

# Waitsia Gas Project

## Investor Site Tour

3 August 2017

David Biggs

CEO and Managing Director



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## East coast gas market

- **Market overview**
  - Energy supply issues across southern Australia contributing to forecast price increases
  - Industry demand for reliable domestic supply
  - Widespread view that some LNG producers are short gas
- **Opportunity**
  - Casino and BassGas contracts to re-price from 2018 and 2019 respectively
  - Anticipate significantly higher prices on east coast

## West coast gas market

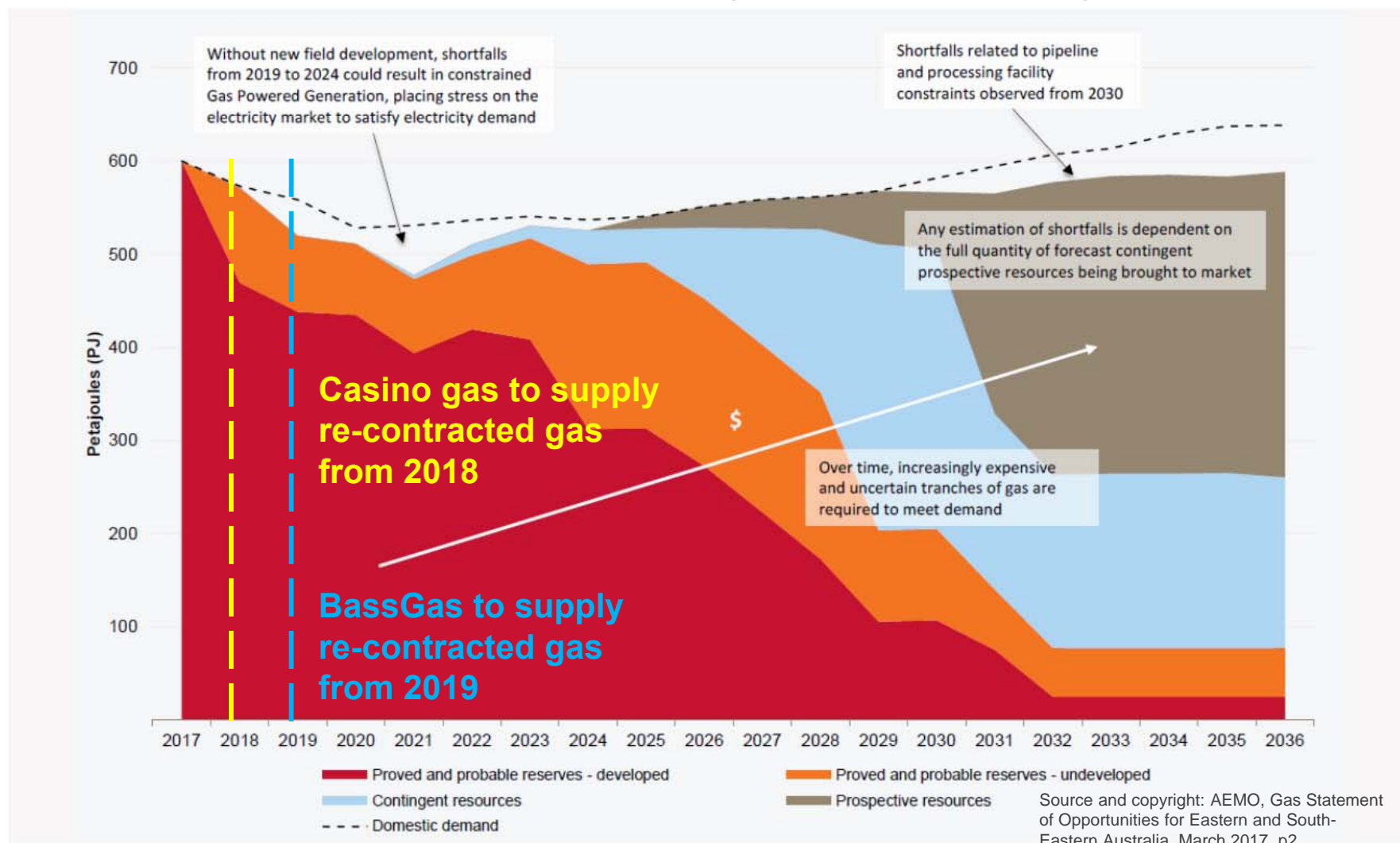
- **Market overview**
  - NW Shelf confirmed reduced supply to WA market
  - Temporary spot market oversupply to wane
  - Domestic demand resilient
  - Customers want diversity of producers and supply security
- **Opportunity**
  - Waitsia aligned with optimal customer re-contracting window over next 3-5 years
  - Anticipate significantly stronger pricing for term contracts

Excellent pricing potential in both major markets



# East coast struggling to meet demand

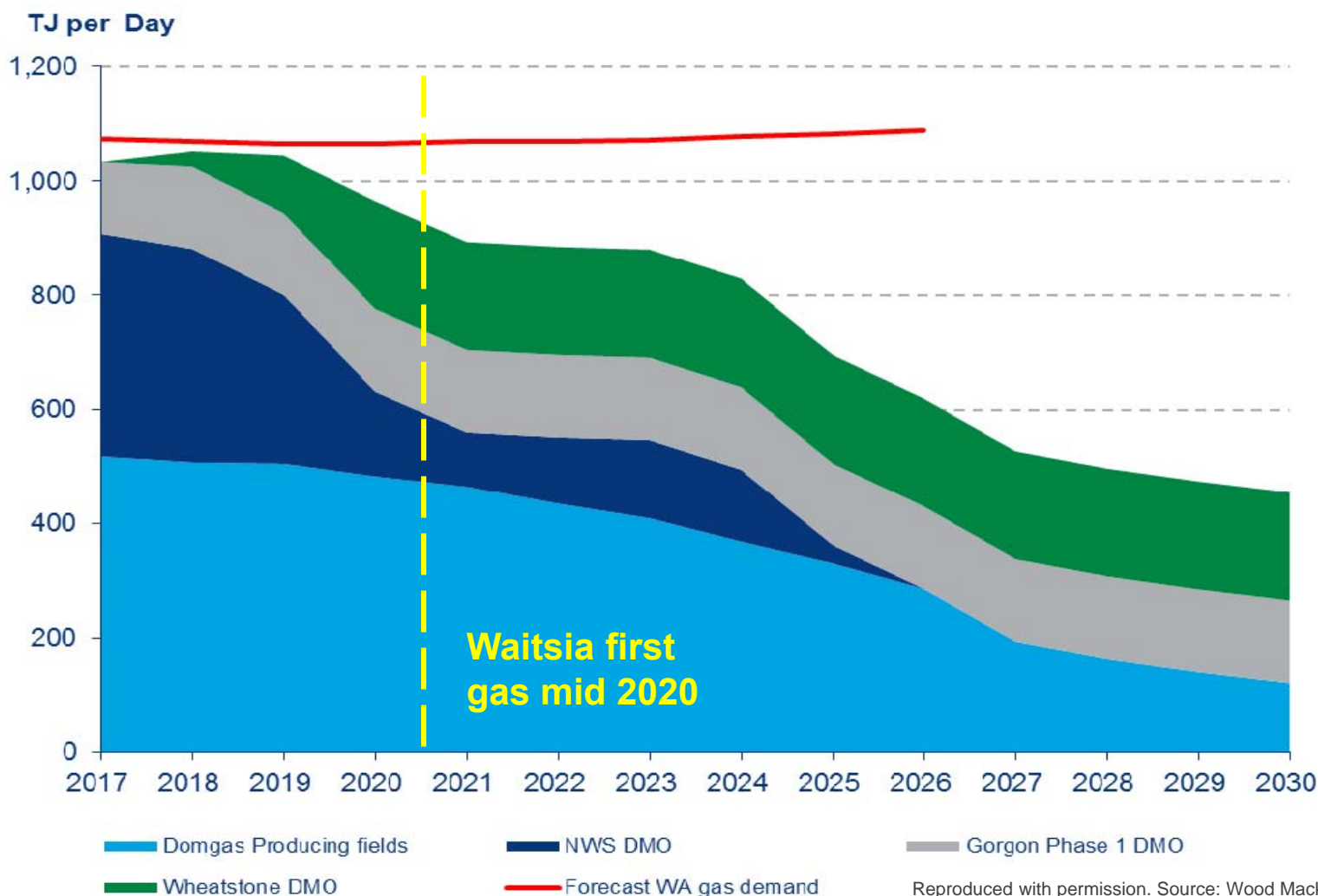
## Eastern and south-eastern Australia domestic gas production (excluding LNG), 2017–36



Current supply-demand imbalance driving up prices

# New fields needed to meet WA demand

## WA Gas Supply/Demand (Existing And Planned)



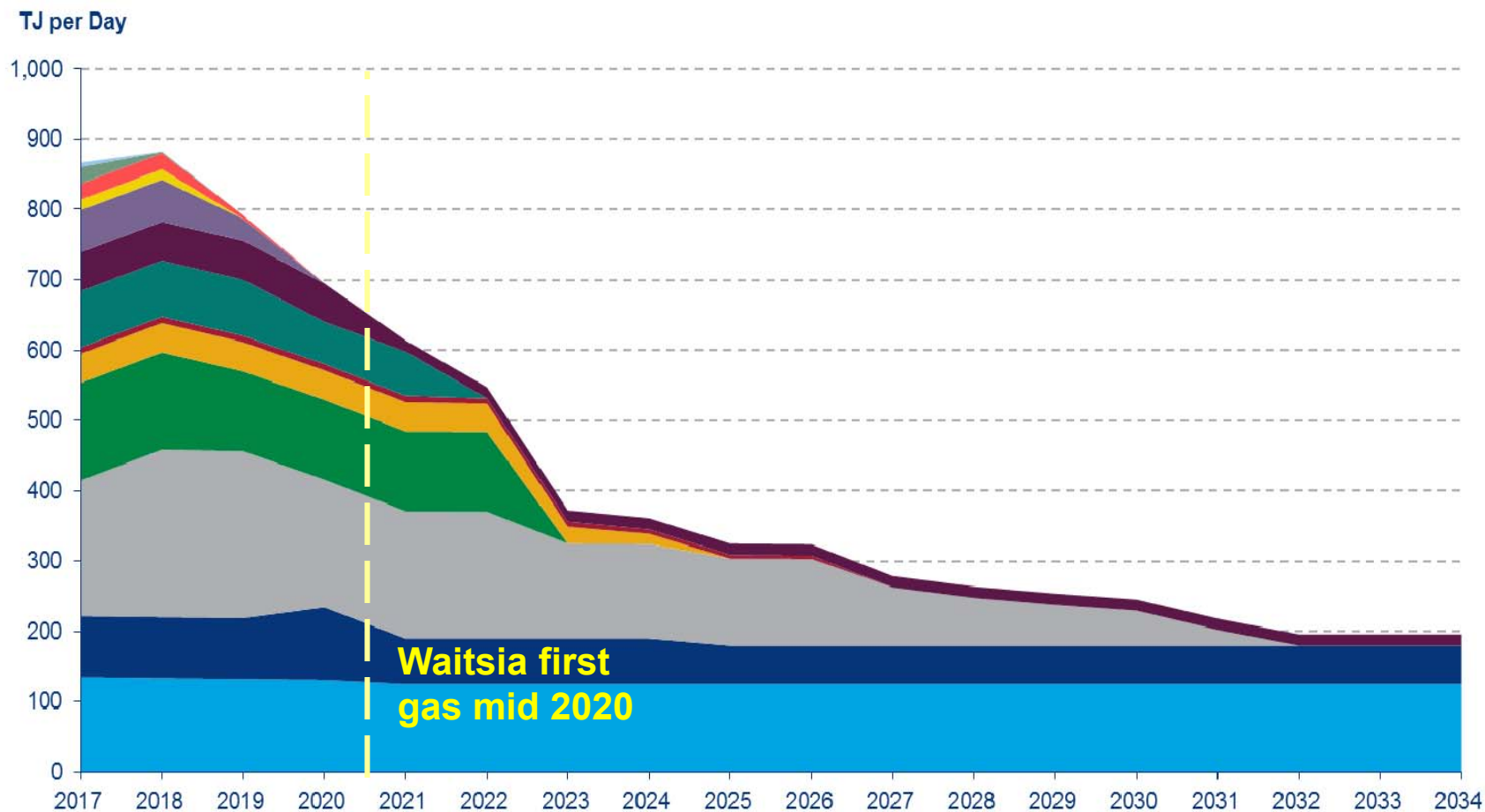
Source: Wood Mackenzie and AEMO

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Waitsia Stage 2 and Gorgon Phase 2 needed to meet WA gas market demand

