, Kupe (0.9 PJe) due to higher market demand in the September Quarter 2013 and APLNG (0.9 PJe) primarily due to additional wells coming on-line.

Sales revenue increased 38% from the June Quarter 2013 reflecting production increases, higher sales of third party volumes and a higher average commodity price.

#### September Quarter 2013 compared with September Quarter 2012

Production of 37.5 PJe in the September Quarter 2013 was 4.4 PJe or 13% higher than the comparable Quarter in 2012. The higher production primarily reflects a full quarter of production from BassGas (3 PJe) which was shut-in for the September Quarter 2012 for the

Mid Life Enhancement (MLE) project and an increase in production at Kupe (1.1 PJe) due to additional gas contracts being in place in the September Quarter 2013.

Sales revenue increased 36% from the September Quarter 2012 reflecting production increases, higher sales of third party volumes and a higher average commodity price.

### **Exploration, Evaluation and Capital Expenditure**

Expenditure on exploration and evaluation activities was \$38 million and capital expenditure on development and production activities was \$50 million (excluding APLNG) for the Quarter, as detailed in Section 5 of this report.

#### **Significant activities during the Quarter included:**

- **Otway Basin**

On 29 July, 2013 Origin, on behalf of the VIC/L23 Joint Venture, announced the commencement of production from Otway Gas Project's newly developed Geographe gas field in Bass Strait in July, 2013 following commissioning and testing <http://www.originenergy.com.au/news/article/asxmedia-releases/1503>

- **MEO farmin**

On 22 July 2013, Origin acquired a 50% interest in the WA 454P permit and associated Breakwater prospect in offshore Western Australia from MEO Australia. Origin has assumed operatorship of the permit.

- **Drilling Activities:**

- **APLNG**

APLNG participated in 275 wells during the Quarter, including 28 exploration/appraisal wells, eight groundwater monitoring bores and 239 development wells (105 operated Phase 1 wells and 134 non-operated production wells).

- **Cooper Basin**

Origin participated in the drilling of 17 wells during the Quarter, consisting of three exploration wells and 14 development wells.

- **Vietnam**

Origin participated in the drilling of one exploration well in the Quarter. The 121-CV-1X well, which spudded on 15 June 2013, reached planned total depth during July 2013. Final logging has been completed, the well has been plugged and abandoned and the rig was released on 28 August 2013. The results of the well are now being evaluated and incorporated into forward exploration plans.

#### **Post Report Date Events**

- **TAWN (NZ Onshore) Asset Sale**

The divestment of Origin's interests in the Tariki, Ahuroa, Waihapa and Ngaere licences in New Zealand's Taranaki region, as well as the Waihapa Production Station and associated gathering and sales infrastructure, to New Zealand Energy Corp was completed on 29 October 2013. Origin's sale consideration was CDN\$30 million plus a 9% royalty on all future hydrocarbons from these licences

<http://www.originenergy.com.au/news/article/asxmedia-releases/1527>

## 1. PRODUCTION, SALES AND REVENUE

Note: Current Quarter production figures for some non-operated areas may include preliminary production data for the last month of the Quarter. Where actual production volumes only became available after the report date for that Quarter, previous Quarter figures have been amended to reflect this.

### 1.1 Production by Product and Area (including interest in APLNG)

Natural Gas and Ethane	Unit	This Quarter	Previous Quarter	% Change	September Quarter 2012	YTD 2013/14	YTD 2012/13
<b>Natural Gas</b>	<b>PJ</b>						
APLNG (CSG and Denison Trough) *		11.5	10.6	9	10.9	11.5	10.9
SA Cooper & SWQ		2.9	2.7	7	3.3	2.9	3.3
Otway Basin (offshore)		10.3	8.4	23	10.3	10.3	10.3
Bass Basin		2.2	1.5	47	-	2.2	-
Surat Basin		-	-	-	-	-	-
Perth Basin		1.2	1.1	9	1.1	1.2	1.1
Taranaki Basin (onshore)		0.1	0.1	0	0.1	0.1	0.1
Taranaki Basin (Kupe)		3.3	2.7	22	2.5	3.3	2.5
<b>Ethane</b>	<b>PJ</b>						
SA Cooper & SWQ		0.4	0.4	0	0.4	0.4	0.4
<b>Total Production</b>		<b>31.9</b>	<b>27.5</b>	<b>16</b>	<b>28.6</b>	<b>31.9</b>	<b>28.6</b>
<b>Total Sales Volume</b>		<b>32.8</b>	<b>28.6</b>	<b>15</b>	<b>30.4</b>	<b>32.8</b>	<b>30.4</b>
<b>Total Sales Revenue</b>	<b>\$M</b>	<b>140.1</b>	<b>115.8</b>	<b>21</b>	<b>123.7<sup>#</sup></b>	<b>140.1</b>	<b>123.7<sup>#</sup></b>
<b>Average Gas Price</b>	<b>\$/GJ</b>	<b>4.27</b>	<b>4.04</b>	<b>6</b>	<b>4.07</b>	<b>4.27</b>	<b>4.07</b>

Crude Oil	Unit	This Quarter	Previous Quarter	% Change	September Quarter 2012	YTD 2013/14	YTD 2012/13
<b>Crude Oil</b>	<b>kbbbls</b>						
SA Cooper & SWQ		77.8	78.5	(1)	104.0	77.8	104.0
Surat Basin		3.9	4.5	(13)	4.4	3.9	4.4
Perth Basin		-	-	-	8.5	-	8.5
Taranaki Basin (onshore)		34.0	29.2	16	40.2	34.0	40.2
<b>Total Production</b>		<b>115.7</b>	<b>112.2</b>	<b>3</b>	<b>157.1</b>	<b>115.7</b>	<b>157.1</b>
<b>Total Sales Volume</b>		<b>508.8</b>	<b>350.4</b>	<b>45</b>	<b>318.1</b>	<b>508.8</b>	<b>318.1</b>
<b>Total Sales Revenue</b>	<b>\$M</b>	<b>66.8</b>	<b>37.4</b>	<b>79</b>	<b>36.0</b>	<b>66.8</b>	<b>36.0</b>
<b>Average Crude Price</b>	<b>\$/bbl</b>	<b>131</b>	<b>107</b>	<b>23</b>	<b>113</b>	<b>131</b>	<b>113</b>

\* Origin's share in APLNG was diluted from 50% to 42.5% on 9 August 2011 and to 37.5% on 12 July 2012.

