

## ASX Announcement

19 December 2017



# AWE upgrades Waitsia reserves and resources

- **AWE increases Waitsia 2P Reserves by 80% to 820 PJ gross (net 410 PJ to AWE)**
- **Waitsia-3 and Waitsia-4 appraisal well data and the excellent flow test results from the Waitsia Field confirmed an uplift in reserves and resource estimates**
- **Waitsia now ranked in the top 5 largest gas fields ever discovered onshore Australia with gross 2P plus 2C of 910 PJ**
- **Significant prospective resource targets have been identified within AWE's existing permits that may result in future resource upgrades and tie-in opportunities to the Waitsia Field**

AWE Limited (ASX: AWE) provides the following update on the company's 2P Reserves and 2C Contingent Resources as at 1 December 2017, with specific reference to the Waitsia Field, located in Production Licences L1/L2, onshore northern Perth Basin, Western Australia.

### **Waitsia Gas Project (AWE 50%, Operator)**

Following the excellent results from the Waitsia-3 and Waitsia-4 appraisal wells and the record flow-rates observed in well tests undertaken in October/November 2017, AWE has increased its share of 2P Reserves in the Waitsia Field by 80%.

The increase in the field 2P Reserves to 820 PJ gross (Table 1) is due to the reclassification of 2C Contingent Resources, previously held for the southern extension of the field and an improvement in the observed Kingia sandstone reservoir quality and thickness. Ongoing analysis of the well test data has further validated the independent expert assessment undertaken by RISC Operations Pty Ltd, announced on the 14 November 2017.

The Waitsia-3 and Waitsia-4 appraisal wells have confirmed the presence of better quality reservoir and provided additional confidence in the resource with static and dynamic reservoir models used for production forecasting and future well phasing. The results of the appraisal wells have also identified additional near-field exploration targets that in a success case may provide material further extensions to the Waitsia Field.

### **AWE's CEO and Managing Director, Mr David Biggs, said:**

"Recent appraisal drilling and outstanding flow test results from Waitsia-2 (39 MMscf/d), Waitsia-3 (50 MMscf/d) and Waitsia-4 (90 MMscf/d) have confirmed that Waitsia is a world class onshore gas field.

"Our internal analysis highlights substantially higher recoverable hydrocarbons and additional production potential from the excellent quality conventional reservoirs in the Kingia and High Cliff Sandstones that closely correlates with the independent review recently completed by RISC," he said.



“At 910 PJ gross (2P plus 2C) Waitsia is clearly a Tier 1 asset with relatively low development costs and excellent proximity to infrastructure and markets. Add to this more than 300 PJ gross in 2C Contingent Resources from AWE’s other Perth Basin assets, including Senecio, Synaphea and Irwin, and you have over 1 TCF of gas located only 367 kms north of Perth and 80 kms from Geraldton.

“Further exploration and appraisal work is ongoing in L1/L2 and nearby permits to mature significant Waitsia-style prospects in the Kingia and High Cliff Sandstones, close to existing facilities,” Biggs said.

**Table 1. AWE Reserves and Contingent Resources for the Waitsia field as at 1 December 2017**

<b>AWE Reserves and Contingent Resources for the Waitsia field at 1/12/17</b>					
<b>Sales Product</b>	<b>Unit</b>	<b>1P</b>	<b>2P</b>	<b>3P</b>	<b>2C</b>
Gross sales gas	PJ	486	<b>820</b>	1,236	<b>90</b>
Gross condensate	MMbbl	0.11	0.19	0.29	0.02
AWE Net sales gas	PJ	243	<b>410</b>	618	<b>45</b>
AWE Net condensate	MMbbl	0.06	0.10	0.15	0.01

**Table 2. AWE Reserves and Contingent Resources for the Waitsia field as at 30 June 2017**

<b>AWE Reserves and Contingent Resources for the Waitsia field at 30/6/17</b>					
<b>Sales Product</b>	<b>Unit</b>	<b>1P</b>	<b>2P</b>	<b>3P</b>	<b>2C</b>
Gross sales gas	PJ	240.3	<b>456</b>	784.5	<b>211.2</b>
Gross condensate	MMbbl	0.10	0.16	0.28	0.08
AWE Net sales gas	PJ	120.2	<b>228</b>	392.25	<b>105.6</b>
AWE Net condensate	MMbbl	0.05	0.08	0.14	0.04

### **Waitsia Expansion Opportunities and Exploration Potential**

AWE holds one of the largest acreage positions in the onshore northern Perth Basin and is well positioned to capitalise on its competitive advantage to discover new gas resources.

