# **Quarterly Report**

For the 3 months to 30 September 2017



#### **HIGHLIGHTS**

- Outstanding results from Waitsia-3 flow test, conducted October 2017, with a peak gas flow rate of 50 mmscf/d – Waitsia-2 and 4 to be tested through November
- Successful Waitsia-4 appraisal well, drilled over July August, exceeded pre-drill expectations and confirmed the eastern extension of the Waitsia Gas Field
- 25% increase in Waitsia 2P Reserves to 228 PJ of gas (AWE share) announced in August, with further increases likely before the end of Q1 calendar year 2018
- Waitsia Stage 2 facilities design competition and FEED on track, tenders due at end November
- 23% increase in BassGas production over previous quarter following successful compression startup
- In late October, the Indonesian government advised that it will exercise its right to assign 10% of the Contractors' interest in AAL to a local entity in 2018. This is normal under Indonesian PSC terms and is a positive sign of Indonesian government support for the project.



Above: Waitsia-3 flow test produced a peak rate of 50 MMscf/d and an average rate of 49.5 MMscf/d, October 2017.

#### **CEO COMMENTS**

"The September quarter saw significant operational and financial improvement over the previous quarter with production up 16% to 0.6 MMboe and revenue up 15% to \$19.3 million. BassGas production improved by 23% and Casino was up 15% over the previous quarter, while investment expenditure overall reduced by 19%," said David Biggs, CEO and Managing Director.

"The highlight for the period was undoubtedly the ongoing appraisal work at Waitsia, which continued to exceed our expectations," he said.

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"Waitsia-4 was drilled during the September quarter, confirming the eastern extent of the Waitsia gas field. The well revealed a substantially thicker Kingia reservoir with a net pay of 21 metres and exceptional porosity. The net reservoir intervals in both Waitsia-3 and Waitsia-4 are more than double the other wells in the field and confirm the laterally extensive nature of this excellent reservoir," Biggs said.

Production by Product	3 months to Sep 2017	3 months to Jun 2017	Qtr on Qtr Change	3 months to Sep 2017	3 months to Sep 2016 <sup>1</sup>	YTD Change
Condensate ('000 Bbls) <sup>2</sup>	52	43	21%	52	53	-2%
LPG (Tonnes)	4,765	3,235	47%	4,765	4,752	0%
Gas (TJ)	3,228	2,841	14%	3,228	3,373	-4%
Total ('000 BOE)	645	554	16%	645	670	-4%
Key Financial Indicators	3 months to Sep 2017	3 months to Jun 2017	Qtr on Qtr Change	3 months to Sep 2017	3 months to Sep 2016 <sup>1</sup>	YTD Change
Net Sales Volume (MMboe)	0.6	0.6	16%	0.6	0.7	-4%
Sales Revenue (\$m)	19.3	16.7	15%	19.3	19.2	0%
Field Opex (\$m)	10.8	9.1	18%	10.8	9.0	19%
Field EBITDAX (\$m) Average Realised Gas Price	8.5	7.6	12%	8.5	10.2	-17%
(A\$/GJ)	\$4.43	\$4.40	1%	\$4.43	\$4.33	2%

Numbers are preliminary and unaudited and may not add due to rounding. Notes: 1. Production and financial data for prior periods has been adjusted to exclude operations discontinued or divested in FY17, specifically Tui (sold 28 February 2017). For reported historic data, please refer to AWE's FY17 Annual Report, Quarterly and Financial Reports. 2. Condensate production rounded to the nearest 1,000 barrels.

"More recently, in October we commenced a flow testing program at Waitsia-3 which produced outstanding results. Gas flowed from a 42 metre interval in the Kingia Sandstone at a peak rate of 50 MMscf/d with an average rate of 49.5 MMscf/d recorded over a 2.6 hour period. Importantly, this is twice the rate recorded from the Kingia at Waitsia-1.

"We plan to test the remaining wells, Waitsia-2 and Waitsia-4 through November. The data from the flow test program and Waitsia-4 drilling results will assist in establishing the extent of a further upgrade of Waitsia reserves, which we expect to announce before the end of Q1 calendar year 2018.