# Adjusted to include APLNG carbon related revenue.

Condensate/Naphtha	Unit	This Quarter	Previous Quarter	September		YTD 2013/14	YTD 2012/13
				% Change	Quarter 2012		
Condensate/Naphtha	kbbls						
APLNG (Denison Trough) *		0.3	-	-	0.2	0.3	0.2
SA Cooper & SWQ		58.2	55.9	4	57.4	58.2	57.4
Otway Basin (offshore)		122.4	81.8	50	106.8	122.4	106.8
Bass Basin		87.2	54.2	61	-	87.2	-
Surat Basin		-	-	-	-	-	-
Perth Basin		1.0	0.7	47	0.4	1.0	0.4
Taranaki Basin (onshore)		-	-	-	-	-	-
Taranaki Basin (Kupe)		256.5	222.9	15	221.5	256.5	221.5
<b>Total Production</b>		<b>525.6</b>	<b>415.5</b>	<b>26</b>	<b>386.3</b>	<b>525.6</b>	<b>386.3</b>
<b>Total Sales Volume</b>		<b>549.9</b>	<b>477.5</b>	<b>15</b>	<b>447.7</b>	<b>549.9</b>	<b>447.7</b>
<b>Total Sales Revenue</b>	<b>\$M</b>	<b>63.0</b>	<b>47.4</b>	<b>33</b>	<b>45.2</b>	<b>63.0</b>	<b>45.2</b>
<b>Average Condensate Price</b>	<b>\$/bbl</b>	<b>115</b>	<b>99</b>	<b>15</b>	<b>101</b>	<b>115</b>	<b>101</b>

LPG	Unit	This Quarter	Previous Quarter	September		YTD 2013/14	YTD 2012/13
				% Change	Quarter 2012		
LPG	Kt						
SA Cooper & SWQ		7.2	6.5	11	7.4	7.2	7.4
Otway Basin (offshore)		15.6	10.1	54	12.5	15.6	12.5
Bass Basin		7.3	4.0	83	-	7.3	-
Surat Basin		-	-	-	-	-	-
Taranaki Basin (onshore)		0.2	0.2	0	0.3	0.2	0.3
Taranaki Basin (Kupe)		14.1	12.0	18	10.4	14.1	10.4
<b>Total Production</b>		<b>44.4</b>	<b>32.8</b>	<b>35</b>	<b>30.6</b>	<b>44.4</b>	<b>30.6</b>
<b>Total Sales Volume</b>		<b>44.7</b>	<b>31.5</b>	<b>42</b>	<b>30.8</b>	<b>44.7</b>	<b>30.8</b>
<b>Total Sales Revenue</b>	<b>\$M</b>	<b>36.8</b>	<b>22.0</b>	<b>67</b>	<b>21.0</b>	<b>36.8</b>	<b>21.0</b>
<b>Average LPG Price</b>	<b>\$/t</b>	<b>823</b>	<b>698</b>	<b>18</b>	<b>682</b>	<b>823</b>	<b>682</b>

## 1.2 Production by Basin (including APLNG production)

Production by Basin (All products, PJe)	Unit	This Quarter	Previous Quarter	September		YTD 2013/14	YTD 2012/13
				% Change	Quarter 2012		
Production by Basin	PJe						
APLNG (CSG and Denison Trough) *		11.5	10.6	9	10.9	11.5	10.9
SA Cooper & SWQ		4.4	4.2	5	5.0	4.4	5.0
Otway Basin (offshore)		11.7	9.4	24	11.5	11.7	11.5
Bass Basin		3.0	2.0	50	-	3.0	-
Surat Basin		-	0.0	(100)	-	-	-
Perth Basin		1.2	1.1	9	1.1	1.2	1.1
Taranaki Basin (onshore)		0.3	0.3	0	0.3	0.3	0.3
Taranaki Basin (Kupe)		5.4	4.5	20	4.3	5.4	4.3
<b>Total Production Volume</b>	<b>PJe</b>	<b>37.5</b>	<b>32.1</b>	<b>17</b>	<b>33.1</b>	<b>37.5</b>	<b>33.1</b>
<b>Total Sales Volume</b>	<b>PJe</b>	<b>41.0</b>	<b>34.8</b>	<b>18</b>	<b>36.2</b>	<b>41.0</b>	<b>36.2</b>
<b>Total Sales Revenue</b>	<b>\$M</b>	<b>306.7</b>	<b>222.6</b>	<b>38</b>	<b>226.0<sup>#</sup></b>	<b>306.7</b>	<b>226.0<sup>#</sup></b>
<b>Average Commodity Price</b>	<b>\$/GJe</b>	<b>7.49</b>	<b>6.39</b>	<b>17</b>	<b>6.25</b>	<b>7.49</b>	<b>6.25</b>

Origin's share in APLNG was diluted from 50% to 42.5% on 9 August 2011 and to 37.5% on 12 July 2012.

# Adjusted to include APLNG carbon related revenue.

### 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	September Quarter 2012	YTD 2013/14	YTD 2012/13
Total Production Volume	PJe	26.0	21.5	21	22.2	26.0	22.2
Total Sales Volume	PJe	28.4	23.1	23	24.4	28.4	24.4
Total Sales Revenue	\$M	262.2	182.4	44	187.7	262.2	187.7
Average Commodity Price	\$/GJe	9.2	7.9	17	7.7	9.2	7.7

#### 1.3.2 Origin's interest in APLNG\*

Total All Products	Unit	This Quarter	Previous Quarter	% Change	September Quarter 2012	YTD 2013/14	YTD 2012/13
Production APLNG 100%	PJe	30.7	28.2	9	29.1	30.7	29.1
<u>Origin's interest:</u>							
Production (all products)	PJe	11.5	10.6	9	10.9	11.5	10.9
Sales (all products)	PJe	12.6	11.7	7	11.8	12.6	11.8
Total Sales Revenue	\$M	44.5	40.2	11	38.3 <sup>#</sup>	44.5	38.3 <sup>#</sup>

### 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	September Quarter 2012	YTD 2013/14	YTD 2012/13
Total Sales Volume	PJe						
Internal		11.2	8.8	28	7.7	11.2	7.7
External		17.3	14.3	21	16.7	17.3	16.7
Total		28.4	23.1	23	24.4	28.4	24.4

#### 1.4.2 External Purchases

Product Purchases included in above sales	Unit	This Quarter	Previous Quarter	% Change	September Quarter 2012	YTD 2013/14	YTD 2012/13
Origin (excluding interest in APLNG)	PJe	2.5	2.1	19	1.4	2.5	1.4
Origin's interest in APLNG *	PJe	1.1	1.3	(15)	1.3	1.1	1.3
Total	PJe	3.6	3.4	6	2.7	3.6	2.7

\* Origin's share in APLNG was diluted from 50% to 42.5% on 9 August 2011 and to 37.5% on 12 July 2012.