# WA gas market tightening

## Contracted Supply By Customer



Source: Wood Mackenzie

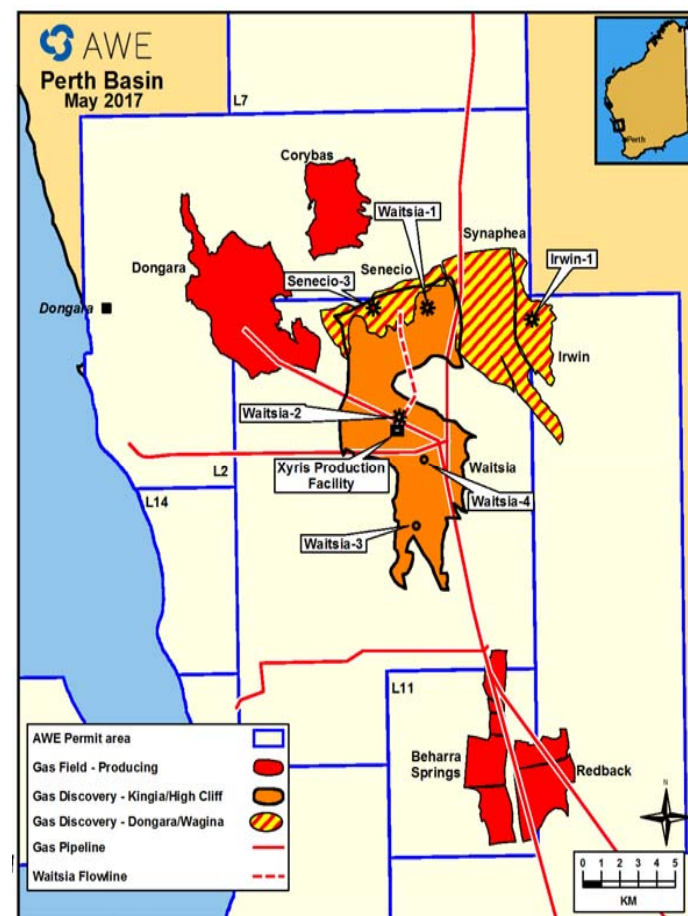
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Waitsia gas production aligned with customer recontracting window

# Waitsia Stage 1A exceeds expectations



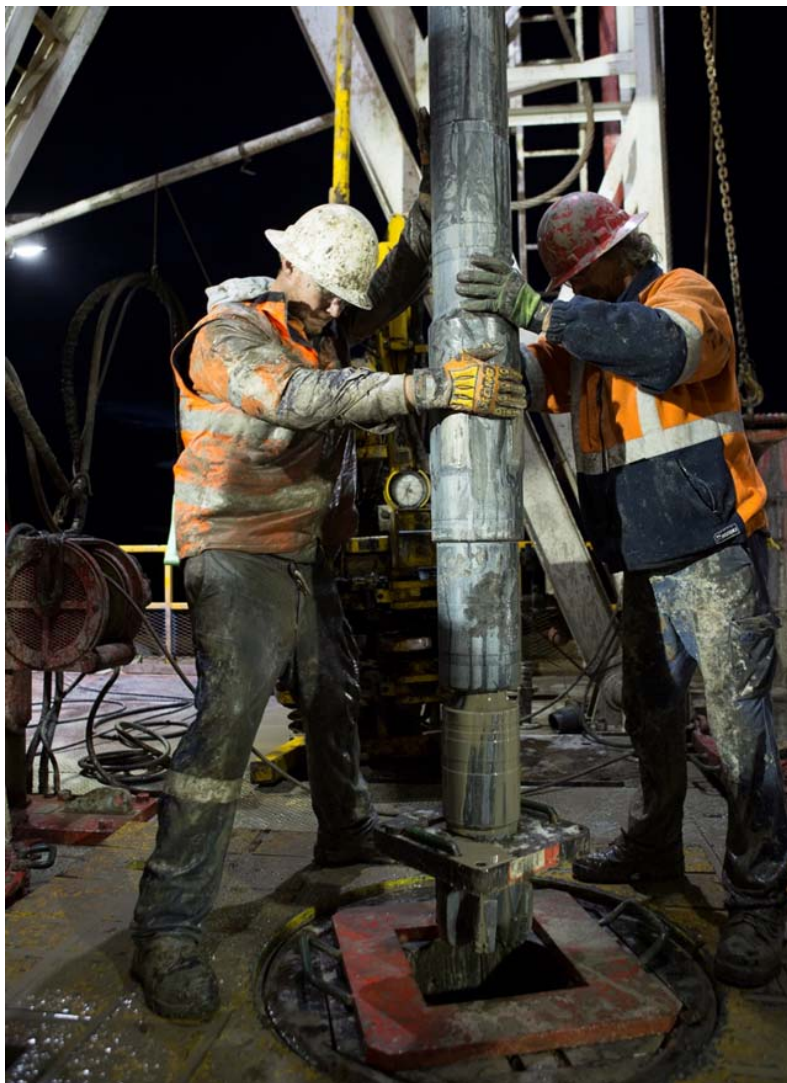
- First gas achieved on time and under budget in August 2016
- Stage 1A comprises 2 wells in extended production test – Senecio-3 and Waitsia-1
- Preliminary well performance has exceeded pre-production expectations
- Confirmed high quality conventional reservoir system with excellent connectivity from:
  - Kingia Sandstone (produced from Senecio-3), and
  - High Cliff Sandstone (produced from Waitsia-1)
- Stage 1A supplies a MDQ of 9.6 TJ/d under a 2.5 year take or pay agreement with Alinta
- Very good gas quality – 93% methane, 4%–5% CO<sub>2</sub> – implies minimal processing for Stage 2
- Opportunity to continue Stage 1A production in parallel with Stage 2, with potential to expand



Production data from Stage 1A will aid Stage 2 development



# Waitsia Stage 2 growing in value



- Waitsia-3 and 4 appraisal wells being drilled over May-August 2017
- Independent review of Waitsia 2P reserves<sup>1</sup> is 34% higher than AWE's current estimate
  - Certifies capacity to deliver 100 TJ/d for 10 yrs
  - Conventional reservoir structure
- Potential to upgrade Waitsia 2P Reserves post appraisal drilling
- Pre-FEED completed; design competition and FEED commenced in June
- Capital costs to be finalised post FEED
  - Relatively simple onshore plant, close to pipeline infrastructure
- AWE targeting FID in late CY 2017
- Potential sale/IPO of Origin upstream assets having a positive impact

1. Announced 20 September 2016

**Waitsia work program designed to further de-risk project and add substantial value**



# Waitsia gas marketing – strong demand



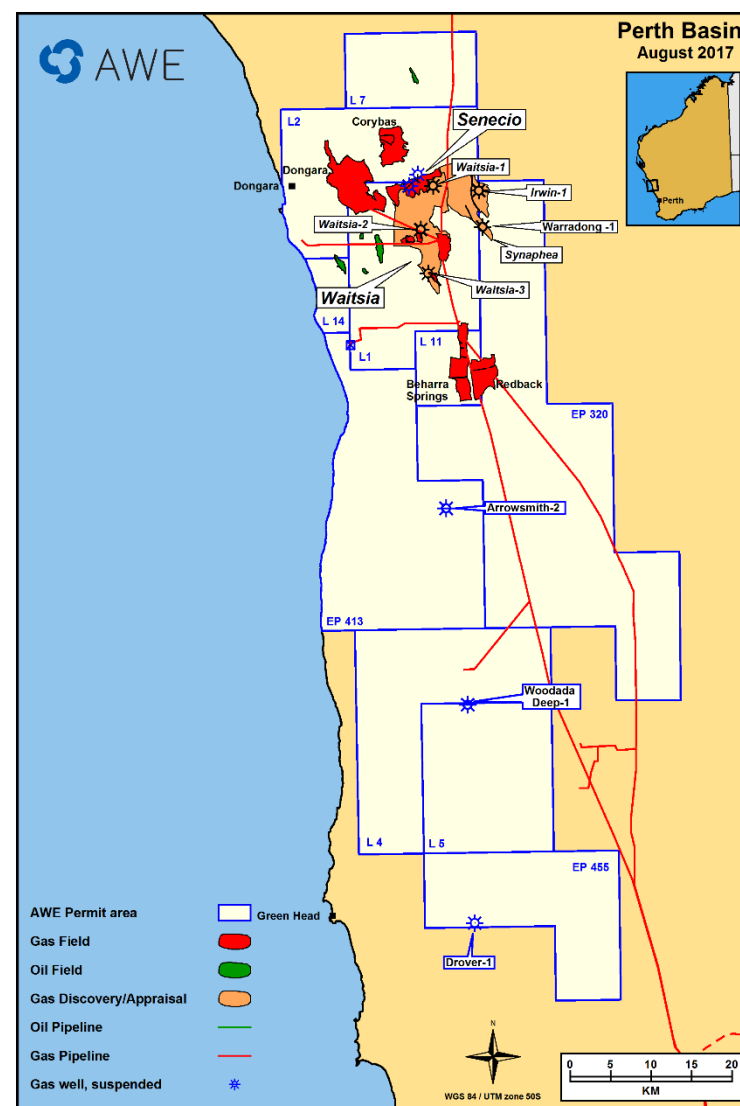
- Aiming to contract substantial gas volumes in 2017 ahead of FID
- Tender process completed in 2016 with positive feedback from potential customers
  - Waitsia gas increases competition, improves diversity and security of supply
- Bid volumes totalled more than double the JV's 2P Reserves
- First gas sales term sheet agreed
  - Gas sales term sheet for 15 TJ/d agreed with AGL in February 2017
  - Negotiating gas sale arrangements with other potential customers

Market and price range for Waitsia gas established

# Waitsia – exciting exploration potential



- Further development potential in Waitsia beyond Stage 2
- Potential to increase production to 150 TJ/d from Stage 2 and existing facilities
- Largest exploration acreage position in the onshore Perth Basin
- Significant exploration potential at Kingia and HCSS horizons south of Waitsia
- Potential Beharra Deep well targeting significant Waitsia-like prospect adjacent to Beharra gas plant



The onshore Perth Basin is AWE's cornerstone asset

# Waitsia

## A new onshore gas resource for Western Australia

Suzanne Hunt  
GM WA Assets and Engineering

Investor Site Tour  
Dongara/Pt Denison 3<sup>rd</sup> August 2017



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- This presentation does not incorporate data from Waitsia-3 and Waitsia-4 appraisal wells.

## AWE Reserves & Contingent Resources

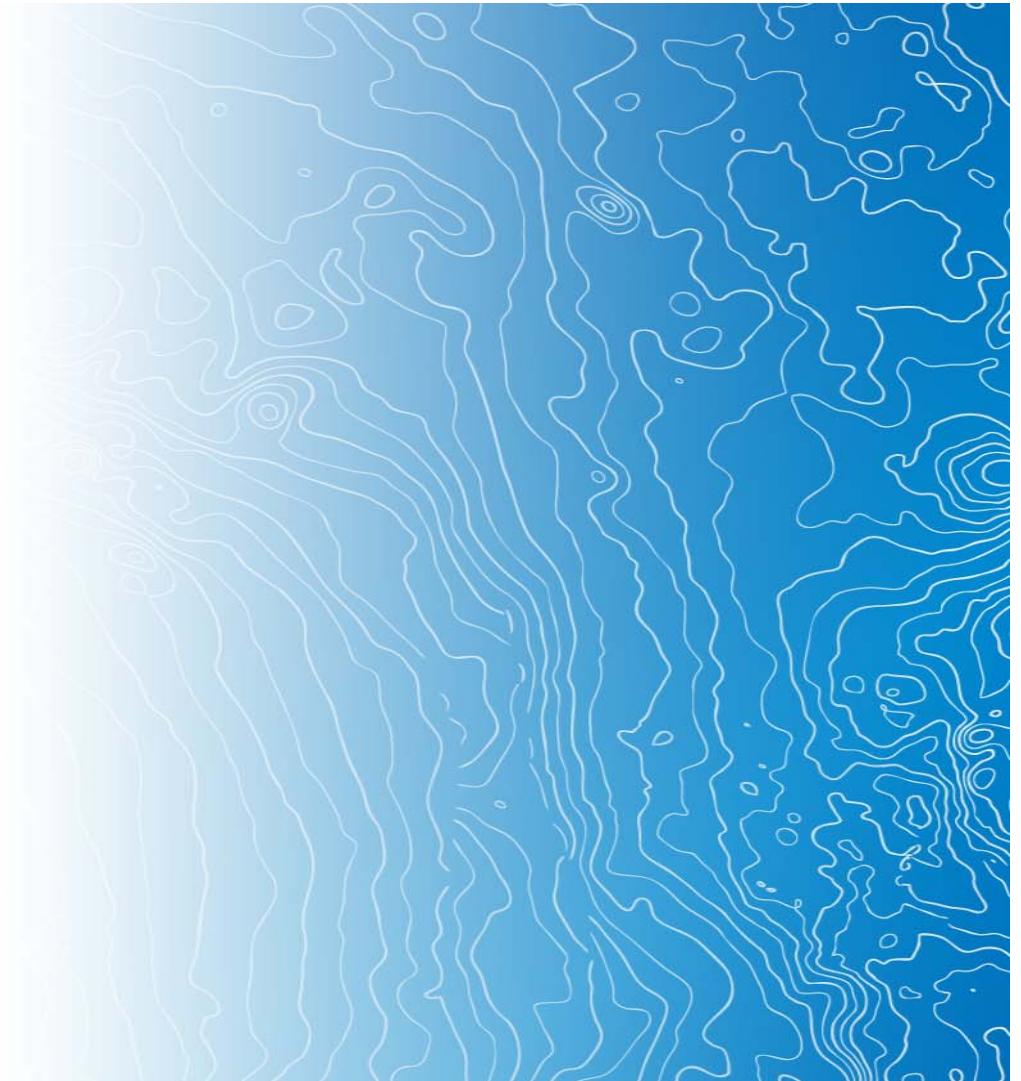


- The Reserves and Contingent Resources in this presentation are based on and fairly represent information and supporting documentation prepared by and under the supervision of qualified petroleum reserves and resource evaluator Dr. Suzanne Hunt, AWE General Manager WA Assets and Engineering. Dr. Hunt, 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 resources sector generally. 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;
  - SPEE Monograph 3 "Guidelines for the Practical Evaluation of Undeveloped Reserves in Resource Plays";
  - 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.