"In addition to these excellent sub-surface outcomes, the FEED process for the gas plant facilities continued as scheduled and tenders for EPC and BOO delivery methods are expected by the end of November. Gas marketing is also making progress and negotiations with a number of potential customers are underway, in some cases as part of their gas tender processes.

"The project remains on track for the joint venture to be in a position to make a FID from the end of 2017" he said, "although it is unclear what impact, if any, the proposed sale of Lattice (AWE's 50% partner in Waitsia) to Beach may have on FID timing."

"At BassGas, unscheduled maintenance resulted in greater downtime than anticipated. These issues are being addressed and production is expected to improve further over the coming quarter.

"Casino gas marketing is making good progress, as is the planning for the workover of Casino-5 in early 2018," Biggs said.

"In Indonesia, we continued to work with the Operator of AAL to integrate the G sand into the existing field development plan during the quarter, and we are encouraged by recent improvement in the oil price. The Indonesian government is keen to advance the project and has advised the PSC partners that it intends to exercise its right to assign 10% of the Contractors' interest to a local entity in 2018. This is customary and was anticipated by the Joint Venture partners. The introduction of a new PSC partner will leave AWE with a 45% interest. Under the PSC, the existing partners will carry the local entity through the development phase but will be repaid from production, once it commences.

"Overall, FY18 is off to a good start and we are excited about unlocking the considerable potential in Waitsia and securing better revenue outcomes from our east coast gas projects," he concluded.



Above: Waitsia-4 appraisal well drilling, August 2017.

# **PRODUCTION & RESERVES**

#### **PRODUCTION**

Production for the September quarter was 0.6 MMboe, 16% higher than the June quarter due to improved production from BassGas (up 23%), Casino (up 15%) and Onshore Perth Basin/Beharra Springs (up 13%). Production at BassGas improved significantly following the introduction of compression on the Yolla platform but was hampered by unscheduled maintenance at the onshore Lang Lang gas plant. The ratio of gas to gas liquids production was 83:17 for the September quarter.

Production by Project	3 months to	3 months to	Qtr on Qtr	3 months to	3 months to	YTD
('000 BOE)	Sep 2017	Jun 2017	Change	Sep 2017	Sep 2016 <sup>1</sup>	Change
BassGas	363	294	23%	363	367	-1%
Casino/Henry	144	125	15%	144	207	-31%
Waitsia Stage 1A <sup>2</sup>	66	70	-6%	66	26	156%
Onshore Perth Basin	72	64	13%	72	70	3%
TOTAL ('000 BOE)	645	554	16%	645	670	-4%

Numbers may not add due to rounding. Notes: 1. Production data for prior periods has been adjusted to exclude operations discontinued or divested in FY17, specifically Tui (sold 28 February 2017). For reported historic data, please refer to AWE's FY17 Annual Report, Quarterly and Financial Reports. 2. Waitsia Stage 1A commenced production in August 2016.

# **RESERVES AND RESOURCES**

AWE issued its FY17 Reserves Report on 9 August 2017. The major changes comprised a 25% increase in Waitsia 2P Reserves; a 13% increase (before production) in BassGas 2P Reserves; and the reclassification of Ande Ande Lumut's 2P Reserves to 2C Contingent Resources. At 30 June 2017, AWE's 2P Reserves and 2C Contingent Resources totaled 51.9 MMboe and 109.5 MMboe respectively.

# FINANCIAL & CORPORATE

# **SEPTEMBER QUARTER**

Sales volume for the September quarter was 0.6 MMboe, up 16% over the previous quarter after adjusting for the sale of Tui in FY17 and in line with the increase in production. Sales revenue for the quarter followed suit and increased by 15% to \$19.3 million. The average blended gas price for the quarter was \$4.43/GJ.

Field Opex for the September quarter was \$10.8 million, 18% higher than the June quarter due largely to unscheduled maintenance at BassGas, operatorship transition costs at Casino and higher activity levels at Dongara and Beharra Springs. Field EBITDAX for the period was also higher at \$8.5 million, up 12%.