# Adjusted to include APLNG carbon related revenue.

## 2 DEVELOPMENT AND EXPLORATION OPERATIONS

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

#### 2.1.1 Upstream Operations

APLNG production (100%) was 30.7 PJe during the Quarter, an increase of 9% compared to the June Quarter 2013, primarily due to a successful Spring Gully workover campaign, Spring Gully wells coming online and improved Talinga compressor availability.

Average production from operated assets increased from 229 TJ/d in the June Quarter 2013 to 255 TJ/d (APLNG share) and increased from 78 TJ/d to 79 TJ/d from non-operated assets (APLNG share).

APLNG participated in 275 wells during the Quarter, including 28 exploration/appraisal wells, eight groundwater monitoring bores and 239 development wells (105 operated Phase 1 wells and 134 non-operated production wells).

#### APLNG Operated Production Wells

The Phase 1 drilling program continued, with 105 operated production wells drilled during the Quarter. Of these, 23 were drilled in Condabri, 16 in Spring Gully, 58 in Combabula and eight in Orana. A total of 448 Phase 1 operated wells have been drilled to 30 September 2013.

			Pre-Phase 1 <sup>1</sup>	Phase 1 <sup>2</sup>	
			Development wells commissioned	Development wells drilled	Development wells commissioned
Bowen	Spring Gully	This Quarter	2	16	10
		YTD 2013/2014	2	16	10
		Total to Date	177 <sup>3</sup>	59 <sup>4</sup>	20 <sup>5</sup>
		Max. Avg Well Deliverability <sup>6</sup>	1.2 TJ/d	-	-
Surat	Talinga	This Quarter	-	-	-
		YTD 2013/2014	-	-	-
		Total to Date	101 <sup>3</sup>	-	-
		Max. Avg Well Deliverability <sup>6</sup>	2.2 TJ/d	-	-
	Orana	This Quarter	-	8	-
		YTD 2013/2014	-	8	-
		Total to Date	-	8	-
		Max. Avg Well Deliverability <sup>6</sup>	-	-	-
	Condabri	This Quarter	-	23	12
		YTD 2013/14	-	23	12
		Total to Date	-	267	12
		Max. Avg Well Deliverability <sup>6</sup>	-	-	-
	Combabula	This Quarter	-	58	-
		YTD 2013/14	-	58	-
		Total to Date	-	114	-
		Max. Avg Well Deliverability <sup>6</sup>	-	-	-
Total	This Quarter	2	105	22	
	YTD 2013/2014	2	105	22	
	Total to Date	278 <sup>7</sup>	448 <sup>7</sup>	32	

<sup>1</sup> APLNG operated wells designated to deliver gas to its domestic operations

<sup>2</sup> APLNG operated wells designated to deliver first gas to both trains of the CSG to LNG project

<sup>3</sup> 30 June, 2013 pre Phase 1 well counts revised from 167 to 175 for Spring Gully and 102 to 101 for Talinga

<sup>4</sup> Excludes two pre-Phase 1 development wells drilled in Spring Gully

<sup>5</sup> 30 June, 2013 Spring Gully Phase 1 Development wells online revised from 0 to 10

<sup>6</sup> Maximum average observable rate sustained over a week, throughout the Quarter, from wells that have been online for more than six months

<sup>7</sup> Excludes 25 conventional wells in the Denison Trough and 23 CSG wells in the Peat Project Area not targeted for any Phase 1 development

## **Bowen Basin (CSG)**

### *Spring Gully Project area (Operated)*

The gas plants achieved gross average production of 129 TJ/day (APLNG share 126 TJ/day) during the Quarter.

Of the wells that form part of the Spring Gully Phase 6 project, two were commissioned and are now online, in addition, 10 APLNG phase 1 wells were also commissioned and are now online. The 32 well workover campaign to install artificial lift systems was completed during the Quarter.

16 APLNG Phase 1 wells were drilled during the Quarter.

### *Fairview Project area (Non-operated)*

Average Fairview gas production during the Quarter was 105 TJ/d (APLNG share 25 TJ/d).

10 development wells and five exploration/appraisal wells were drilled in the non-operated Fairview project area and other participating GLNG-operated tenements in the region during the Quarter.

### *Peat Project Area (Operated)*

Average gas production for the Quarter was 9 TJ/d (100% owned by APLNG).

## **Surat Basin (CSG)**

### *Talinga/Orana Project Area (Operated)*

Average production for the Quarter was 115 TJ/d (100% owned by APLNG). 101 wells are currently producing in the field with the North Talinga field fully commissioned.

Eight Orana Phase 1 wells and three ground water monitoring bore were drilled in the Quarter.

### *Argyle/Kenya/Lauren/Bellevue Project Area (Non-operated)*

ATP 620 JV (Kenya) production averaged 126 TJ/d during the Quarter (APLNG share 51 TJ/d) and PL 247 (Bellevue) production averaged 7 TJ/d during the Quarter (APLNG share 2 TJ/d), with APLNG receiving a further 1 TJ/d of Bellevue gas under gas banking repayment arrangements with QGC.

Across total participating QGC tenements, 124 development wells and four appraisal wells were drilled during the Quarter.

### *Angry Jungle (Non-Operated)*

During the Quarter, three exploration and appraisal wells were drilled in the GLNG-operated tenement, ATP 631P.

### *Condabri Project Area (Operated)*

Development of the Condabri project area has progressed, with 23 development wells drilled and 13 completed during the Quarter. 12 wells are currently producing to an early flare in the Condabri Central field.

### *Combabula Project Area (Operated)*

Development of the Combabula project area continues with 58 development wells and two groundwater monitoring bores drilled during the Quarter.

### *Other Areas (Operated)*

Nine Exploration wells and three groundwater monitoring bores were drilled in this Quarter.

## **Galilee Basin (CSG)**

Four Exploration wells were drilled in the Galilee Basin this Quarter, three were plugged and abandoned (Cannonball 1, Politic 1 and Skull 1) whilst one was cased and suspended (Yahoo 1) for further evaluation.