The Waitsia Field 2C Contingent Resource (Table 1) relates only to the tight gas currently discovered in the High Cliff Sandstone. During the drilling of all Waitsia appraisal wells, elevated gas shows were observed in a number of other formations including the Irwin River Coal Measures and the company is assessing whether these potentially significant resources have development potential.

Outside of the Waitsia Field, AWE has identified a number of future exploration targets that if successful could be tied into existing infrastructure or the upcoming Waitsia Gas Plant through expansion phases. Contingent resources are currently carried for the Dongara/Wagina Formations and sandstones within the Irwin River Coal Measures in the Perth Basin as shown in Table 3.

The new information acquired from the Waitsia campaign indicates these intervals offer prospective resource potential both around the Waitsia field area and more regionally across the AWE Perth Basin acreage. In particular, it has been observed that good reservoir quality extends east offering prospective reservoir opportunities beyond the Waitsia Field.

**Table 3. AWE 2C Contingent Resources in the Perth Basin (AWE share) as at 1 December 2017**

<b>AWE's share of 2C Contingent Resources for Perth Basin assets at 1/12/17</b>				
<b>Field</b>	<b>Unit</b>	<b>1C</b>	<b>2C</b>	<b>3C</b>
Senecio (L1/L2)	PJ	27.9	45.8	81.5
Waitsia – HCSS (L1/L2)	PJ	20.4	45.2	81.7
Synaphea (L1/L2 & EP320)	PJ	62.2	81.0	107.6
Irwin (L1/L2 & EP320)	PJ	4.7	8.2	12.9
Dongara, Elegans/Corybas (L1/L2)	PJ	6.5	14.8	26.2
<b>Total</b>	<b>PJ</b>	<b>121.7</b>	<b>195.0</b>	<b>309.9</b>

**The Joint Venture partners in Production Licence L1/L2 are:**

AWE Limited (via subsidiaries, Operator)	50.00%
Origin Energy Limited (via Lattice Energy)	50.00%

**The Joint Venture partners in Production Licence EP320 are:**

AWE Limited (via subsidiaries)	33.00%
Origin Energy Limited (via Lattice Energy, Operator)	67.00%

**About the Waitsia gas field**

The northern Perth Basin has been one of Western Australia's major gas producing regions for more than 50 years. Discovered in September 2014, the Waitsia field is regarded as the largest onshore conventional gas discovery in Australia for the last 40 years and has the capability to supply the domestic market with 100 TJ/d for at least 20 years from conventional reservoirs.

**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 based in Sydney with a project office in Perth. AWE has a substantial portfolio of production, development and exploration assets in Australia, New Zealand, and Indonesia.

**Reserves Consent**

The AWE Reserves and Contingent Resources referred to in this announcement 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, reservoir production and facilities engineering and 30 years in the resource sector generally. Mr Furniss and Dr Hunt has 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.

Notes.