Sales Revenue (\$ million)	3 months to Sep 2017	3 months to Jun 2017	Qtr on Qtr Change	3 months to Sep 2017	3 months to Sep 2016 <sup>1</sup>	YTD Change
Condensate	2.8	2.3	20%	2.8	2.6	7%
Gas	14.3	12.6	14%	14.3	14.6	-2%
LPG	2.2	1.8	22%	2.2	2.0	9%
Total Sales Revenue	19.3	16.7	15%	19.3	19.2	0%

Numbers are preliminary and unaudited and may not add due to rounding. Notes: 1. Production and financial data for prior periods has been adjusted to exclude operations discontinued or divested in FY17, specifically Tui (sold 28 February 2017). For reported historic data, please refer to AWE's FY17 Annual Report, Quarterly and Financial Reports.

#### INVESTMENT EXPENDITURE

Following the reclassification of AAL 2P Reserves to 2C Contingent Resources (announced 9 August 2017), work on the AAL project is now classified as Evaluation rather than Development. As a result, AWE has modified its Investment Expenditure disclosure to reflect Exploration, Evaluation (AAL and Trefoil) and Development (Waitsia, BassGas, Casino).

Development expenditure for the September quarter decreased 35% due to finalisation of the BassGas MLE project and the reallocation of AAL expenditure to Evaluation. Exploration expenditure remained at low levels and totaled \$0.9 million for the quarter. Evaluation expenditure of \$1.6 million reflected ongoing work on the AAL project as well as Trefoil feasibility studies. Total investment expenditure for the September quarter was \$10.4 million, down 19% on the June quarter.

Investment Expenditure	3 months to	3 months to	Qtr on Qtr	3 months to	3 months to	YTD
(\$'000)	Sep 2017	Jun 2017	Change	Sep 2017	Sep 2016 <sup>1</sup>	Change
Exploration	879	471	87%	879	810	9%
Evaluation	1,601	263	509%	1,601	108	1,382%
Development	7,907	12,147	-35%	7,907	12,491	-37%
Total	10,387	12,881	-19%	10,387	13,409	-23%

Notes: 1. Financial data for prior periods has been adjusted to exclude operations discontinued or divested in FY17, specifically Tui (sold 28 February 2017). For reported historic data, please refer to AWE's FY17 Annual Report, Quarterly and Financial Reports. Numbers are preliminary and unaudited and may not add due to rounding.

#### LIQUIDITY

At 30 September 2017, AWE was in a net debt position of \$64 million, with cash of \$17 million and drawn debt of \$81 million.

The increased net debt position for the quarter, a movement of \$9.7 million, reflects the ongoing high levels of development activity at Waitsia-4 appraisal drilling, Waitsia-3 flow testing and FEED) and the delay in receiving payment for the sale of the Lengo asset.

#### **CORPORATE ACTIVITY**

The sale of AWE's 42.5% interest in the Bulu PSC, including the Lengo gas project, to a subsidiary of HyOil Pte Ltd for up to \$27.5 million was approved by the Indonesian government in July 2017 and AWE is awaiting payment of approximately \$15 million with the potential for additional cash payments following the execution of gas sales agreements. The purchaser has not made payment by the due date and AWE is in discussions with the purchaser who is seeking an extension of time for completion.

During the quarter, AWE increased its interest in EP455 in the onshore Perth Basin from 81.5% to 100% for nil consideration to facilitate the exit of its joint venture partner.

To complete the relinquishment of the Terumbu PSC (AWE 100%), offshore Indonesia, AWE is required to pay approximately US\$4 million in lieu of completing the work program. A payment of US\$1 million was made in July with the remainder expected to be paid by instalments by the end of FY18.

In September, the Operator of BassGas (Origin/Lattice) advised AWE that the JV was unsuccessful in an arbitration in respect of drilling costs for Yolla-5 and 6 from the drilling contractor. As a result AWE will be required to pay its share of outstanding drilling costs and fees of approximately \$5 million gross, in 2Q FY18. The majority of these costs were provided for in the 2017 financial year accounts.

In June 2017, AWE entered into an agreement to sell its 100% interest in the L7 (Mt Horner) permit, onshore Perth Basin, to Key Petroleum. The agreement was executed in October and Key will assume operatorship and all liabilities associated with the permit following government approval. The terms of the sale include an upfront payment to Key of \$380,000 and additional payments of up to \$1.9 million within two years for a defined portion of decommissioning and rehabilitation costs. AWE is no longer liable for future restoration costs for the permit.