## **Denison Trough (including Conventional)**

Average gas production for the Quarter was 8 TJ/d (APLNG share 4 TJ/d). The Northern Denison field remains temporarily shut down to carry out upgrade activities.

### *Other Areas*

Mira 3 pilot well was worked over and brought online for the first time during the Quarter.

During the Quarter, three exploration and appraisal wells were drilled in the Denison Trough, with two cased and suspended and the third plugged and abandoned.

## **2.1.2 Upstream Project Update**

Upstream progress at 30 September 2013 is 50%. This incorporates a rebasing of overall progress reporting to allow for project cost increases already announced in February, the greater part of which was increased contingency on the Upstream part of the project. This rebasing has no effect on the achievement of project milestones or schedule.

There were 105 development wells drilled in the Quarter with a total of 448 Phase 1 wells drilled to date. Drilling progress is continuing in line with plan and lease construction is ramping up with a new contractor panel appointed.

For the Quarter there were 91 diameter-kilometres of gathering lines installed, bringing the cumulative total to 252 diameter-kilometres (equivalent to 427 wells). There is 275 kilometres of the main pipeline installed (132 kilometres during the Quarter) and it is now 84% complete.

The first wells were brought on line in Condabri Central during August with gas flowing into the gathering network and flared, and produced water flowing into ponds. Practical completion was achieved for the Condabri Central to Condabri South 132kV transmission line during August and the Monreagh Dam was completed.





*Water Treatment Facility - Condabri Central*

### **2.1.3 Downstream Project Update**

The Downstream project is 54% complete at the end of September 2013.

The seventh barge of modules was delivered to Curtis Island during the Quarter, and the eighth and ninth barges were en-route at the end of September 2013.

A number of key equipment packages were delivered to Curtis Island, including the first batch of pre-fabricated generation substations; the Train 2 CO<sub>2</sub> absorber and the first shipment of Train 2 refrigeration compressors. Additionally, packages en-route at the end of the Quarter included the second shipment of Train 2 refrigeration compressors.

Other construction activities during the Quarter included completed setting of Train 1 compressors, commencement of concrete pouring of the Train 2 tabletops, and completed pile driving for the loading platform, trestle and berthing dolphins of the LNG jetty.

By the end of the Quarter, the construction camp was completed and the main dredging required for the project was completed (ongoing maintenance dredging will continue). Roof raising on the second LNG tank occurred in July 2013 and the concrete walls surrounding the tanks are almost complete. Insulation works are continuing on both tanks.



*Curtis Island - Overview from South*

## **2.2 Cooper / Eromanga Basin (South Australia / Queensland)**

Cooper Basin production of 4.4 PJe increased by 5% from the previous Quarter due to additional wells coming online. Production was 0.6 PJe or 12% lower than the September 2012 Quarter as a result of natural field decline.

A total of 17 wells were drilled in the Quarter, consisting of 14 development locations and three unconventional exploration locations. Seven wells were from operations at the Cowralli Multi-Well pad and the remaining wells from the SWQ development programme and the 2013 Charo and Cook Oil programmes.

13 of the development wells were cased and suspended with one subject to ongoing drilling.

Exploration activity was highlighted by continued activity within the Nappamerri Trough with the drilling and case and suspend of Van Der Waals-1 and Langmuir-1. Moomba 194 (Fortuna 1Vt), the vertical appraisal/micro-seismic monitoring wellbore for the subsequent horizontal targeting the REM shale, was subject to ongoing drilling. The first well in the campaign (Gaschnitz 1 ST) was fracture stimulated over seven stages and produced gas to surface at 1 MMscf/d.

## **2.3 Otway Basin (Victoria / Tasmania)**

Otway Basin production of 11.7 PJe has increased by 24% from the previous Quarter due to higher plant availability and the Geographe 2 well being online from July 2013.

## **2.4 Bass Basin (Tasmania)**

Bass Basin production of 3 PJe has increased by 50% from the previous Quarter due to both Yolla 3 and Yolla 4 wells being online and higher plant availability.

Production is currently restricted by produced water handling capability. Yolla MLE Phase 2 activities commenced on the platform.

## **2.5 Surat Basin (Queensland)**

Operations at the Kincora gas processing plant remained suspended during the Quarter pending the completion of an asset review. Oil production of 3.9 kbbls is continuing from the Emu Apple Field.

Pilot testing continues at Duke 2 and Duke 3 pilots at the Ironbark ATP 788 CSG tenement.

## **2.6 Perth Basin (Western Australia)**

Perth Basin production of 1.2 PJe has increased by 9% from the previous Quarter. Condensate production increased 47% due to the more liquids rich Beharra Spring wells coming back online.

## **2.7 Bonaparte Basin (Western Australia/Northern Territory)**

### *Petrel Field (WA6R & NT/RL1)*

The Operator, GDF Suez, continues to work up the development concept for the upstream development of the Petrel gas field.

## **2.8 Taranaki Basin (New Zealand)**

### *Kupe (offshore Taranaki)*

Kupe production of 5.4 PJe (Origin share) was 20% higher than the previous Quarter due to higher seasonal market nominations. Three tanker liftings of Kupe light crude from Port Taranaki were completed during the Quarter.

### *Tariki/Ahuroa/Waihapa/Ngaere (TAWN) and Rimu/Kauri/Manutahi*

Total onshore production of 0.3 PJe was in line with the previous Quarter.

The Manutahi-D pilot plant was partly operational during the Quarter and production limited due to post commissioning operational issues with the pilot plant equipment. These issues were resolved during October.

Oil production from the Manutahi waterflood pilot remained temporarily shut-in for the majority of the Quarter while a workover was conducted to clean out the central producing well. Oil production resumed in early October.

## **2.9 Canterbury Basin (New Zealand)**

The operator, Anadarko, continued preparations to drill the Caravel-1 well during the Quarter. The well is scheduled to commence drilling in the second half of FY2014 using the Noble Bob Douglas drillship.

## **2.10 Lamu Basin (Kenya)**

Technical assessment of the prospectivity of the L8 PSC area continued during the Quarter.

## **2.11 Song Hong Basin (Vietnam)**

The 121-CV-1X well, spudded on 15 June 2013 and reached planned total depth during July 2013. Final logging has been completed, the well plugged and abandoned and the rig was released on 28 August. The results of the well are now being evaluated and incorporated into forward exploration plans.

