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# Unlocking Value from New Gas Plays

ASX: WGO

Investor Roadshow, August-September 2019

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# Investment Highlights



# Pursuing transformational growth



- **Exploration and appraisal success** in EP469, onshore Perth Basin – a long-term gas production region in WA with **exciting new play potential**
- **West Erregulla-2 well** commenced drilling in June 2019; analogous to nearby Waitsia discovery
- **Significant gas discovery** in Wagina Sandstone announced 1 August
- **Major gas discovery** in Kingia Sandstone announced 27 August
- Second primary target, **High Cliff Sands**, yet to be encountered
- **Tightening gas market** in Western Australia driving future demand windows
- Good progress at **highly prospective Tesorillo Project** in Cadiz Province in Southern Spain
- Possible **Tesorillo appraisal well** planned for 2020

# Company overview



Warrego Energy Limited is listed on the ASX with offices in Sydney and the UK

## Capital Structure

**Cash:** ~\$7.3 million (June Qtrly)

**Issued Cap:** 631 million shares

**Options:** 7 million @ 12.4c

**Unissued Founder Shares:** 43 million

**Market Cap:** \$230 million<sup>1</sup>

**No Debt**

1. Undiluted market cap at ~\$0.37 share price



## Insider Shareholders

**Dennis Donald** 19.9% Co-Founder & MD

**Duncan MacNiven** 19.9% Co-Founder, Exec Dir

**Greg Columbus** 4.8% Non-exec Chairman

**Owain Franks** 3.0% Exec Dir

**Mark Routh** 2.3% Non-exec Dir

**David Casey** 1.2% CEO - Aust. & APAC



# Board of Directors



Board has extensive E&P experience, deep drilling expertise and direct knowledge of adjacent Waitisia analogue



## **Greg Columbus, Chairman**

Greg has more than 30 years experience delivering large complex oil & gas projects. He is currently Managing Director of Clarke Energy, which specialises in providing engineering, installation and maintenance of gas engine power stations and operates in over 28 countries.



## **Owain Franks, Executive Director**

Owain was previously Commercial Director of AIM listed Independent Resources and a senior advisor to Dana Petroleum and Canamens Energy. He was a senior partner of PwC in the UK for 21 years and on the UK Management Board.



## **Dennis Donald, Group CEO & Managing Director**

Dennis is a former 45 Commando and co-founder of Warrego. He left Shell in 1998 to form Leading Edge Advantage (LEA) a specialist global advanced drilling consultancy. LEA was acquired by Synergy Ltd in 2008.



## **Mark Routh, Non-executive Director**

Mark is a Petroleum Engineer with over 35 years experience in the oil & gas industry. He was previously CEO and latterly Chairman of AIM listed Independent Oil & Gas. Prior to this he was founder and Managing Director of CH4 Energy, which was acquired by Venture Production in 2006.



## **Duncan MacNiven, Executive Director**

Duncan is a co-founder of Warrego. He is a former corporate oil & gas lawyer and has previously worked as counsel for Pentex Energy and Sibir Energy. Duncan was a co-founder of Leading Edge Advantage.



## **David Biggs, Non-executive Director**

David has over 35 years experience in the oil & gas industry and significant knowledge of the Perth Basin. He was previously Managing Director of AWE Limited, until its acquisition by Mitsui in 2018 for \$602m. Prior to this he was CEO of Cue Energy.

# A brief history



- **2007** - Private company Warrego Energy Ltd UK (WELUK) founded by Dennis Donald and Duncan MacNiven
- **2008** - Secured EP469 in the Onshore Perth Basin, WA
- **2013** - Initial farm out of 80% of EP469 for \$40m
- **2014** - 3D seismic completed over EP469
- **2015** - Reacquired 100% of EP469
- **2018** - Farmed out 50% of EP469 and Operatorship to Strike Energy
- **March 2019** - ASX-listed WGO created via RTO of Petrel Energy by WELUK; gained acreage in Spain (Tesorillo) and Perth Basin (EPA-0127)
- **June 2019** - Commenced drilling West Erregulla prospect in EP469
- **August 2019** - Major gas discoveries in Kingia and Wagina announced

# Opportunity focused

Targeting stranded onshore gas assets to unlock significant value



## Australia

- EP469 onshore Perth Basin, WA
- EPA-0127 onshore Perth Basin, WA



## Spain

- Tesorillo Project, Cadiz Province





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# Success in the Perth Basin