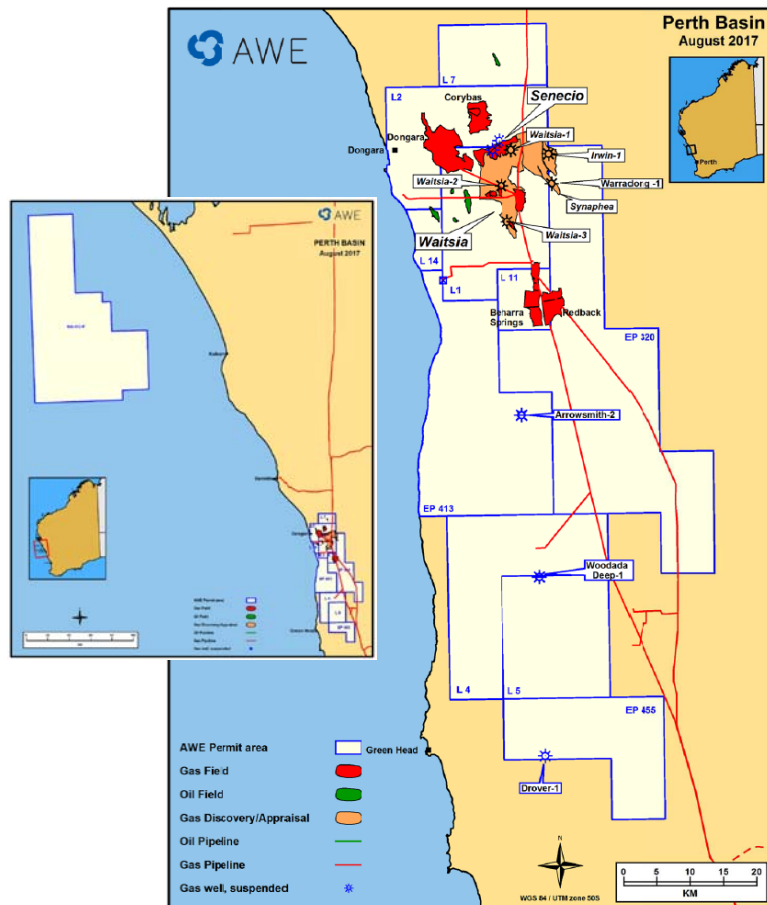


## Agenda

- AWE in the Perth Basin
- Waitsia Discovery and History
- Waitsia Development
- Regional Setting
- Summary



# AWE Acreage in WA



- AWE has a substantial Acreage position in the onshore northern Perth Basin;
- AWE has an interest in a significant number of gas and oil production facilities (Xyris, Dongara, Mt Horner, Beharra Springs, Woodada);
- AWE's acreage has access to both major pipelines (Dampier to Bunbury Natural Gas Pipeline (DBNGP), Parmelia Gas Pipeline) to southern markets;
- AWE actively markets gas to customers (Industrial, Distribution)

## Significant Acreage and Facility Position

\* Excluding Jingemba Divestment L14

## Waitsia Significance



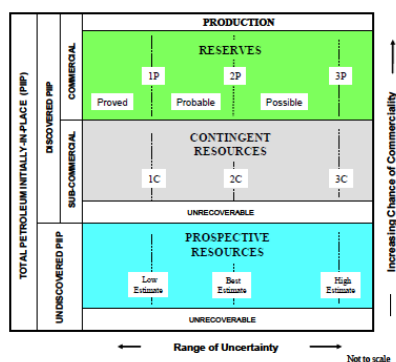
- Largest conventional onshore Australian discovery in 30 years
- Material development with access to existing infrastructure & markets
- New play has re-invigorated Perth Basin exploration & development
- Positive for Mid West & WA – as it provides regional economic benefits; diversity of gas supply; royalties
- Incentive for continued exploration in other onshore Australian basins



# Significant 2P+2C Reserves/Resources Upside



- Review underway to incorporate results of Waitsia-3
- Significant upside in the basin from both tight gas (e.g. Senecio, Synaphea, Irwin) and new Kingia/High-Cliff plays yet to be drilled.
  - Waitsia Field 2P+2C Reserves/Resources (AWE est.) : 630 bcf (gross)
  - Independent Expert Reserve Certification 2P+2C (RISC Sept 2016 est) :* 692 bcf (gross)
  - Senecio/Synaphea/Irwin 2C (AWE est.) : 234 bcf (gross)
  - Total 2P+2C (AWE est.) : 864 bcf (gross)



Field and Permit	Reservoir Interval	AWE Share of Reserves (Bcf of gas)			AWE Share of Contingent Resources (Bcf of gas)		
		1P	2P	3P	1C	2C	3C
Waitsia (L1/L2)	Kingia/High Cliff Sandstone	93	172	300	67	143	326
Senecio (L1/L2)	Dongara/Wagina	-	-	-	25	41	73
Synaphea (L1/L2; EP320)	Dongara/Wagina	-	-	-	53	69	92
Irwin (L1/L2; EP320)	Dongara/Wagina	-	-	-	4	7	11
<b>TOTAL</b>			172			260	

AWE net Reserves and Contingent Resource estimates for the Waitsia and annotated onshore Perth Basin (reported at 3 June 2016)



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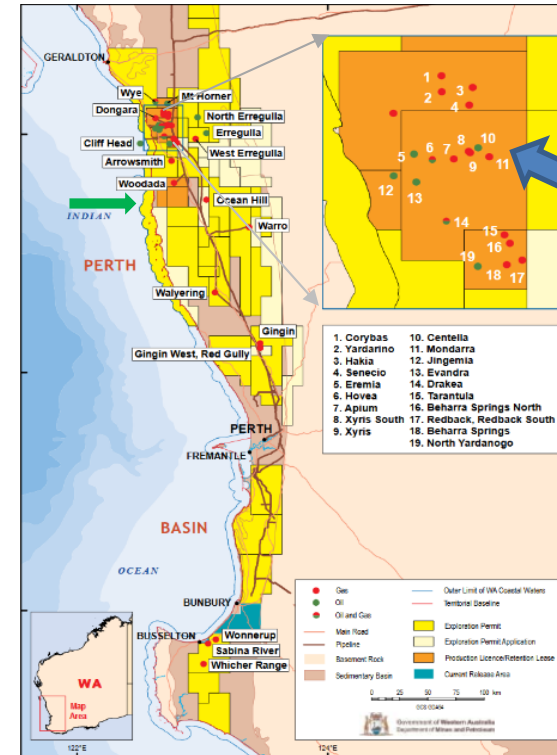




# Onshore Sedimentary Basins and Discoveries



Western Australia's sedimentary basins



Significant hydrocarbon discoveries in the Perth Basin

Waitsia

Extensive oil and gas activity throughout the Perth Basin

## Exploration history – Pioneers in the Perth Basin



1964 - Yardarino discovery (which led on to the nearby Dongara discovery). The Premier, David Brand, the Minister for Mines, Arthur Griffith and Robin Elliott, WAPET pictured.



**1952 - large scale oil exploration began**

**1953 – struck oil at Rough Range (Exmouth), a turning point for oil exploration in WA and Australia**

**1964 - WAPET discovered the first commercial natural gas field in the state, at Dongara in the Perth Basin**

**1971 - Dongara discovery went into production and resulted in construction of the first gas pipeline in WA**

**Dongara fields are close to sources of demand and provide an important secure supply**

**In the mid 1960s, other oil and gas discoveries took off (eg Barrow Island).**



1964 - R Elliott, WAPET, with oil from Yardarino No 1 well

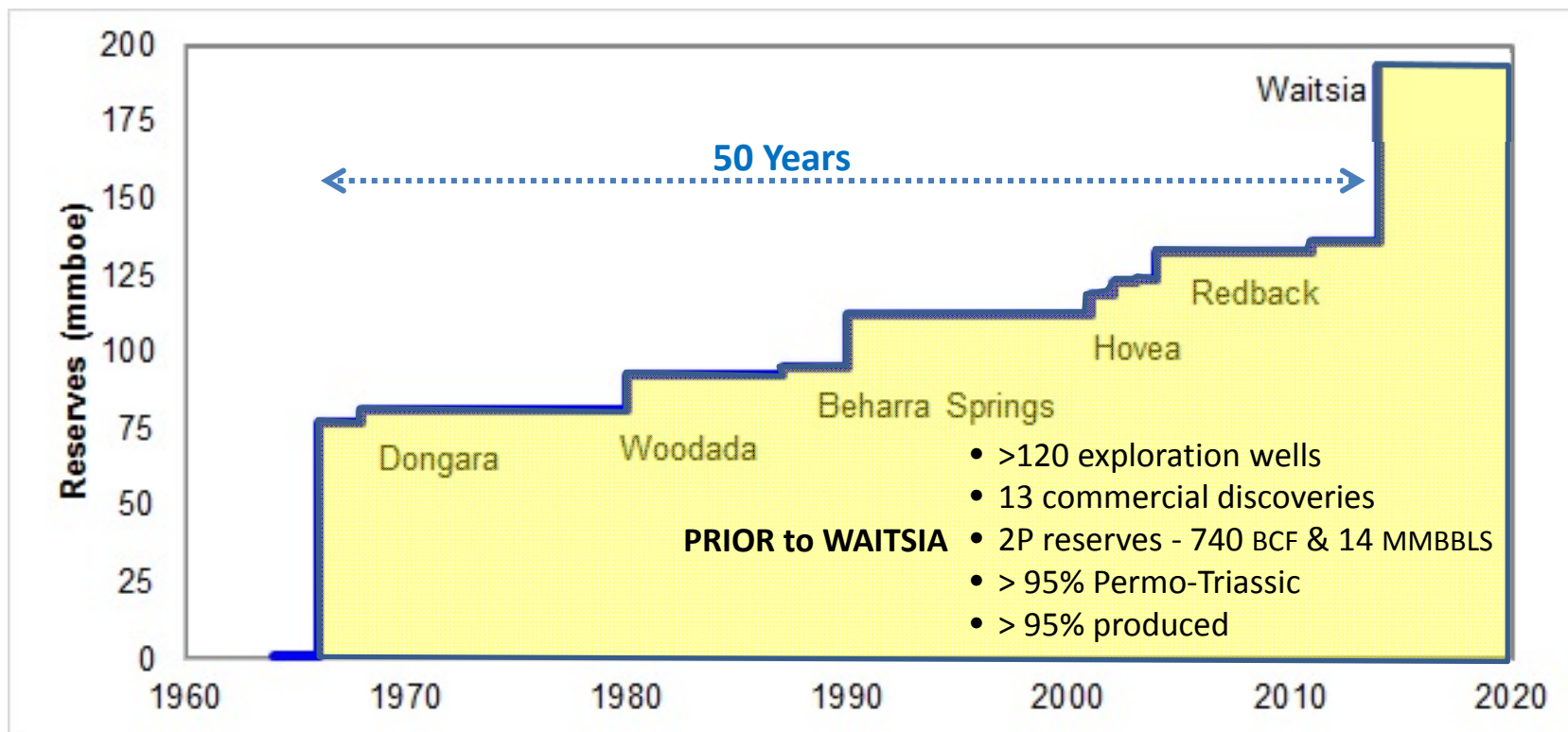


1967 - WAPET drilling, Dongara



1967 - WAPET gas well, Dongara

## Exploration history – onshore North Perth Basin



Schematic only

## Waitsia Fundamentals



**Permit:** L1/L2 Waitsia Gas Project AWE 50% (Operator), Origin 50%

**Location:** the Waitsia gas field is located on agricultural land in the Shire of Irwin, about 14.5 kilometres east of Dongara and 367 km north of Perth.