## 2.12 Botswana

The nine corehole and drill stem testing program was completed. The test results indicated variable permeability. Desorption and adsorption core analysis results are presently being interpreted.

## 3. ACQUISITIONS/DIVESTMENTS

### DIVESTMENT

- **TAWN (NZ Onshore) Asset Sale**

The divestment of Origin's interests in the Tariki, Ahuroa, Waihapa and Ngaere licences in New Zealand's Taranaki region, as well as the Waihapa Production Station and associated gathering and sales infrastructure, to New Zealand Energy Corp was completed on 29 October 2013.

### ACQUISITIONS

- ***WA 454P (Bonaparte Basin)***

On 22 July 2013, Origin acquired a 50% interest in the WA 454P permit and associated Breakwater prospect in offshore Western Australia from MEO Australia. Origin has assumed operatorship of the permit.

#### 4. DRILLING ACTIVITY

##### 4.1 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
Langmuir 1	Cooper Basin - SA	Gas	13.19%	C&S
Moomba 194	Cooper Basin - SA	Gas	13.19%	Drilling Ahead
Van Der Waals 1	Cooper Basin - SA	Gas	13.19%	C&S
Bottle Tree West 1	Bowen Basin	CSG	18.75%*	Suspended
Ironbark Gully 3	Bowen Basin	CSG	8.97%	Suspended
Ironbark Gully 4	Bowen Basin	CSG	8.97%	Suspended
Ironbark Gully 5	Bowen Basin	CSG	8.97%	Suspended
New Fowler 1	Bowen Basin	CSG	18.75%*	P&A
Waddy Brae 2	Bowen Basin	CSG	8.97%	Suspended
Waddy Brae 3	Bowen Basin	CSG	8.97%	Suspended
Westgrove 8	Bowen Basin	CSG	18.75%*	Suspended
Cannonball 1	Galilee Basin	CSG	37.5%*	P&A
Politic 1	Galilee Basin	CSG	37.5%*	P&A
Skull 1	Galilee Basin	CSG	37.5%*	P&A
Yahoo 1	Galilee Basin	CSG	37.5%*	Suspended
Angry Jungle 7	Surat Basin	CSG	6.79%	Suspended
Barney 10	Surat Basin	CSG	11.72%	Suspended
Celeste 20	Surat Basin	CSG	11.72%	Suspended
Gilbert Gully 15	Surat Basin	CSG	37.5%*	Suspended
Gilbert Gully 24	Surat Basin	CSG	37.5%*	Suspended
Gilbert Gully 25	Surat Basin	CSG	37.5%*	Suspended
Gilbert Gully 26	Surat Basin	CSG	37.5%*	P&A
Mostyn 1	Surat Basin	CSG	6.79%	Suspended
Myalla 1	Surat Basin	CSG	6.79%	Suspended
Poppy 14	Surat Basin	CSG	11.72%	Suspended
Poppy 15	Surat Basin	CSG	11.72%	Suspended
Waar Waar 10	Surat Basin	CSG	37.5%*	P&A
Waar Waar 13	Surat Basin	CSG	37.5%*	Suspended
Waar Waar 4	Surat Basin	CSG	37.5%*	P&A
Zig Zag 3	Surat Basin	CSG	37.5%*	Continuing
Zig Zag 4	Surat Basin	CSG	37.5%*	Suspended
121-CV-1X	Vietnam	Oil/Gas	45.00%*	P&A

\* Denotes Origin Operatorship

## 4.2 Development

The table below summarises the development drilling in which Origin had an interest during the Quarter. Origin participated in 247 CSG development wells (including groundwater monitoring wells) across the Bowen and Surat Basins and 14 conventional gas/oil development wells in the Cooper Basin during the Quarter.

Basin / Area Development Wells	Origin Effective Interest %	Well Status
<i>Cooper Basin - SA</i>		
<i>Target - Gas</i>		
Cowralli 17	13.2%	C&S
Cowralli 18	13.2%	C&S
Cowralli 19	13.2%	C&S
Cowralli 20	13.2%	C&S
Cowralli 27	13.2%	C&S
Cowralli 28	13.2%	C&S
Cowralli 29	13.2%	C&S
Pelican 13	13.2%	C&S
<i>Cooper Basin - SA</i>		
<i>Target - Oil</i>		
Charo 18	13.2%	C&S
<i>Cooper Basin - SWQ</i>		
<i>Target - Gas</i>		
Bolah 1	25.0%	Drilling Ahead
Okotoko West 1/ST1	16.7%	C&S
<i>Cooper Basin - SWQ</i>		
<i>Target - Oil</i>		
Cook 24	25.00%	C&S
Cook 25	25.00%	C&S
Cook 27	25.00%	C&S
<i>Bowen Basin</i>		
<i>Target - CSG</i>		
Durham Ranch 100	11.7%	Production
Durham Ranch 102	11.7%	Production
Durham Ranch 106	11.7%	Production
Durham Ranch 107	11.7%	Production
Durham Ranch 124	11.7%	Production
Durham Ranch 126	11.7%	Production
Durham Ranch 179	11.7%	Production
Durham Ranch 180	11.7%	Production
Durham Ranch 183	11.7%	Production
Durham Ranch 265	11.7%	Production
Durham Ranch 266	11.7%	Production
Durham Ranch 276	11.7%	Production
Durham Ranch 93	11.7%	Production
Durham Ranch 94	11.7%	Production
Durham Ranch 99	11.7%	Production
Fairview 12-02-2	11.7%	Production
Fairview 12-02-3	11.7%	Production

Basin / Area Development Wells	Origin Effective Interest %	Well Status
Fairview 12-08-2	11.7%	Production
Fairview 12-08-3	11.7%	Production
Fairview 13-09-4	11.7%	Production
Fairview 13-14-5	11.7%	Production
Fairview 13-14-6	11.7%	Production
Fairview 13-14-7	11.7%	Production
Fairview 13-14-8	11.7%	Production
Fairview 16-49-1	11.7%	Production
Spring Gully 146	11.7%	Production
<i>Surat Basin</i>		
<i>Target - CSG</i>		
Broadwater 124	11.7%	Production
Broadwater 131	11.7%	Production
Broadwater 139	11.7%	Production
Broadwater 140	11.7%	Production
Broadwater 148	11.7%	Production
Broadwater 149	11.7%	Production
Broadwater 150	11.7%	Production
Broadwater 151	11.7%	Production
Broadwater 157	11.7%	Production
Broadwater 158	11.7%	Production
Broadwater 166	11.7%	Production
Broadwater 168	11.7%	Production
Broadwater 175	11.7%	Production
Broadwater 179	11.7%	Production
Broadwater 185	11.7%	Production
Broadwater 186	11.7%	Production
Broadwater 188	11.7%	Production
Broadwater 198	11.7%	Production
Broadwater 206	11.7%	Production
Broadwater 213	11.7%	Production
Broadwater 219	11.7%	Production
Clunie 101	11.7%	Production
Clunie 102	11.7%	Production
Clunie 103	11.7%	Production
Clunie 104	11.7%	Production
Clunie 105	11.7%	Production
Clunie 106	11.7%	Production
Clunie 107	11.7%	Production
Clunie 108	11.7%	Production
Clunie 109	11.7%	Production
Clunie 110	11.7%	Production