# **OPERATIONS, EXPLORATION & DEVELOPMENT**

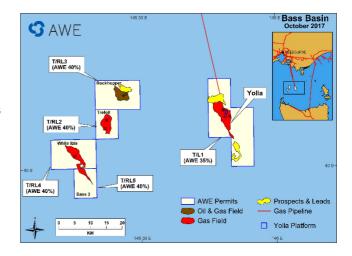
#### **SOUTH EAST AUSTRALIA**

#### Bass Basin - BassGas Project (35%)

Production for the September quarter was up 23% over the previous quarter, largely due to the start-up of compression on the Yolla platform. AWE's share was approximately 1.5 PJ of gas, 50,300 barrels of condensate and 4,800 tonnes of LPG. The average gross daily production rate for the quarter, excluding planned downtime, was 48 TJ/d.

BassGas is currently producing from three wells: Yolla 4, 5 and 6. Production for the quarter, while up significantly over the previous quarter, was impacted by planned and unplanned maintenance activity. Optimisation of compression on the Yolla platform was hampered by issues associated with the onshore sales gas compressor at the Lang Lang gas plant which resulted in a period of down time while repairs were effected. A wireline program is being planned for early 2018.

AWE anticipates a change of Operator in 2018 following the announcement in October that Origin Energy has agreed to sell its Lattice Energy subsidiary to Beach Energy.



### Evaluation

In T/RL2 (AWE 40%), the Shearwater 3D seismic reprocessing was completed in October and the Operator continues to progress development concept studies for the Trefoil Field with updated static and dynamic modelling of the reservoirs nearing completion.

#### Otway Basin - Casino Gas Project (25%)

Production to the end of the September quarter increased by 15% compared to the June quarter when the lona plant was shut in for scheduled maintenance. AWE's share of production was 0.9 PJ of sales gas and 561 barrels of condensate. The average gross daily production rate for the quarter, excluding planned downtime, was 37 TJ/d.

Casino is currently producing from three wells: Casino-4, Netherby-1 and Henry-2. Casino-5 remains shut-in and the Joint Venture is currently reviewing the workover plans. The workover is scheduled for February-March 2018, subject to equipment availability.

The transition of Operator from Santos Energy to Cooper Energy was approved by the government during the period. Marketing of uncontracted gas from Casino, for the period post February 2018, is making progress and the Joint Venture is also reviewing processing options.

#### Exploration

In permit VIC/P44 (AWE 25%), the Joint Venture is undertaking new seismic inversion studies to de-risk prospects for a possible future exploration program. Applications have been submitted to renew retention leases over VIC/RL11 (Martha) and VIC/RL12 (Blackwatch) for a further five year period and are pending approval by the regulator.

#### **WESTERN AUSTRALIA**

# Onshore Perth Basin – Waitsia Gas Project (50%, Operator)

Production from the Xyris Production Facility for the September quarter decreased by 6% over the previous quarter due to undertaking operability upgrade works in September. AWE's share was 0.4 PJ of gas and 132 barrels of condensate. The average daily rate for the quarter was 8.6 TJ/d.



The Waitsia-4 appraisal well was successfully drilled during the period to a Total Depth of 3,744 metres MDRT. The Kingia reservoir was penetrated very close to prognosis at 3,379 metres MDRT. Strong gas shows were encountered in the Kingia and High Cliff Sandstone intervals as well as minor shows in the Irwin River Coal Measures. The well was cased and suspended for future testing and production.

Preliminary interpretation of the Kingia reservoir shows excellent conventional reservoir qualities similar to those observed in Waitsia-3 and considerably better than pre-drill estimates. The gross Kingia reservoir interval of 42 metres contains 21 metres of net gas pay with reservoir quality similar to Waitsia-3. The Kingia net reservoir interval in both Waitsia-3 and Waitsia-4 is more than double that observed in other wells in the field and confirms the laterally extensive nature of this excellent reservoir. The High Cliff Sandstone reservoir interval and Irwin River Coal Measures were gas-bearing and preliminary analysis indicates these are tight reservoirs.

Subsequent to the end of the period, AWE commenced flow testing the Waitsia-3 appraisal well. The testing program is designed to determine well deliverability from the southern extent of the Waitsia field and to collect gas samples for compositional analysis.