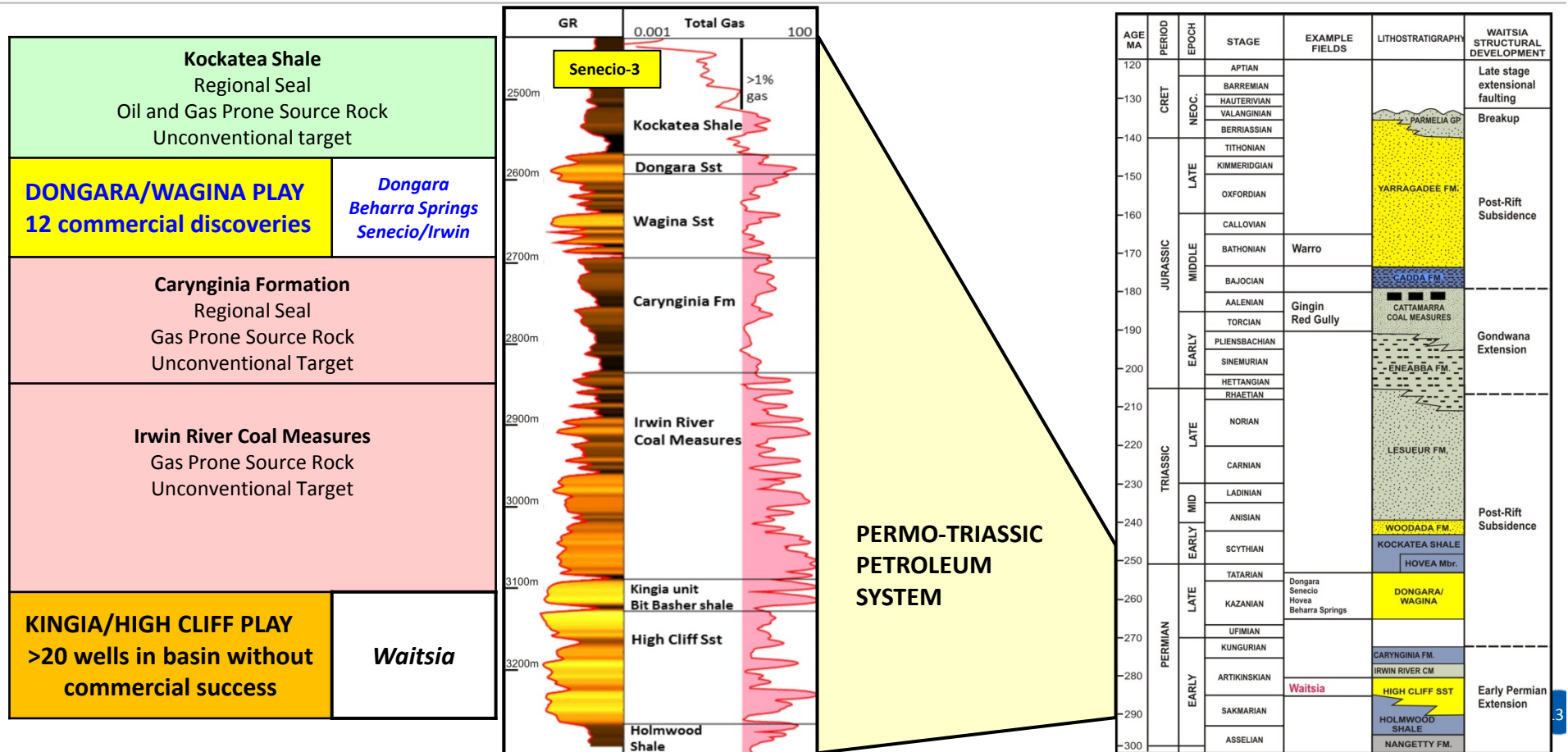
AWE has basin-dominant position with multi-TCF potential:

- *Conventional + Tight Sand*
- *Strategy to build a material domestic gas business*
- *Early and low cost development via existing infrastructure*
- *Attractive WA gas market options*
- *Exploration and Appraisal success at Waitsia, Senecio, Synaphea and Irwin.*



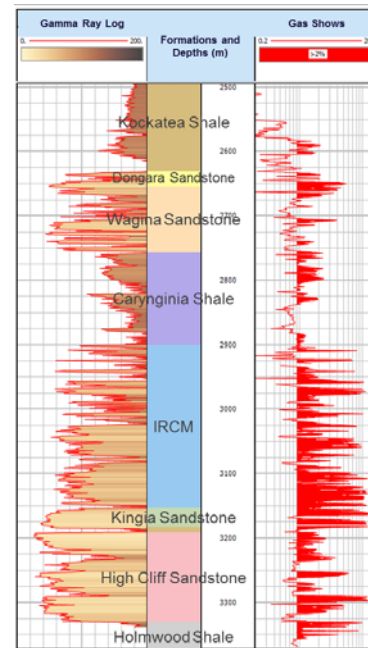
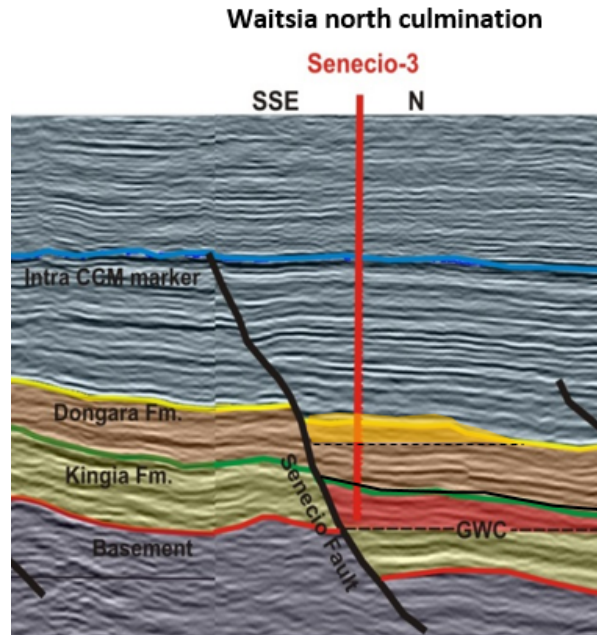


# Permo-Triassic petroleum system & plays



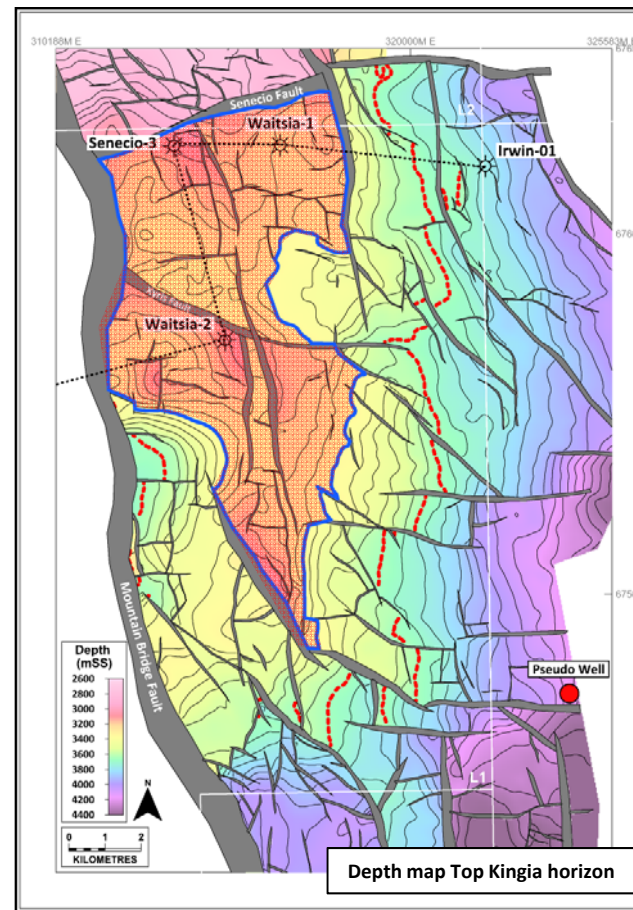
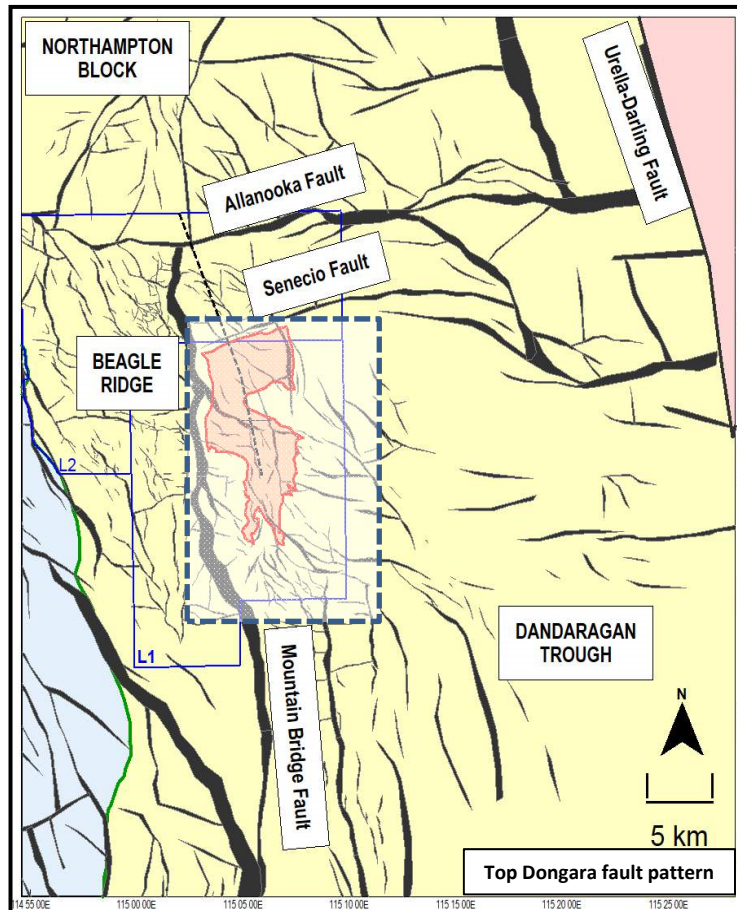


## The Discovery – How did it happen ?



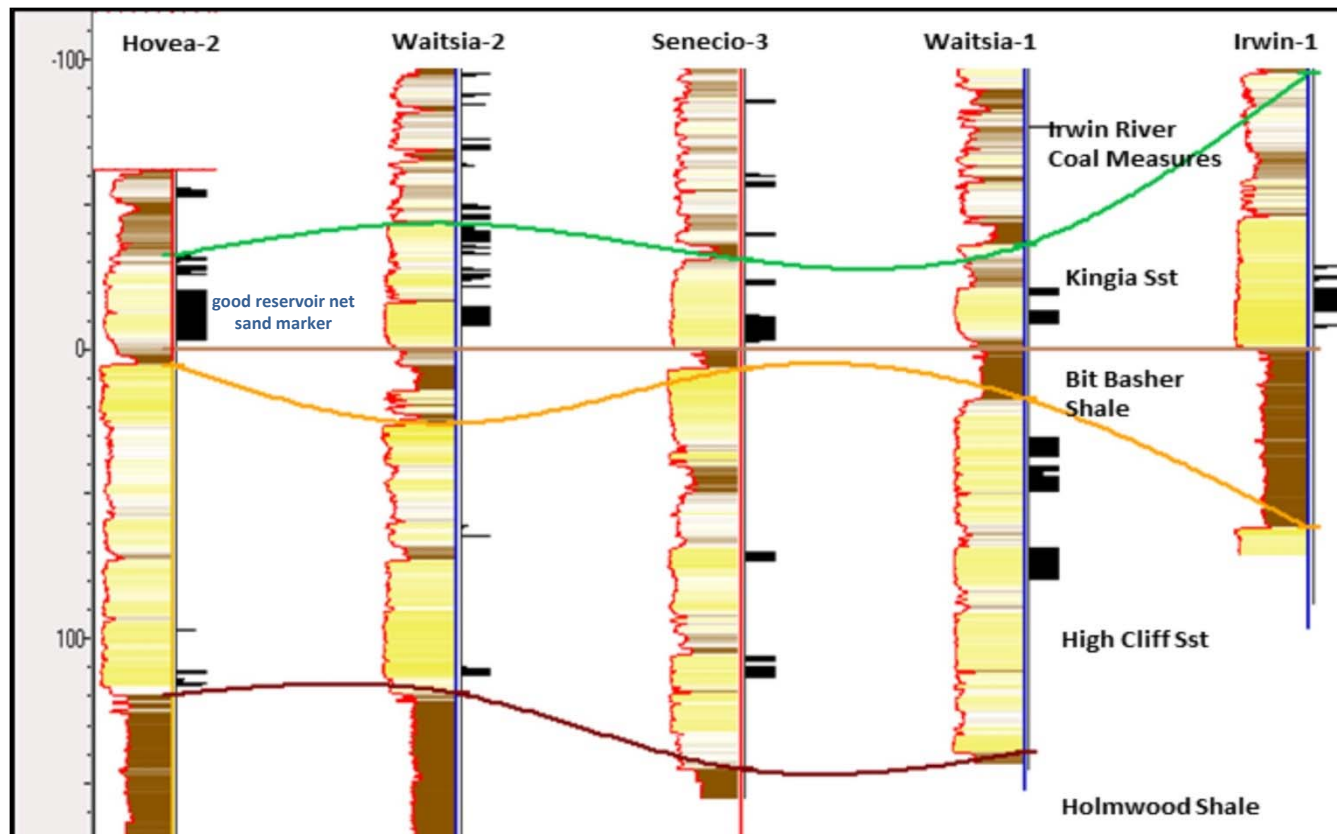
Senecio-3 well targeted the Dongara-Wagina sands. Below this intersection, the team observed further shows of gas. Drill bit was in good condition, well was under budget – decision made to continue.