Basin / Area Development Wells	Origin Effective Interest %	Well Status
Clunie 111	11.7%	Production
Clunie 112	11.7%	Production
Combabula 103	34.77%*	Production
Combabula 104	34.77%*	Production
Combabula 105	34.77%*	Production
Combabula 106	34.77%*	Production
Combabula 119	34.77%*	Production
Combabula 120	34.77%*	Production
Combabula 132	34.77%*	Production
Combabula 134	34.77%*	Production
Combabula 135	34.77%*	Production
Combabula 136	34.77%*	Production
Combabula 137	34.77%*	Production
Combabula 138	34.77%*	Production
Combabula 139	34.77%*	Production
Combabula 140	34.77%*	Production
Combabula 150	34.77%*	Production
Combabula 151	34.77%*	Production
Combabula 152	34.77%*	Production
Combabula 153	34.77%*	Production
Combabula 154	34.77%*	Production
Combabula 155	34.77%*	Production
Combabula 156	34.77%*	Production
Combabula 157	34.77%*	Production
Combabula 166	34.77%*	Production
Combabula 167	34.77%*	Production
Combabula 168	34.77%*	Production
Combabula 169	34.77%*	Production
Combabula 184	34.77%*	Production
Combabula 185	34.77%*	Production
Combabula 186	34.77%*	Production
Combabula 187	34.77%*	Production
Combabula 188	34.77%*	Production
Combabula 189	34.77%*	Production
Combabula 190	34.77%*	Production
Combabula 191	34.77%*	Production
Combabula 206	34.77%*	Production
Combabula 208	34.77%*	Production
Combabula 209	34.77%*	Production
Combabula 221	34.77%*	Production
Combabula 234	34.77%*	Production
Combabula 235	34.77%*	Production
Combabula 248	34.77%*	Production
Combabula 283	34.77%*	Production
Combabula 29	34.77%*	Production
Combabula 45	34.77%*	Production
Combabula 46	34.77%*	Production
Combabula 47	34.77%*	Production
Combabula 48	34.77%*	Production

Basin / Area Development Wells	Origin Effective Interest %	Well Status
Combabula 66	34.77%*	Production
Combabula 76	34.77%*	Production
Combabula 79	34.77%*	Production
Combabula 84	34.77%*	Production
Combabula 88	34.77%*	Production
Combabula 95	34.77%*	Production
Combabula 96	34.77%*	Production
Combabula North 284	34.77%*	Production
Combabula North 323	34.77%*	Production
Combabula North 376	34.77%*	Production
Combabula North 377	34.77%*	Production
Combabula Pond MB1	37.50%*	GWM
Combabula Pond MB3	37.50%*	GWM
Condabri 183	37.50%*	Production
Condabri 189	37.50%*	Production
Condabri 191	37.50%*	Production
Condabri 192	37.50%*	Production
Condabri 363	37.50%*	Production
Condabri 364	37.50%*	Production
Condabri 365	37.50%*	Production
Condabri 366	37.50%*	Production
Condabri 367	37.50%*	Production
Condabri 368	37.50%*	Production
Condabri 369	37.50%*	Production
Condabri 370	37.50%*	Production
Condabri 371	37.50%*	Production
Condabri 372	37.50%*	Production
Condabri 374	37.50%*	Production
Condabri 376	37.50%*	Production
Condabri 377	37.50%*	Production
Condabri 378	37.50%*	Production
Condabri 388	37.50%*	Production
Condabri North 184	37.50%*	Production
Condabri North 24	37.50%*	Production
Condabri North 336	37.50%*	Production
Condabri North 76	37.50%*	Production
David 111	11.7%	Production
David 112	11.7%	Production
David 113	11.7%	Production
David 123	11.7%	Production
David 131	11.7%	Production
David 133	11.7%	Production
Gilbert Gully MB1-G	37.5%*	GWM
Glendower 109	11.7%	Production
Glendower 110	11.7%	Production
Glendower 119	11.7%	Production
Glendower 120	11.7%	Production
Glendower 138	11.7%	Production



Basin / Area Development Wells	Origin Effective Interest %	Well Status
Glendower 139	11.7%	Production
Glendower 140	11.7%	Production
Glendower 159	11.7%	Production
Glendower 160	11.7%	Production
Glendower 170	11.7%	Production
Glendower 171	11.7%	Production
Glendower 172	11.7%	Production
Glendower 174	11.7%	Production
Glendower 177	11.7%	Production
Glendower 178	11.7%	Production
Glendower 179	11.7%	Production
Glendower 182	11.7%	Production
Glendower 183	11.7%	Production
Glendower 186	11.7%	Production
Glendower 187	11.7%	Production
Glendower 188	11.7%	Production
Glendower 189	11.7%	Production
Glendower 190	11.7%	Production
Glendower 193	11.7%	Production
Glendower 194	11.7%	Production
Glendower 195	11.7%	Production
Glendower 196	11.7%	Production
Glendower 197	11.7%	Production
Glendower 199	11.7%	Production
Glendower 203	11.7%	Production
Glendower 204	11.7%	Production
Glendower 205	11.7%	Production
Glendower 213	11.7%	Production
Glendower 214	11.7%	Production
Glendower 215	11.7%	Production
Glendower 5	11.7%	Production
Harry 117	11.7%	Production
Harry 118	11.7%	Production
Harry 119	11.7%	Production
Harry 135	11.7%	Production
Isabella 149	11.7%	Production
Isabella 159	11.7%	Production
Isabella 219	11.7%	Production
Jen 108	11.7%	Production
Jen 109	11.7%	Production
Jen 112	11.7%	Production
Jen 113	11.7%	Production
Jen 123	11.7%	Production
Jen 132	11.7%	Production
Jen 133	11.7%	Production
Kenya East 133	11.7%	Production
Kenya East 138	11.7%	Production
Kenya East 154	11.7%	Production
Kenya East 155	11.7%	Production