The zone being flow tested is the Kingia Sandstone, where a 42 metre interval (3,248 metres to 3,290 metres MDRT) was perforated. At the end of a 7 hour clean up period, the well flowed gas at a peak rate of 50 million standard cubic feet per day (MMscf/d) and an average of 49.5 MMscf/d on an 80/64 inch choke at ~1,924 psig

flowing well head pressure over a 2.6 hour period. The gas quality is similar to the good gas quality found in other wells in the field The Kingia Sandstone performance at Waitsia-3 is better than Waitsia-1, reflecting the considerable improvement in pay thickness and reservoir quality.

AWE is currently working to integrate the new data from the Waitsia-4 well and the flow testing program into its dynamic and static models, and expects to formally update Waitsia field reserves in Q1 CY2018. In the meantime, AWE has commissioned an independent review of Waitsia reserves which will be available in November.

Good progress was made on FEED for the gas plant facilities during the period and AWE anticipates that the joint venture will be able to evaluate EPC and BOO tenders from the end of November as planned.

Gas marketing continued during the period with some potential gas customers undertaking tender processes to meet their new gas requirements. This is a positive development although it has added additional time to the negotiation of gas sales agreements.

All key work streams remain on track for the joint venture to be in a position to make a Final Investment Decision (FID) from the end of 2017 although at this stage it is unclear what impact, if any, the proposed sale of Lattice (AWE's 50% partner in Waitsia) to Beach may have on joint venture FID timing

During the period, the Western Australia government announced a moratorium on Hydraulic Fracture Stimulation (fracking) while a parliamentary inquiry is undertaken into the process. No fracking was required for Waitsia Stage 1A and no fracking will be required for the planned Waitsia Stage 2 development as gas will be produced from the conventional reservoirs in the Kingia Formation and High Cliff Sandstones. AWE's exploration plans do not include fracking and therefore AWE does not expect to be impacted by the moratorium on fracking in Western Australia.

#### Onshore Perth Basin - Beharra Springs (33%)

AWE's share of production from other Onshore Perth Basin assets, including Beharra Springs, was up 13% with 0.4 PJ of gas and 279 barrels of condensate.

A technical review of the Dongara and Corybas facilities is being undertaken pending a decision whether to transition these assets to care and maintenance. AWE's program to decommission non-producing wells and rehabilitate well sites is continuing as planned and will continue over a number of years.

#### Exploration

In EP320 (AWE 33%), the Joint Venture has commenced planning of a 3D seismic program to be acquired in mid-2018 to fulfil Permit Year 2 work commitments. The 3D survey will mature significant Waitsia-style prospects in the Kingia and High Cliff sandstones in the east of the permit.

In Production License L11 (AWE 33%), the Joint Venture is reviewing options for an exploration well to test the Beharra Deep prospect in the Kingia and High Cliff Sandstones directly beneath Beharra Springs Gas Field and close to existing processing facilities.

### **NEW ZEALAND**

#### Taranaki Basin

Exploration

In onshore New Zealand permit PEP 55768 (AWE 51%, Operator), the Joint Venture continues to plan the Kohatukai-1 exploration well and a farmout process is well advanced.

#### **INDONESIA**

#### Northwest Natuna Sea -

#### Ande Ande Lumut (AAL) Oil Project (50%)

Evaluation

Field development studies are ongoing with a focus on drilling and completions optimisation for K sand and G sand resources. Minor updates to the FPSO processing infrastructure are under review to maximise comingled production from the two reservoirs.

The joint venture is preparing an application to jointly develop the G sand and K sand reservoirs from field startup. This may require an amendment to the approved Plan of Development prior to FID. Stage 2 commercial tenders remain on hold until this work is completed.

The Indonesian government has advised that it will exercise its right to assign 10% of the contractor share to a local entity. The 10% will require each of the PSC contractors to relinquish 10% of their interest leaving each contractor with a 45% share, and carry the local entity's development costs. The new partner is obliged to repay AWE its share of the carry from production.

#### For more information please see our website www.awexplore.com or contact:

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#### **ABOUT AWE LIMITED**

AWE Limited is an independent, Australian energy company focused on upstream oil and gas opportunities. Established in 1997 and listed on the Australian Securities Exchange (ASX: AWE), the company is headquartered in Sydney with an office in Perth. AWE has a substantial portfolio of production, development and exploration assets in Australia, New Zealand, and Indonesia.