# Structure

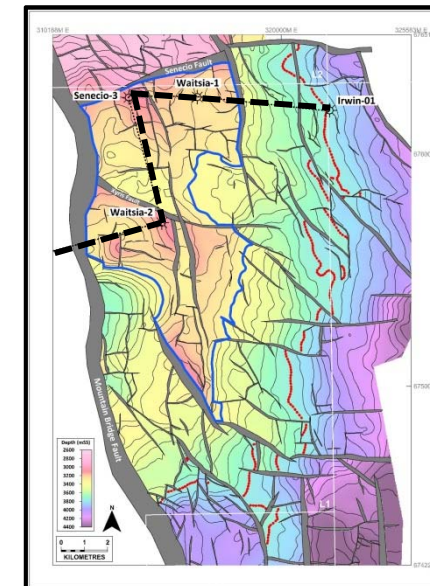


- Low-side fault closure of ~50 km<sup>2</sup>
- Crest at 3000m with 350m gross gas column
- Trap defined by Mountain Bridge & Senecio faults
- Senecio fault seals despite small throw
- Stress suggests W-E faults prone to re-activation – not the case.

## Kingia & High Cliff correlation



- Gross thickness 150-200m
- Beach & shoreface setting
- Quartz sand composition
- Intervals of good porosity >11% in Kingia & High Cliff





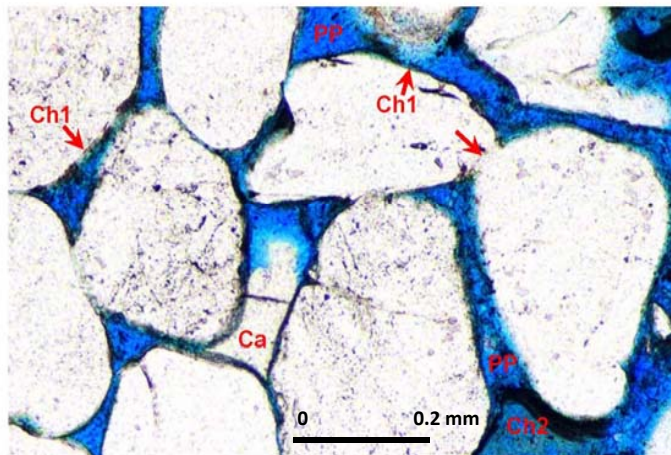
## High Perm. vs Low Perm. Sandstone Comparison

### Waitsia Field

#### Kingia/High Cliff Reservoir

Clay Rims prevent Quartz Cementation  
& preserve abundant primary porosity  
(blue)

PLATE 64: Senecio-3 SWC #3 3176.5m (cont.)



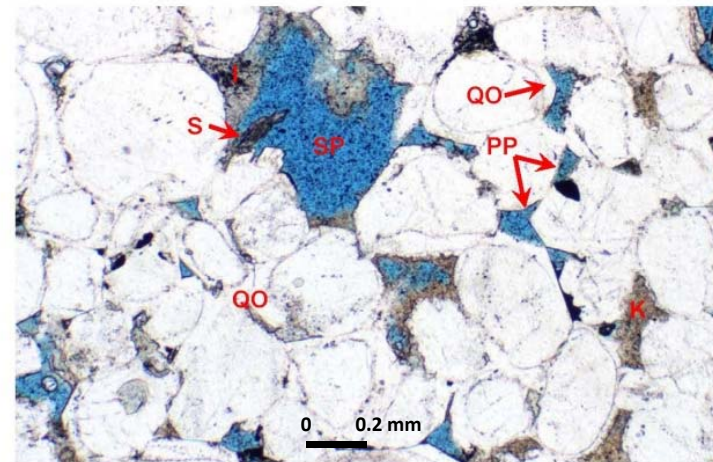
Porosity >11%; Permeability 10 - 100+ mD

### Senecio/Synaphea/Irwin Fields

#### Dongara/Wagina Reservoir

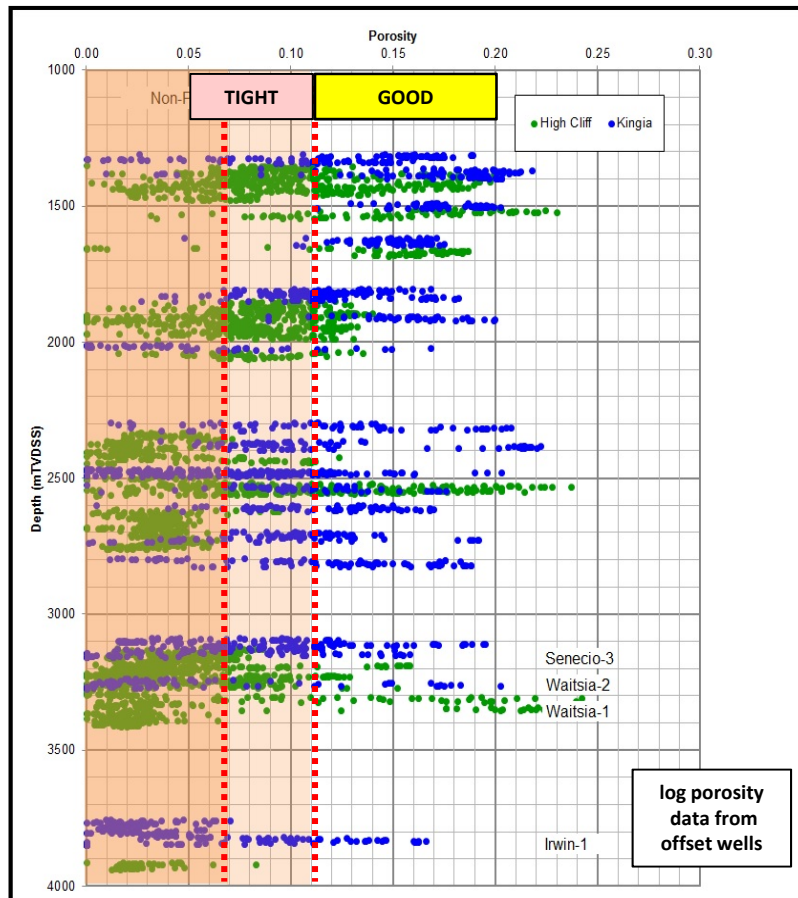
Pervasive Quartz Cement with  
localised primary but common  
secondary porosity (blue)

PLATE 16: Senecio-3 #49A 2651.76m (cont.)



Porosity 5-11%; Permeability 0.1 - 10 mD

## Good reservoir is diagenetically controlled



- Porosity controlled by diagenesis NOT depth
- Clay rim formation likely to be influenced by depositional environment
- Most Kingia wells have some good reservoir – deepest to date 3750m
- High Cliff more variable
- Wagina reservoir in Beharra Springs field is a direct analogue



# Waitsia Field

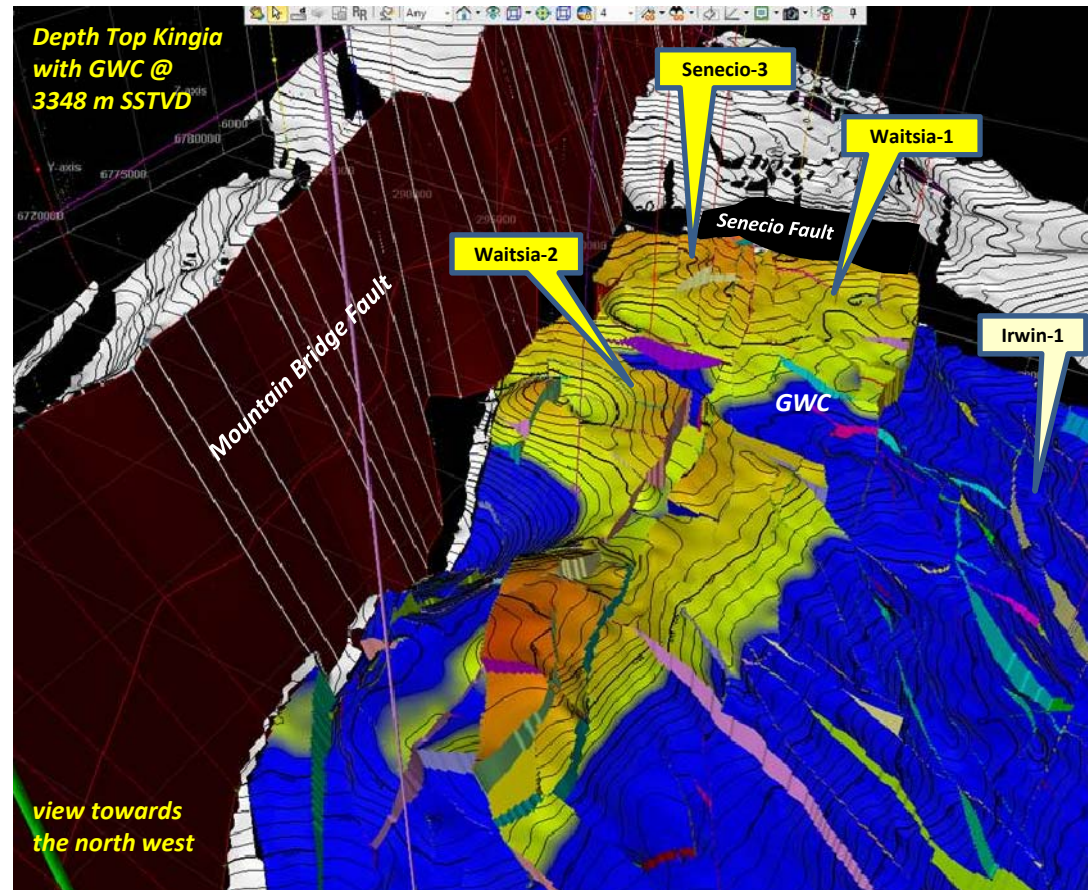


## Kingia/High Cliff 3D Model

- Gross gas column of 350m
- Area 50 km<sup>2</sup>

## Status: Further Appraisal & Development Planning

- Early start-up with connection of S-3, W-1 to existing Xyris Facility



## S-3 & W-1 Well Test Results & Productivity



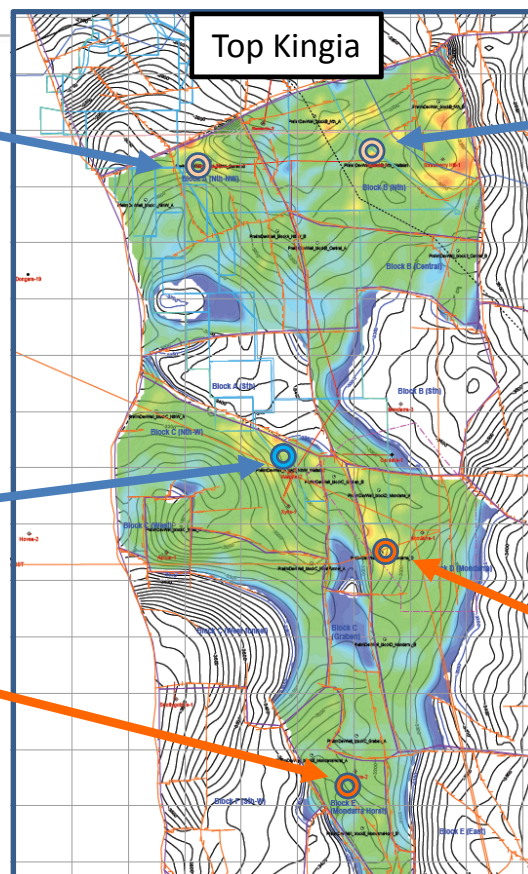
Senecio-3 Kingia: 16.0 MMscf/d (peak)  
Senecio-3 HCSS: 0.3 MMscf/d



Senecio-3 Kingia Test – flare shown @ 10.0 MMscf/d

Waitsia-2 Test Planned Q4 2017  
Best Kingia reservoir encountered to date

Waitsia-3: Test planned Q4 2017  
Appraise southern limit



Waitsia-1 Kingia: 25.7 MMscf/d (tubing constrained)  
Waitsia-1 HCSS: 24.7 MMscf/d (tubing constrained)



Waitsia-1 Kingia Test – flare shown @ 17.5 MMscf/d



Waitsia-1 HCSS Test – flare shown @ 15.5 MMscf/d

Waitsia-4: Test planned Q4 2017\*  
Appraise eastern limit

- Currently Producing in Stage 1A
- Existing Appraisal Well
- Appraisal Well

\*Well test contingent on successful appraisal result

Excellent well test results to date demonstrating high productivity and some of the best results seen in onshore Australia. Waitsia-1 well test was tubing constrained; larger casing and tubing planned for future wells.