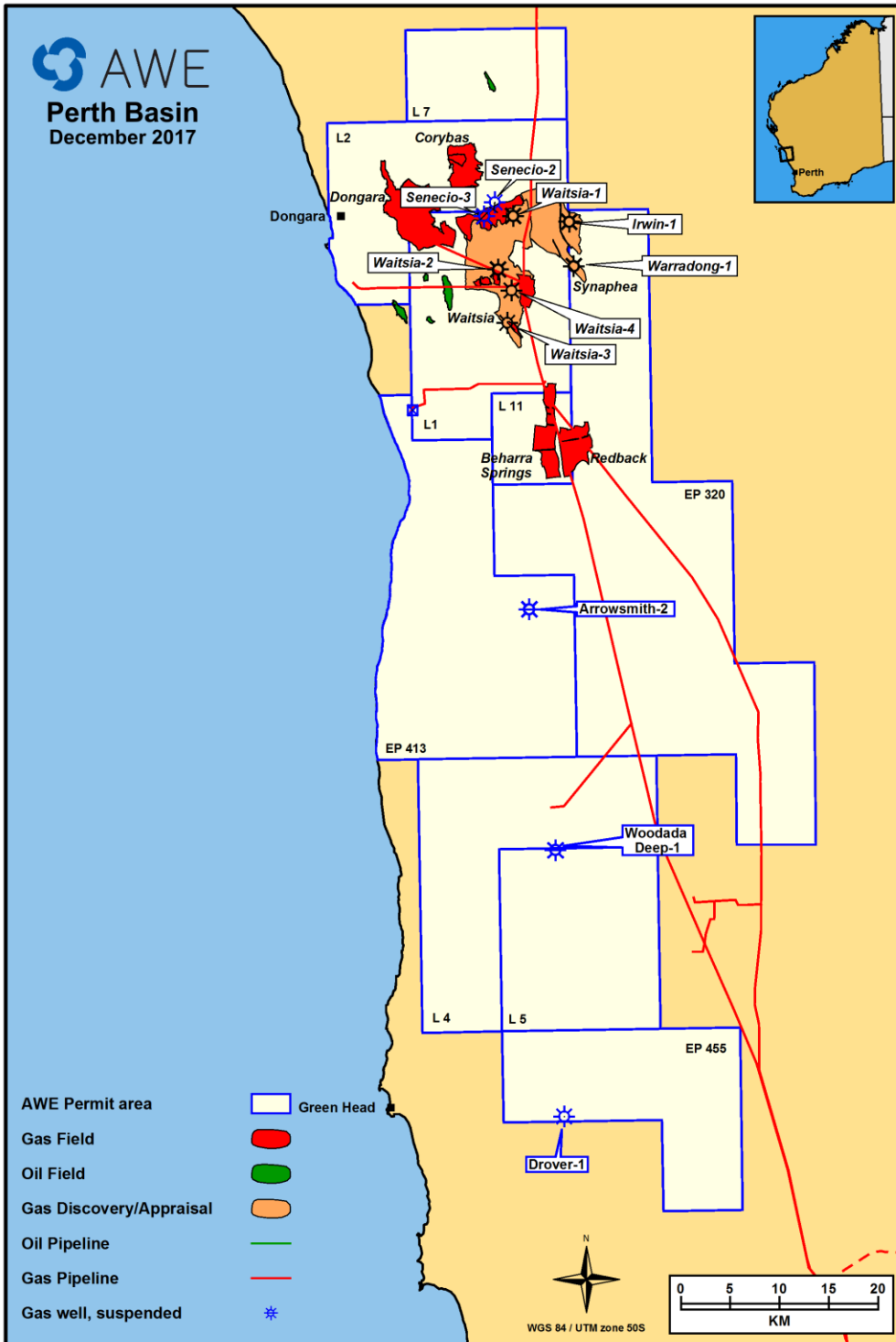
1. Includes Developed plus Undeveloped Reserves
2. Net sales gas and net condensate calculated at 50% of gross in line with AWE's Joint Venture interest
3. Probabilistic methods have been used
4. Reserves include 143 PJ net, proved developed reserves based on ongoing long term production from the Xyris facility.
5. The reference point for reserves and contingent resource determination is the custody transfer point for the products. Reserves are stated as sales quantities net of fuel estimated at 1.7%. Contingent resources are stated as sales quantities net of fuel estimated at 1.7%. Sales gas conversion factor is 1.06 PJ/Bcf of sales gas.
6. The reserves are in conventional reservoirs and the contingent resources are tight conventional sandstone

### Summary of Abbreviations

2C	Contingent Resources
2P	Proved and Probable Reserves
Bcf	Billion Cubic Feet
MMbbl	Million barrels
MMscf/d	Million standard cubic feet per day
PJ	Petajoules
TCF	Trillion Cubic Feet

### Conversion Tables

<p><b>Volume</b></p> <p>1 cubic metre = 1 kilolitre = 35.3 cubic feet = 6.29 barrels          1 megalitre = 1,000 cubic metres</p>	<p><b>Barrel of Oil Equivalents (BOE)</b></p> <p>Sales Gas: 6PJ = 1 MMBOE          LPG: 1 tonne = 11.6 BOE          Condensate: 1 barrel = 1 BOE          Oil: 1 barrel = 1 BOE</p>
<p><b>Energy Value</b></p> <p>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)</p>	<p><b>Decimal Number Prefixes</b></p> <p>kilo = thousand = <math>10^3</math>          mega = million = <math>10^6</math>          giga = 1,000 million = <math>10^9</math>          tera = million million = <math>10^{12}</math>          peta = 1,000 million million = <math>10^{15}</math></p>



For information please see our website [www.awexplore.com](http://www.awexplore.com) or contact:

David Biggs  
 CEO and Managing Director  
 AWE Limited  
 02 8912 8000

Matthew Sullivan  
 Investor Relations and Corporate Affairs  
 AWE Limited  
 02 8912 8022  
[Matthew.sullivan@awexplore.com](mailto:Matthew.sullivan@awexplore.com)

**ENDS**