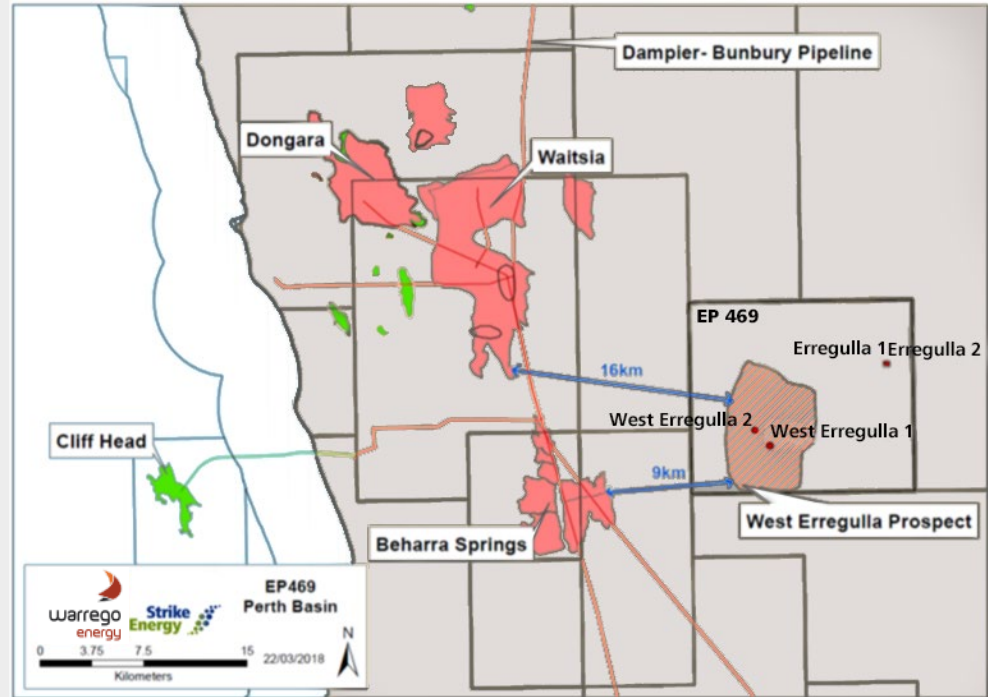
Defining the prize

# Perth Basin: exciting onshore gas province



Waitsia and West Erregulla discoveries establish new deep gas play

- Following the Waitsia discovery, the onshore Perth Basin has emerged as one of the most exciting areas in Australia for gas exploration
- AWE sold for \$602 million in 2018; Waitsia (50%) represented 83% of AWE's 2P Reserves
- Warrego holds a 50% non-operated interest in EP469 and a 100% interest in EPA-0127
- The West Erregulla-2 well in EP469 has already made significant discoveries in the Kingia and Wagina formations
- Further upside potential with the final target yet to be encountered



# WE-2 major Kingia discovery

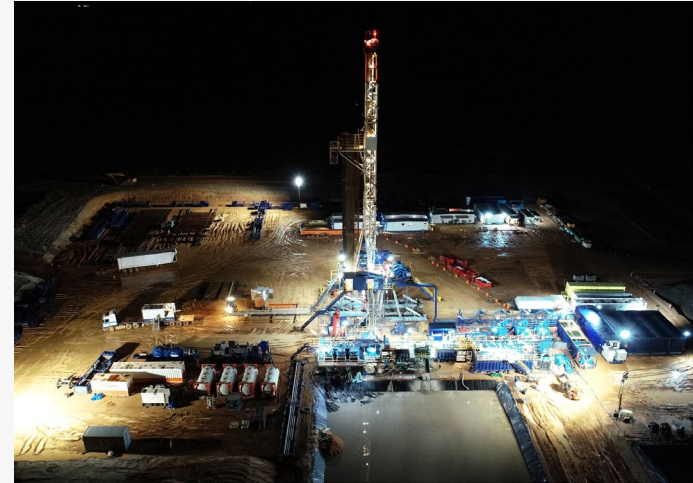


## Kingia Sandstone intersected close to prognosis

- Major conventional gas discovery
- 41m of net pay in a gross Kingia gas column of 97m, substantially thicker than Waitsia analogues
- Excellent reservoir quality with high gas saturation and porosities up to 19% (average 14.3%)

## High Cliff Sands yet to be encountered

- Drilling to planned TD of 5,200m
- Wireline logging and side-wall coring to be undertaken before completing the well for production and flow testing



# WE-2 significant Wagina discovery



## Dongara and Wagina Formations were penetrated close to prognosis

- Significant conventional gas discovery
- Substantial gas flow whilst drilling indicative of permeability in the basal Wagina sands
- Net reservoir of 10.2m in a gross Wagina gas column of 79m<sup>(1)</sup>
- Porosities of up to 14% and reservoir pressure in excess of 6,800 psia