Basin / Area Development Wells	Origin Effective Interest %	Well Status
Lauren 100	15.2%	Production
Lauren 102	15.2%	Production
Lauren 103	15.2%	Production
Lauren 104	15.2%	Production
Lauren 105	15.2%	Production
Lauren 106	15.2%	Production
Lauren 112	15.2%	Production
Lauren 113	15.2%	Production
Lauren 114	15.2%	Production
Lauren 115	15.2%	Production
Lauren 116	15.2%	Production
Lauren 117	15.2%	Production
Lauren 124	15.2%	Production
Lauren 127	15.2%	Production
Lauren 139	15.2%	Production
Matilda John 207	15.2%	Production
Matilda John 217	15.2%	Production
Matilda John 218	15.2%	Production
Matilda John 226	15.2%	Production
Matilda John 227	15.2%	Production
Orana 87	37.5%*	Production
Orana 90	37.5%*	Production
Orana 91	37.5%*	Production
Orana 92	37.5%*	Production
Orana 93	37.5%*	Production
Orana 94	37.5%*	Production
Orana 95	37.5%*	Production
Orana 96	37.5%*	Production
Poppy 138	11.7%	Production
Poppy 139	11.7%	Production
Poppy 149	11.7%	Production
Poppy 211	11.7%	Production
Reedy Creek WB3-G	34.77%*	GWM
RubyJo 165	11.7%	Production
RubyJo 175	11.7%	Production
RubyJo 176	11.7%	Production
RubyJo 194	11.7%	Production
RubyJo 214	11.7%	Production
RubyJo 218	11.7%	Production
RubyJo 219	11.7%	Production
Talinga MB11-S	37.5%*	GWM
Talinga Pond A MB3	37.5%*	GWM
Talinga Pond A MB7	37.5%*	GWM
Zig Zag MB1-G	37.5%*	GWM

**Notes:**

\* Denotes Origin Operatorship  
GWM - Ground Water Monitoring



## 5. EXPLORATION, EVALUATION AND CAPITAL EXPENDITURE

The tables below include total expenditure on exploration and evaluation activities and capital expenditure on development and production activities. They include capitalised interest and exclude expenditure on acquisitions. Expenditure in the current financial year is preliminary and is subject to audit review. Note: Numbers may not add due to rounding.

### Australian Operations

A\$m	September				
	This Quarter	Previous Quarter	Quarter 2012	YTD 2013/14	YTD 2012/13
Exploration / Evaluation	17	3	12	17	12
Development / PP&E	47	60	132	47	132
<b>Total</b>	<b>64</b>	<b>63</b>	<b>144</b>	<b>64</b>	<b>144</b>

### New Zealand Operations

NZ\$m	September				
	This Quarter	Previous Quarter	Quarter 2012	YTD 2013/14	YTD 2012/13
Exploration / Evaluation	1	0	2	1	2
Development / PP&E	3	5	2	3	2
<b>Total</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>

### International Operations

A\$m	September				
	This Quarter	Previous Quarter	Quarter 2012	YTD 2013/14	YTD 2012/13
Exploration / Evaluation	19	10	19	19	19
Development / PP&E	0	0	0	0	0
<b>Total</b>	<b>19</b>	<b>10</b>	<b>19</b>	<b>19</b>	<b>19</b>

### Total (excluding APLNG)

A\$m	September				
	This Quarter	Previous Quarter	Quarter 2012	YTD 2013/14	YTD 2012/13
Exploration / Evaluation	38	13	33	38	33
Development / PP&E	50	64	134	50	134
<b>Total</b>	<b>88</b>	<b>78</b>	<b>167</b>	<b>88</b>	<b>167</b>

### APLNG

Origin is required to contribute cash to APLNG (in proportion to its equity holding) where APLNG has insufficient cash from other sources to fund its activities. Origin began making cash contributions in the December Quarter 2011.

### Origin's contribution to APLNG

A\$m	September				
	This Quarter	Previous Quarter	Quarter 2012	YTD 2013/14	YTD 2012/13
Contribution	742	442	119	742	119

\* Origin's share in APLNG was diluted from 42.5% to 37.5% on 12 July 2012.