# Stage 1A EPT Well Performance Results



## Stage 1A Extended Production Test Objectives

- Gather long term well and field production behaviour for input into full field development
- Firm up min connected gas volume, well count, phasing and P50 recovery estimates

## Well Test vs. Extended Production Test Results

**S-3 Kingia:** Kingia zone is the poorest Kingia penetration in Waitsia field – 16.0 MMscf/d (peak rate)

- Discovery well in sub-optimal location
- EPT pressure build-up analysis indicates better reservoir quality away from well (similar to W-1 & W-2 quality)

**W-1 HCSS:** Best HCSS penetration to date – 24.7 MMscf/d (tubing constrained)

- HCSS reservoir connectivity extent unknown due to limited well test volume
- EPT result shows excellent reservoir quality and broad connectivity in B Block

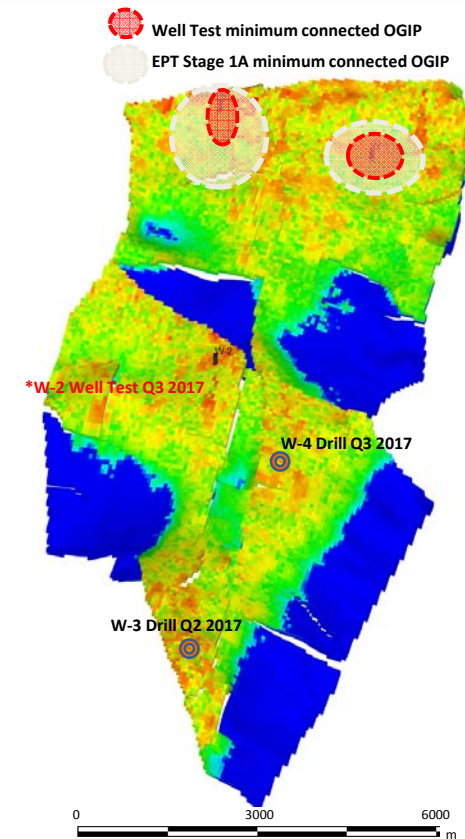
**W-1 Kingia:** Best Kingia test result to date – 25.7 MMscf/d (tubing constrained)

- Excellent reservoir quality and connectivity from well test result
- EPT of W-1 Kingia to commence FY 2018

**Table 1. Well Test results v Extended Production Test preliminary results^**

	Senecio-3 (Kingia)	Waitsia-1 (HCSS)	Waitsia-1 (Kingia)
Estimated connected OGIP from well test	18-65 Bcf of gas	16-47 Bcf of gas	49-59 Bcf of gas
Preliminary connected OGIP from EPT	45-80 Bcf of gas	>50 Bcf of gas	Not yet tested

^See ASX Announcement on 22 December 2016: "Waitsia Stage 1A well performance exceeds expectations"



**Stage 1A EPT well results have met and exceeded expectations - firming up minimum connected volumes and long term production behaviour and deliverability**



## Waitsia-3 Result



### ASX Announcement

4 July 2017

### Waitsia-3 gas discovery confirms extension to Waitsia Field

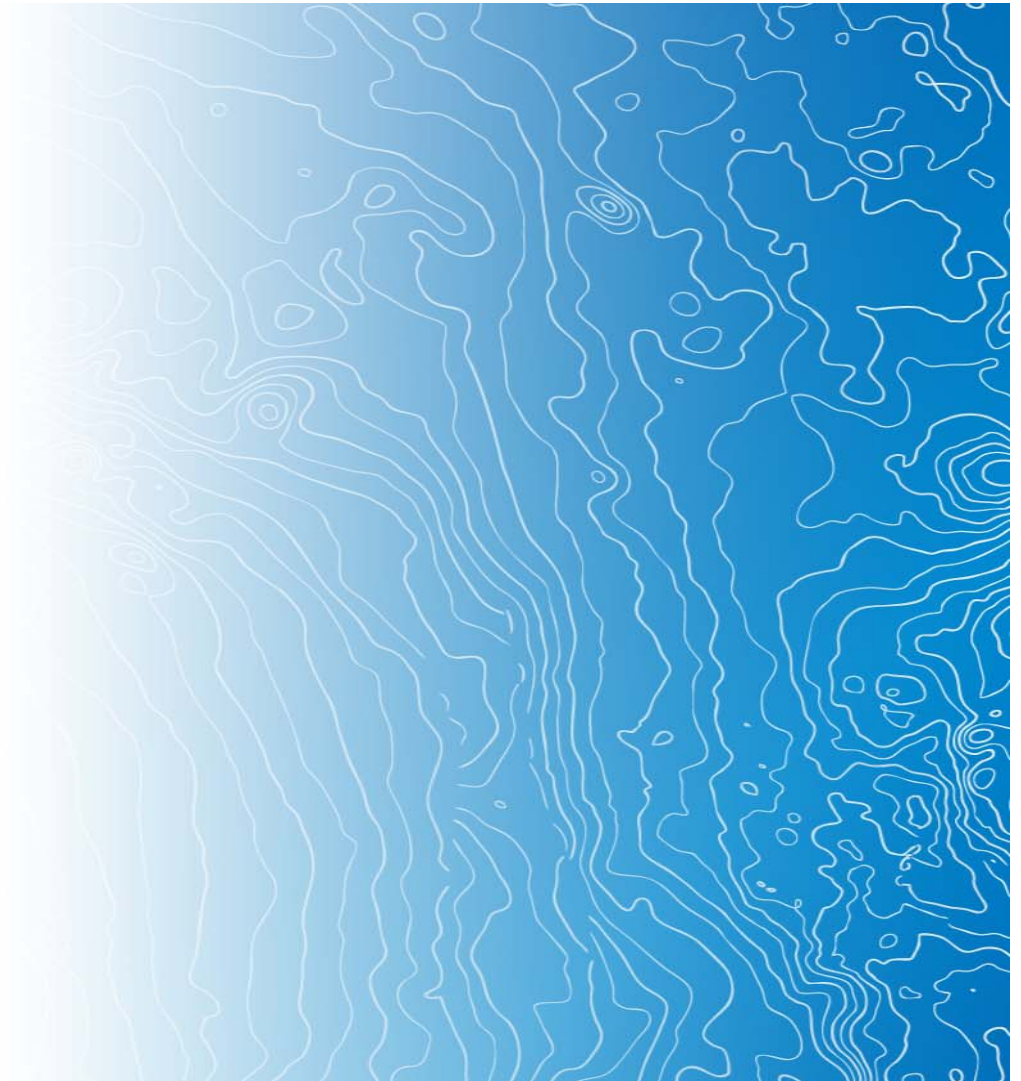
- Successful appraisal of southern extension of the Waitsia Gas Field
- Strong gas shows across 150 m interval of Kingia and High Cliff Sandstone reservoirs
- Kingia reservoir considerably thicker and better quality than predicted
- Gas observed in High Cliff Sandstone below the lowest known gas observed in previous wells in the field
- Waitsia-3 has been suspended for future testing and production
- Anticipate booking additional Waitsia 2P Reserves in second half of CY 2017



Resource to Reserve Changes Indicated

## Agenda

- AWE in the Perth Basin
- Waitsia Discovery and History
- **Waitsia Development**
- Regional Setting
- Summary





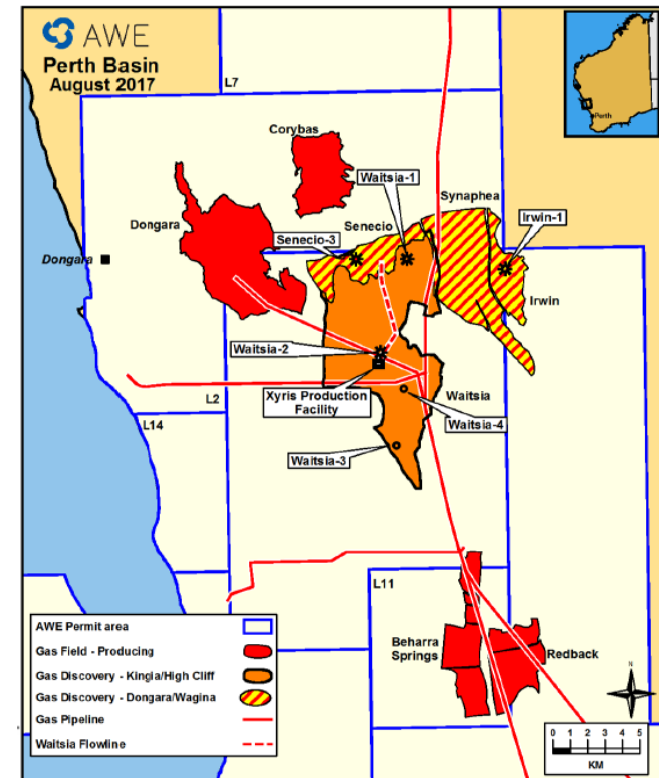
## Discovery sequence



Date	Activity	Result
2005	Senecio-1/2	<ul style="list-style-type: none"> <li><b>Dongara</b> TIGHT GAS discovery</li> </ul>
2013	Irwin 3D	<ul style="list-style-type: none"> <li>Improved mapping – Senecio 1/2 in local fault zone</li> </ul>
2014	Senecio-3	<ul style="list-style-type: none"> <li><b>Dongara</b> better quality reservoir (not tested)</li> <li>Well deepened due to very high gas shows</li> <li><b>Kingia/High Cliff</b> CONVENTIONAL GAS discovery</li> <li>Testing confirmed high flow potential</li> </ul>
2015	Irwin-1	<ul style="list-style-type: none"> <li><b>Dongara</b> TIGHT GAS discovery (not tested)</li> <li><b>Kingia</b> secondary target wet as expected but good quality reservoir</li> </ul>
	Waitsia-1	<ul style="list-style-type: none"> <li>Confirmed lateral extent of <b>Kingia/High Cliff</b> reservoir</li> <li>Defined GWC – (with further review post Waitsia-3)</li> <li>Testing further confirmed high flow potential</li> </ul>
	Waitsia-2	<ul style="list-style-type: none"> <li>Confirmed field extension to south (not tested)</li> </ul>

### Pre-Senecio-3

- 19 wells drilled for Dongara targets in Waitsia area but terminated before reaching Kingia/High Cliff
- Perceived poor reservoir quality & problem with cross-fault seal