#### **RESERVES CONSENT**

The Reserves and Contingent Resources in this report are based on and fairly represent information and supporting documentation prepared by and under the supervision of qualified petroleum reserves and resource evaluators Mr Andrew Furniss, AWE General Manager Exploration and Geoscience, and Dr. Suzanne Hunt, AWE General Manager WA Assets and Engineering. Mr Furniss, a member of the Society of Petroleum Engineers and the American Association of Petroleum Geologists, holds an MSc in Exploration Geophysics and a BSc (Hons) in Geological Sciences and has over 26 years' of industry experience in strategic planning, portfolio management, prospect evaluation, technical due diligence and peer review, reserves and resource assessment, the application of advanced geophysical technology and business development. Dr. Hunt, a Petroleum Engineer with a Ph.D. in Geomechanics, is a member of the Society of Petroleum Engineers and has over 20 years' experience in the petroleum sector in geoscience, field development planning, reserves estimation, production and facilities engineering and 30 years in the resource sector generally. Mr Furniss and Dr Hunt have consented in writing to the inclusion of this information in the format and context in which it appears.

AWE reserves and contingent resources are estimated in accordance with the following:

- SPE/AAPG/WPC/SPEE Petroleum Resources Management System guidelines of November 2011;
- ASX Disclosure rules for Oil and Gas Entities, Chapter 5; and
- ASX Listing Rules Guidance Note 32.

AWE applied deterministic methods for reserves and contingent resource estimation for all assets. The reserves were estimated at the lowest aggregation level (reservoir) and aggregated to field, asset, basin and company levels. Estimated contingent resources are un-risked and it is not certain that these resources will be commercially viable to produce.

#### **CONVERSION TABLES**

Volume 1 cubic metre = 1 kilolitre = 35.3 cubic feet = 6.29 barrels 1 megalitre = 1,000 cubic metres	Barrel of Oil Equivalents (BOE) Sales Gas: 6PJ = 1 MMBOE LPG: 1 tonne = 11.6 BOE Condensate: 1 barrel = 1 BOE Oil: 1 barrel = 1 BOE
Energy Value  1,000 standard cubic feet of sales gas yields about  1.055 gigajoules (GJ) of heat  1 petajoule (PJ) = 1,000,000 gigajoules (GJ)  1 gigajoule = 947,817 British Thermal Units (BTU)	Decimal Number Prefixes kilo = thousand = 10 <sup>3</sup> mega = million = 10 <sup>6</sup> giga = 1,000 million = 10 <sup>9</sup> tera = million million = 10 <sup>12</sup> peta = 1,000 million million = 10 <sup>15</sup>

# **GLOSSARY OF ABBREVIATIONS**

2C	Contingent Resources	FPSO	Floating Production Storage and
2D	Two-dimensional		Offloading
2P	Proved and Probable Reserves	FY	Financial Year
3D	Three-dimensional	GWC	Gas Water Contact
AAL	Ande Ande Lumut oil project	GJ	Gigajoules
ASIC	Australian Securities & Investments	JV	Joint Venture
	Commission	LPG	Liquefied Petroleum Gas
BOE	Barrels of Oil Equivalent	LTI	Lost Time Injuries
BOO	Build Own Operate	m	metres
Bbls	Barrels	MDRT	Measured Depth below Rotary Table
Bopd	Barrels of oil per day	MLE	Mid Life Enhancement project
CEO	Chief Executive Officer	MMboe	Million Barrels of Oil Equivalent
CY	Calendar Year	MMscf/d	Million standard cubic feet per day
EBITDAX	Earnings before interest, tax,	PJ	Petajoules
	depreciation, amortisation and	POD	Plan of Development
	exploration expenses	PSC	Production Sharing Contract
EPC	Engineering, Procurement, Construction	PSDM	Pre-Stack Depth Migration
FID	Final Investment Decision	TJ	Terajoules
FEED	Front End Engineering & Design	TVDSS	Total Vertical Depth Sub-Sea-level

Except where otherwise noted, all references to "\$" are to Australian dollars.

# **ENDS**