## 6. ORIGIN'S INTERESTS

### 6.1 Origin held interests in the following permits during the Quarter:

Basin/Project Area	Interest	Basin/Project Area	Interest	Basin/Project Area	Interest
<b>AUSTRALIA</b>		<b>AUSTRALIA</b>		<b>AUSTRALIA</b>	
<b>COOPER BASIN (South Australia)</b>		<b>Spring Gully</b>		<b>Bass Basin (Tasmania)</b>	
Patchawarra East Block PPLs	10.54%	ATP 592P and PLs 195, 203, 268(A), 414(A), 415(A), 416(A), 417, 418(A) and 419(A)	35.44% * <sup>1</sup>	T/L1	42.50% *
SA Unit PPLs	13.19%	PL 204	37.40% * <sup>1</sup>	T/18P	39.00% *
Reg Sprigg West Unit (PPL 194/PPL 211 )	7.90%	PL 200	35.89% * <sup>1</sup>	<b>PERTH BASIN (Western Australia)</b>	
<b>COOPER BASIN (Queensland)</b>		<b>Talinga/ Orana</b>		EP320 and L11	
SWQ Unit Subleases	16.74%	ATP 692P, PLs 209, 215, 216(A), 225(A), 226, 272, 289(A), 445(A) and 481(A)	37.50% * <sup>1</sup>	L 14	67.00% *
Aquitaine A * B Blocks of ATP 259P and associated PLS	25.00%			L1/L2 (Excluding Dongara, Mondarra and Yardarino)	49.19% *
Aquitaine C Block of ATP 259P and associated PLS	27.00%				
Wareena Block of ATP 259P and associated PLS	10.00%				
<b>GALILEE BASIN (Queensland)</b>		<b>Kenya/ Argyle/Lauren/Bellevue</b>		<b>BONAPARTE BASIN (Western Australia &amp; Northern Territory)</b>	
ATP 666P	37.50% * <sup>1</sup>	PLs 179, 180, 228, 229 and 263	15.23% 1	WA 454P	50.00% * <sup>3</sup>
ATP 667P	37.50% * <sup>1</sup>	PL 247	11.02% 1	NT/RL1 and WA6R	5.00%
ATP 668P	37.50% * <sup>1</sup>	ATP 648P Shallows, PLs 257, 273, 274, 275, 278, 279, 442, 466 and 474	11.72% 1	<b>NEW ZEALAND</b>	
<b>SURAT BASIN (Queensland)</b>		<b>Peat</b>		<b>TARANAKI BASIN</b>	
PL 14	100.00% *	PL 101	37.50% * <sup>1</sup>	PML 38146	50.00% *
PL 74	69.00% *	<b>Other Bowen Basin</b>		PMP 38151	100.00% *
PL 30	75.00% *	ATP 804P	10.99% 1	PMP 38155	100.00% *
PLs 21, 22, 27 and 64	87.50% *	ATPs 653P and 745P and PLs 420(A), 421(A) and 440(A)	8.94% 1	PML 38138	100.00% * <sup>2</sup>
PLs 53, 174 and 227	100.00% *	PLs 219 and 220	37.50% * <sup>1</sup>	PML 38139	100.00% * <sup>2</sup>
ATP 470P Redcap	90.00% *	<b>Other Surat Basin</b>		PML 38140	100.00% * <sup>2</sup>
PL 264	90.00% *	ATP 606P and PLs 297, 404, 408, 403(A), 405(A), 406(A), 407(A), 412(A), 413(A) and 444(A)	34.77% * <sup>1</sup>	PML 38141	100.00% * <sup>2</sup>
ATP 470P Formosa Downs	42.72% *	ATP 631P, PLs 281(A) and 282(A)	6.79% 1	<b>CANTERBURY BASIN</b>	
PL 71 (Exploration)	72.00% *	ATP 663P and PLs 434(A), 435(A), 436(A), 437(A), 438(A) and 439(A)	37.50% * <sup>1</sup>	PEP 38264	50.00%
PL 71 (Production)	90.00% *	973P, and PLs 265, 266 and 267	37.50% * <sup>1</sup>	<b>KENYA</b>	
PL 70	100.00% *	ATP 972P, and PLs 469(A), 470(A) and 471(A)	34.77% * <sup>1</sup>	<b>LAMU BASIN</b>	
ATP 471P Weribone Pooling Area	50.64% *	ATP 1178P	37.50% * <sup>1</sup>	L8	
ATP 336P and PLs 10W, 11W, 12W, 28, 69 and 89	46.25%	<b>ONSHORE OTWAY BASIN</b>			
PL 11 Snake Creek East 1 Exclusion Zone	25.00%	<b>Victoria</b>			
ATP 647P (Block 2656 only)	50.00% *	PPLs 6,9 and PRL1	90.00% *		
ATP 754P	50.00% *	PPLs 4, 5, 7, 10 and 12	100.00% *		
ATP 788P Shallows	100.00% *	PPL 2 Ex (Iona Exclusion)	100.00% *		
ATP 471P Bainbilla	24.75%	PPL 8	100.00% *		
<b>DENISON TROUGH (Queensland)</b>		<b>OFFSHORE OTWAY BASIN</b>			
PLs 41, 42, 43, 44, 45, 54, 67, 173, 183 and 218	18.75% * <sup>1</sup>	<b>Victoria</b>			
ATP 337P (Denison Trough) - Production	18.75% * <sup>1</sup>	Vic/P42 (V)	100.00% *		
ATP 337P (Denison Trough) - Exploration, PLs 449(A), 450(A), 451(A), 454(A) and 457(A)	18.75% 1	Vic/P43	67.23% *		
ATP 337P Mahalo and PL448(A)	11.25% 1	Vic/L23	67.23% *		
ATP 553P	18.75% 1	Vic/RL2(V)	100.00% *		
<b>CSG (Queensland)</b>		<b>Tasmania</b>			
<b>Fairview</b>		T/L2, T/L3 and T/30P			
ATP 526P and PLs 90, 91, 92, 99, 100, 232, 233, 234, 235 and 236	8.97% 1	T/34P			
				<b>Notes:</b>	
				* Operatorship	
				<sup>1</sup> Interest held through 37.5% ownership of APLNG Joint Venture	
				<sup>2</sup> Divestment to New Zealand Energy Corp was completed on 29 October 2013	
				<sup>3</sup> Origin is on title but farmin from Drysdale Offshore Exploration Pty Ltd not yet completed	
				<sup>4</sup> Interest held though 50% ownership of Kubu Energy Resources (Pty) Ltd (a Botswana company)	

## 7. CONVERSION FACTORS AND ABBREVIATIONS

### 7.1 Conversion Factors

Crude oil	0.00583	PJ/kbbbls
Condensate	0.00541	PJ/kbbbls
LPG	0.0493	PJ/ktonnes
Ethane	0.0517	PJ/ktonnes

### 7.2 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>BTEX</b>	benzene, toluene, ethylbenzene, xylene
<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>CTU</b>	coiled tubing unit
<b>DA</b>	designated authority
<b>DERM</b>	Department of Environmental and Resource Management
<b>EA</b>	environmental authority
<b>FEED</b>	front end engineering & design
<b>FID</b>	final investment decision
<b>GJ</b>	gigajoule = $10^9$ joules
<b>joule</b>	a measure of energy
<b>Kbbbls</b>	Kilo barrels = 1,000 barrels
<b>Ktonnes</b>	Kilo tonnes = 1,000 tonnes
<b>LNG</b>	liquefied natural gas
<b>LPG</b>	liquid petroleum gas
<b>MDRT</b>	measured depth from rotary table
<b>mmscfd</b>	million standard cubic feet per day
<b>mtpa</b>	million tonnes per annum
<b>P&amp;A</b>	plugged and abandoned
<b>P&amp;S</b>	plugged and suspended
<b>PCA</b>	potential commercial area
<b>PSC</b>	production sharing contract
<b>PSDM</b>	post stack depth migration (seismic processing)
<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>Pigging</b>	pipeline examination and maintenance
<b>QGC</b>	Queensland Gas Company
<b>Spudding</b>	to commence drilling a well
<b>SWQ</b>	South West Queensland
<b>TD</b>	total depth
<b>TJ</b>	terajoule = $10^{12}$ joules
<b>TJ/d</b>	terajoules per day
<b>TVDSS</b>	Total Vertical Depth Subsea
<b>Water Inj</b>	water injection well