## Major success at Waitsia-1



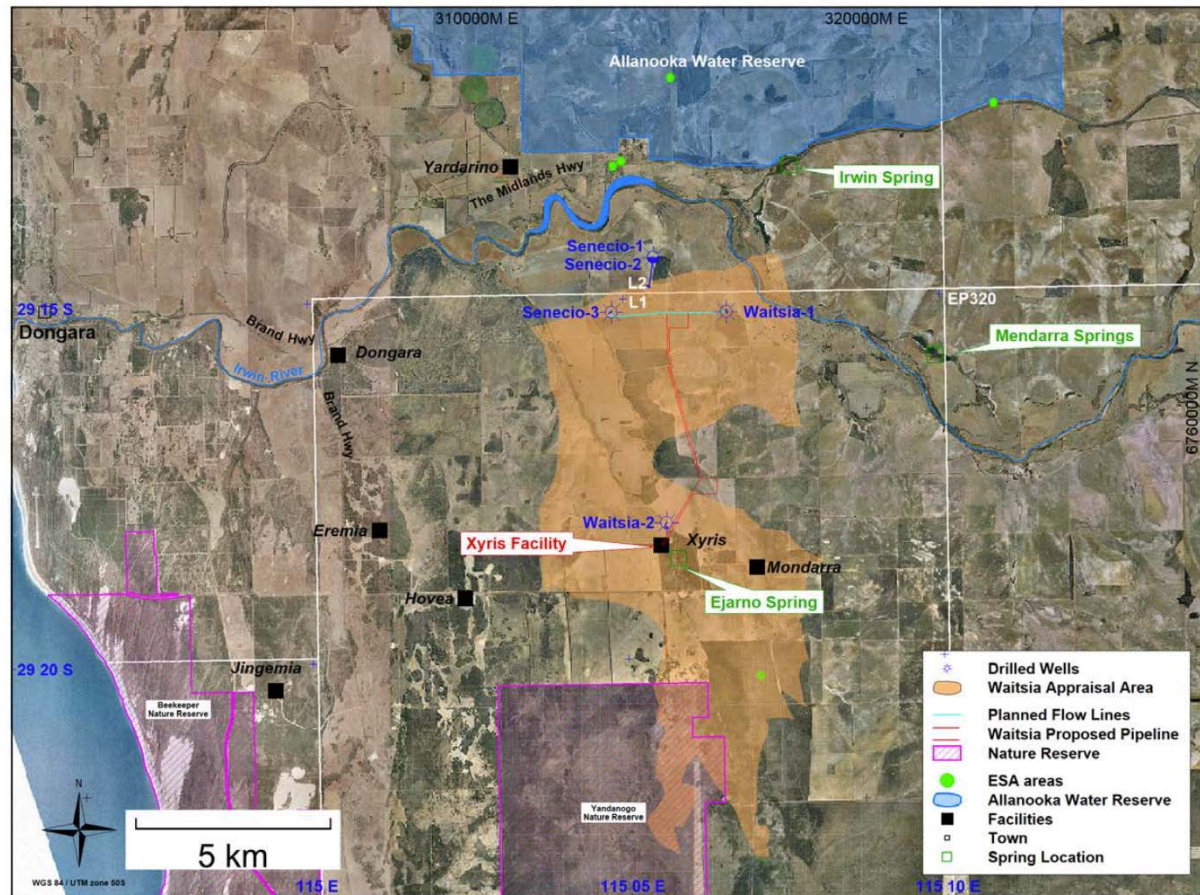
- Waitsia-1 – HCSS – Oct 2015
  - 3382.2 – 3405.5mMDRT (23.5m)
  - After an 7 hour clean-up period, the well flowed at an average rate and pressure of 24.7MMscf/d and 1330 psig, constrained by tubing size, on a 60/64" choke for 1hr.
  - Average Perm 12.5md from test
  - Accessed OGIP from test ~45Bscf
- Waitsia-1 – Kingia Fm. – Oct-Nov 2015
  - 3333 - 3348mMDRT (15m)
  - After an 8 hour combined clean-up and well test period, the well flowed at an average rate and pressure of 25.7MMscf/d and 1530 psig, constrained by tubing size, on a 56/64" choke for 1hr.
  - Average Perm 137md from test
  - Accessed OGIP from test ~50Bscf



**Total combined flow rate > 50MMscf/d from Kingia and HCSS**

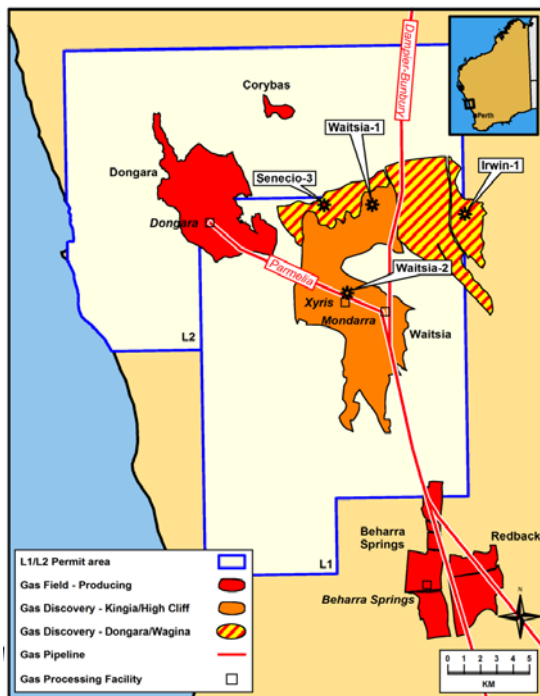
## Waitsia Stage 1A – Refurbished Xyris Production Facility AWE

- Stage 1A involved the construction of new flow lines and infrastructure to connect the Senecio-3 and Waitsia-1 wells to the refurbished Xyris Production Facility with the capacity to produce up to 10 TJ/d.
- AWE purchased Irwin Park Farm (AWE 100%). Waitsia is located predominantly under the farm.
- Stage 1A was completed on time and under budget and first gas was achieved on schedule in August 2016.
- Gas from Waitsia Stage 1A is transported south via the Parmelia Pipeline to Alinta under a GSA for 9.6 TJ/d for 2.5 years



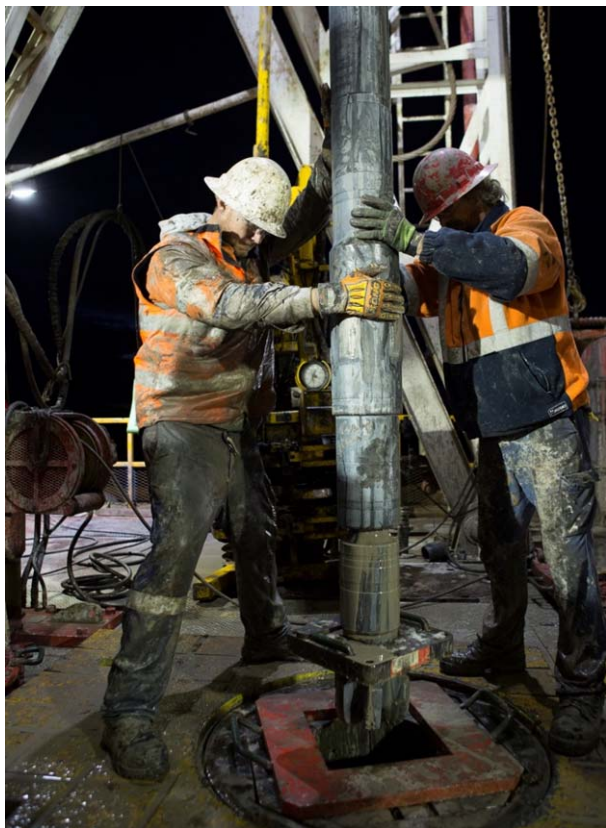


## Waitsia-1A first gas on time and budget



First gas from Waitisia Stage 1A (10 TJ/d) achieved in August 2016

## Waitsia Stage 2 - full field development



- 344 Bcf of gas gross 2P Reserves (172 Bcf or 30.4 mmboe net to AWE)\*
- The Waitsia joint venture completed the concept select process and agreed to progress directly to a 100 TJ/d Stage 2 full field development.
- This approach delivers considerably higher economic value than a phased development alternative due to lower overall costs and capture of the anticipated improvement in gas pricing and strong customer demand in 2020 and beyond.
- AWE is aiming to contract substantial gas volumes in 2017 ahead of an FID, subject to joint venture and regulatory approval.
- Waitsia-3 and Waitsia-4 are the last appraisal wells to be drilled prior to FID. These wells will assist in the evaluation the southern extent of the field which allow conversion of significant contingent resources to reserves.

\* Waitsia field reserves upgraded on 3 June 2016

- **Moving directly to Stage 2 (100TJ/d) development maximises project returns**



# Development Plan

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## STAGE 1: DEVELOPMENT & APPRAISAL



- Connect existing wells to Xyris Production Facility for early sales & to establish drainage efficiency
- First gas delivered August 2016
- Planning to drill 2 further appraisal wells to define reserves

## STAGE 2: DEVELOPMENT CONCEPT

- Full field development of good quality reservoir
- Plateau rate ~100 TJ/D from approx. 6 initial wells (includes 3 appraisal wells already drilled)
- Total of 10-20 production wells to maintain plateau over 20+ year field life - tied to centralised processing facility with regional hubs

## 2017/2018 Budget Program



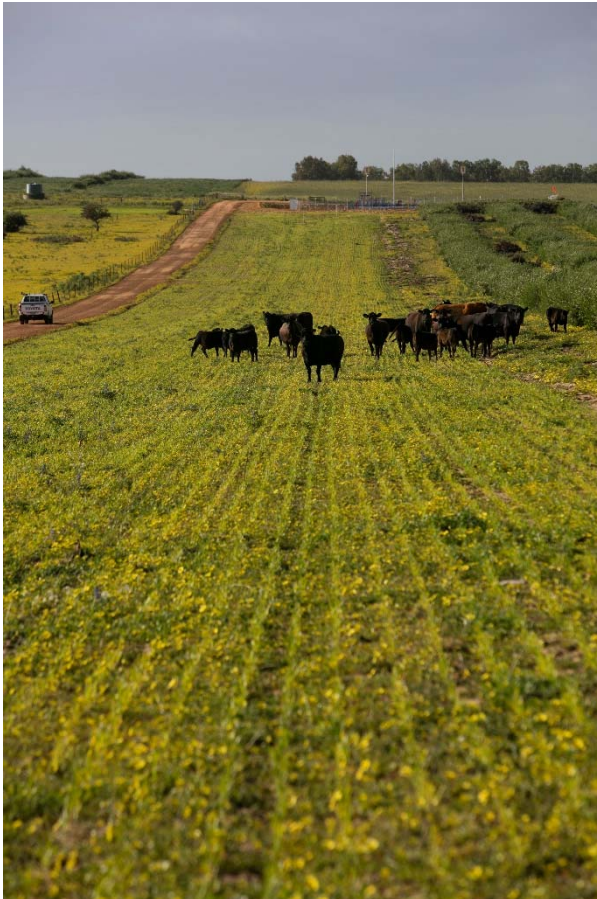
- Drilling Waitsia-3 and Waitsia-4 from June to August 2017.
  - *These are the final appraisal wells planned ahead of stage 2 development and will provide valuable data and potentially increase our 2P reserves.*
- Well Test of Waitsia-2, 3 and possibly 4. Waitsia-2 was drilled in July 2015 and Waitsia -3 was drilled in June 2017. All target formations were successfully intersected, and cores cut over the Kingia and High Cliff Sandstones. Test Waitsia-4 dependant on well outcome
- Project on track and AWE is targeting a final investment decision by the end of 2017.

## Agenda

- AWE in the Perth Basin
- Waitsia Discovery and History
- Waitsia Development
- Regional Setting
- Summary



# Environmental Setting



- Environmental

- Development activity is predominantly in cleared, agricultural land so no potential significant environmental impacts
- Low density and low traffic project area so minimal social amenity impacts
- Conservation reserves in the region with high ecological value accommodated in planning and management measures

- Regulatory setting

- Strong environmental legislation requiring public consultation by proponent

- Community

- Gas sector coexists amongst broad scale agriculture businesses and some intensive horticulture ventures
- Longstanding presence of industry is recognised by locals as an important part of regional economy
- Unemployment and limited business growth in the region are impacting local communities. Local employment practice makes a positive and welcome impact.





## Stakeholder Engagement

- AWE recognises “social licence” as an integral part of good business practice
- Social licence is maintained by demonstrating:
  - ✓ compliance within regulatory framework
  - ✓ striving for HSE excellence
  - ✓ disclosure and transparency
  - ✓ proactive community engagement
  - ✓ listening and responding to evolving community concerns
  - ✓ social investment
- AWE has a comprehensive stakeholder management plan in place
- Responding to growing concerns and opposition about perceived impacts



Stage 1A launch event



AWE's approach to community and stakeholder engagement is open and transparent

## Agenda

- AWE in the Perth Basin
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## Summary



- Waitsia Stage 1A well performance in its year of operations exceeded AWEs pre-production expectations and confirmed high quality conventional reservoir system with excellent connectivity.
- Pre-FEED work for Waitsia Stage 2 development is completed and FEED has commenced.
- Final Stage 2 appraisal wells are underway. Waitsia -3 preliminary results above expectations.
- Waitsia gas sales process making good progress ; one term sheet agreed and others to follow before FID.
- Work is underway to mature significant Waitsia- style prospects in the Kingia and High Cliff sandstones held in AWE's Perth Basin portfolio.

Up to date information is available at:

<http://www.awemidwest.com.au> or email [Midwest@awexplore.com](mailto:Midwest@awexplore.com)

*A more complete description may be found in:*

*"The Waitsia Field, onshore North Perth Basin, Western Australia", Tupper et al., APPEA Journal 2016, June 2016.*

**Project on track and Operator targeting FID in late 2017**







## Senecio-03 well drilling operation

Perth Basin  
Western Australia

August – September 2014



## Questions?



Waitsia Stage-1A Flowline under construction May 2016

# Conversion Tables



## **Volume**

1 cubic metre = 1 kilolitre = 35.3 cubic feet = 6.29 barrels  
1 megalitre = 1,000 cubic metres

## **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)

## **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

## **Decimal Number Prefixes**

kilo = thousand =  $10^3$

mega = million =  $10^6$

giga = 1,000 million =  $10^9$

tera = million million =  $10^{12}$

peta = 1,000 million million =  $10^{15}$

## Glossary



1H	First Half	MLE	Mid Life Enhancement
2H	Second Half	mmboe	Million Barrels of Oil Equivalent
2P	Proved and Probable Reserves	mmscf/d	Million Standard Cubic Feet of gas per Day
2C	Contingent Resources		
AAL	Ande Ande Lumut	Opex	Operating expenditure
AMI	Area of Mutual Interest	p.a.	Per annum
Bcf	Billion cubic feet	P&L	Profit & Loss Account
BOE	Barrels of Oil Equivalent	PJ	Petajoules
Bbls	Barrels	PSC	Production Sharing Contract
Bopd	Barrels of oil per day	SA	South Australia
Capex	Capital expenditure	TJ	Terajoules
CY	Calendar Year	TJ/d	Terajoules per day
EBITDAX	Earnings before interest, tax, depreciation, amortisation and exploration expenses	WA	Western Australia
		WHP	Well head platform
FID	Final Investment Decision		
FPSO	Floating Production Storage and Offloading		
FY	Financial Year		
GM	General Manager		
LPG	Liquefied Petroleum Gas		
LTI	Lost Time Injuries		

# Waitsia Stage 2

## Investor Site Tour

3 August 2017

Steve McCracken

Project Director





# Waitsia Stage 2 Overview

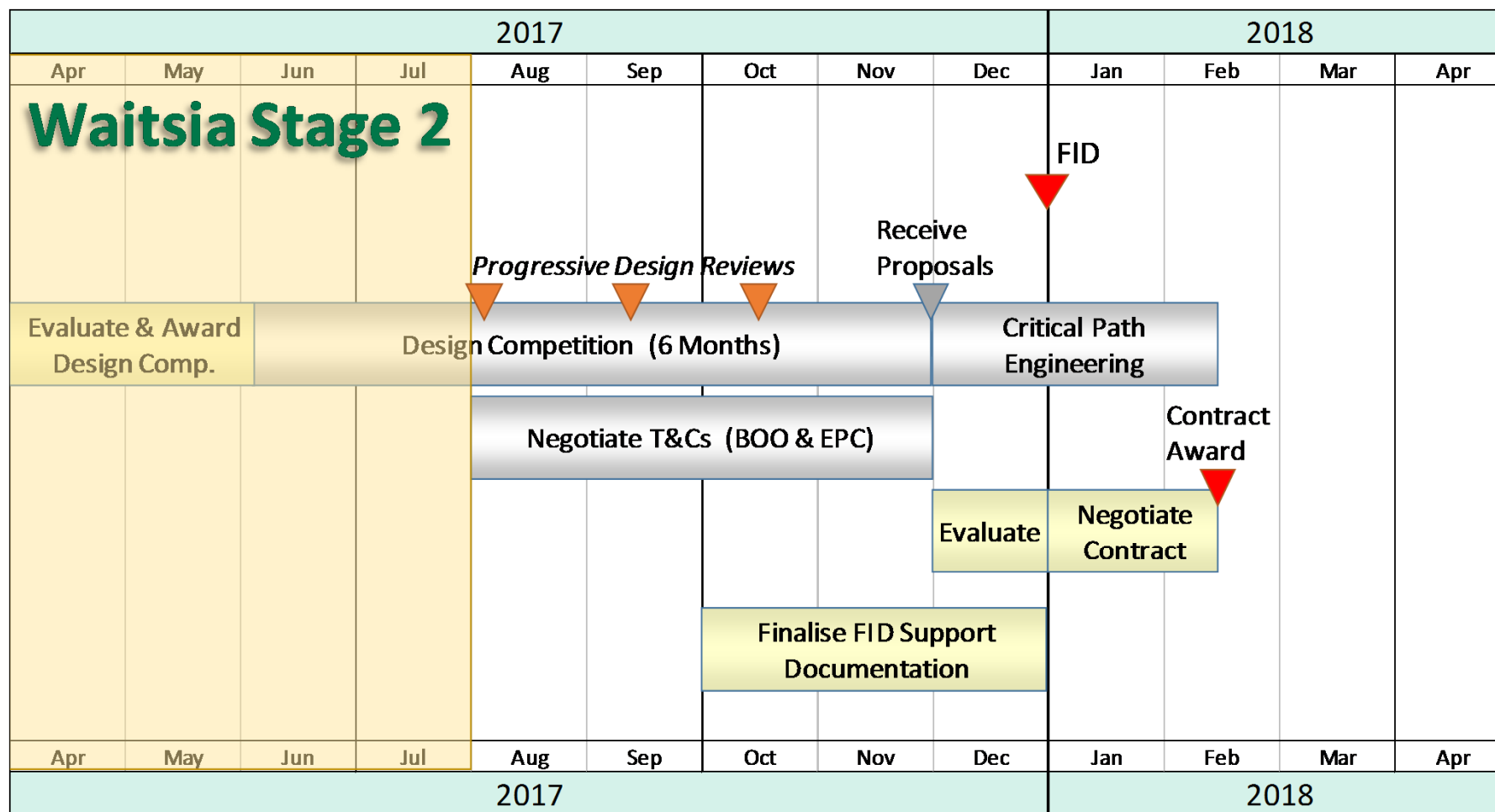
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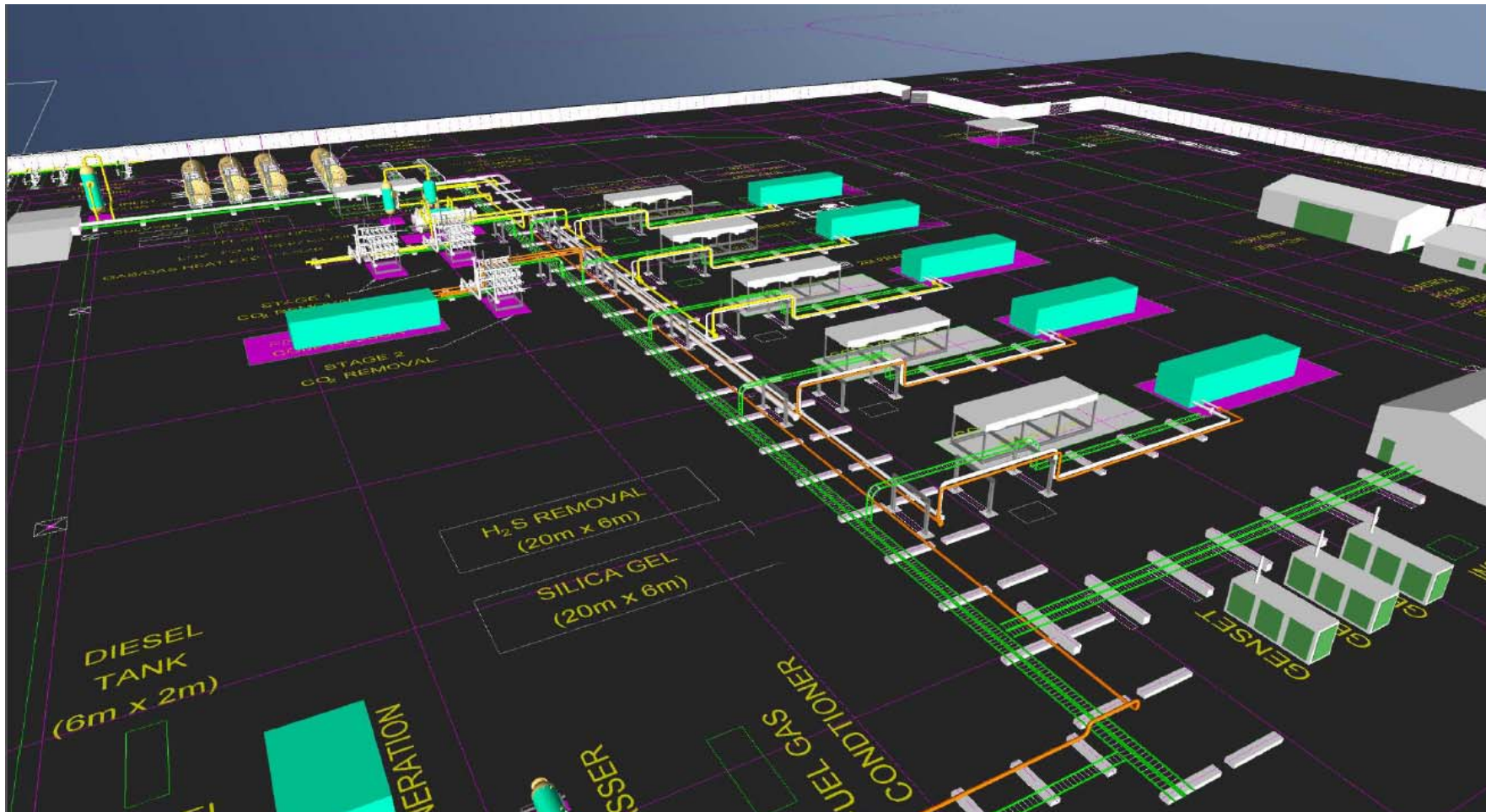
- Pre FEED study completed Mar 2017
- Internal assurance review completed
- Commenced design competition with three companies Jun 2017
- Design reviews Aug/Sep/Oct 2017
- Technical and commercial proposals due Nov 2017
- FID planned for Dec 2017
- Site construction planned to commence Q3 CY 2018
- First gas planned 1H CY 2020

# WGP – 2017 Work Plan Schedule

2017 Focus: Complete a successful design competition by Nov 2017

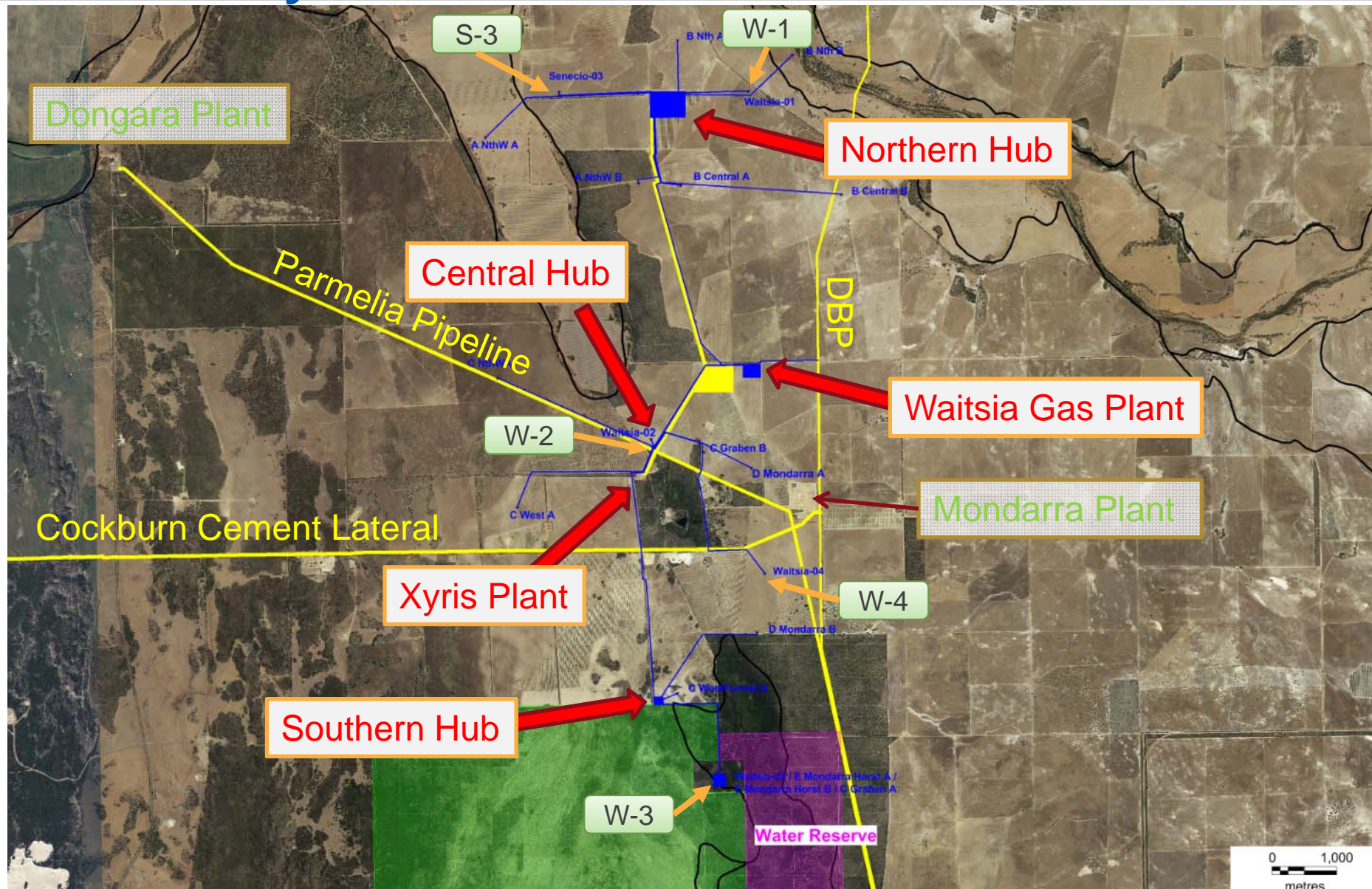


# Gas Plant - Preliminary 3D Model





# Field Layout Overview



Jul 2017



# Field Gathering Schematic