## West Erregulla-2 Wagina discovery appears analogous to Beharra Springs

- Commercial flow rates yet to be demonstrated via production testing

### Note

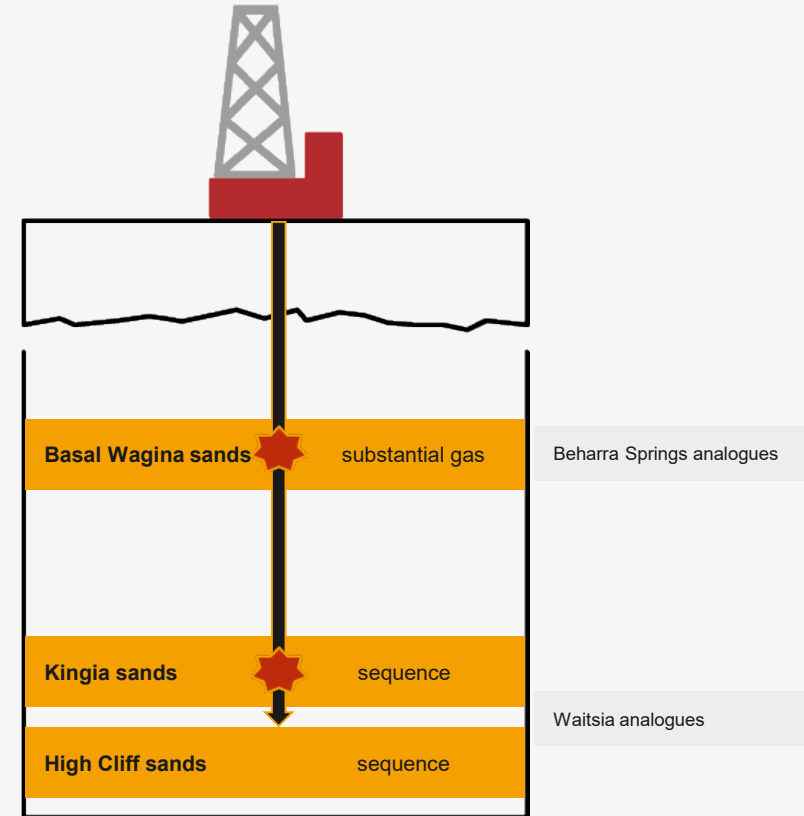
(1) Initial testing has been completed but further analysis may be required



# West Erregulla-2 targets



1. The basal Wagina gas target at ~4200m TVD
  - Substantial gas flows from gas bearing Wagina sands
  - Significant Wagina gas discovery announced on 1 August
2. The 'Main Prize': the Waitsia analogue Kingia – High Cliff sand sequence at ~4750m TVD with a P50 GIIP of 916 BCF<sup>(1)</sup> gross
  - Major Kingia gas discovery announced on 27 August
  - High Cliff sands yet to be encountered



Source:

1. Strike Energy ASX announcement, *West Erregulla– Additional Target and Final Pre-drill Prospective Estimates*, released on the 5<sup>th</sup> March 2019.



# Waitsia / West Erregulla geology



50  50



50  50



	WAITSIA GAS FIELD	WEST ERREGULLA DISCOVERY
Trap	<ul style="list-style-type: none"> <li>North part of field low-side downthrown fault block</li> <li>South part of field antiformal fault with 3 way dip closure</li> </ul>	<ul style="list-style-type: none"> <li>Antiformal fault with 3 way dip closure</li> <li>High-side upthrown fault block to south</li> </ul>
Seal	<ul style="list-style-type: none"> <li>Vertical seal – intraformational seals or continuous charge up to Dongara-Wagina sandstones</li> <li>Lateral seals – downthrown fault block seals across Mountain Bridge Fault against Holmwood shale/Nangetty Formation</li> </ul>	<ul style="list-style-type: none"> <li>Vertical seal – intraformational seals or continuous charge up to Dongara-Wagina sandstones</li> <li>Lateral seals – upthrown fault block to South seals against basal Irwin Coal Measures</li> </ul>
Reservoir	<ul style="list-style-type: none"> <li>Primary reservoir development in Kingia member of High Cliff sand</li> </ul>	<ul style="list-style-type: none"> <li>Same reservoir as Waitsia but with thickened Bit-basher shale separating Kingia and High Cliff. High Cliff porosity strongly developed (similar to that seen in Waitsia-1)</li> </ul>
Charge	<ul style="list-style-type: none"> <li>Charge from overlying IRCM and underlying Holmwood shale</li> <li>Dongara-Wagina sandstones overlying prospect are gas-bearing (led to discovery)</li> </ul>	<ul style="list-style-type: none"> <li>Charge from overlying IRCM and underlying Holmwood shale</li> <li>Dongara-Wagina sandstones overlying prospect are gas-bearing (confirmed in WE-2 2019)</li> </ul>
Volume	910 PJ 2P + 2C reserves and resources <sup>1</sup>	P50 GIIP estimate of 916 BCF Prospective Resources <sup>2</sup> (KHC only)

Source:

1. AWE ASX announcement, 19 December 2017
2. Strike Energy ASX announcement, 5<sup>th</sup> March 2019 (pre drilling)

**Immediate impact and near term upside from drilling of WE-2**

# Multiple commercialisation options



## Gas Market Open and Improving

- *Regional gas buyers continue to seek long term contracts*
- *Further tightening expected in the next 3-4 years as Carnarvon Basin focus shifts back to export*

## Near Field Processing Infrastructure

- *Ongoing infrastructure development underway near West Erregulla may be available for incremental volumes – increasing West Erregulla speed to market*
- *Easy tie- back within 10-15 km*

## Proximity to Pipelines

- *DBNGP and Parmelia pipeline nearby (within 18 km approx.) connecting West Erregulla to all major WA markets*

## Scaleable Development

- *Proximity to existing infrastructure allow partners to scale development pace to meet market demand, improving the potential for near term revenues*

# WA domestic gas market - current & potential supply



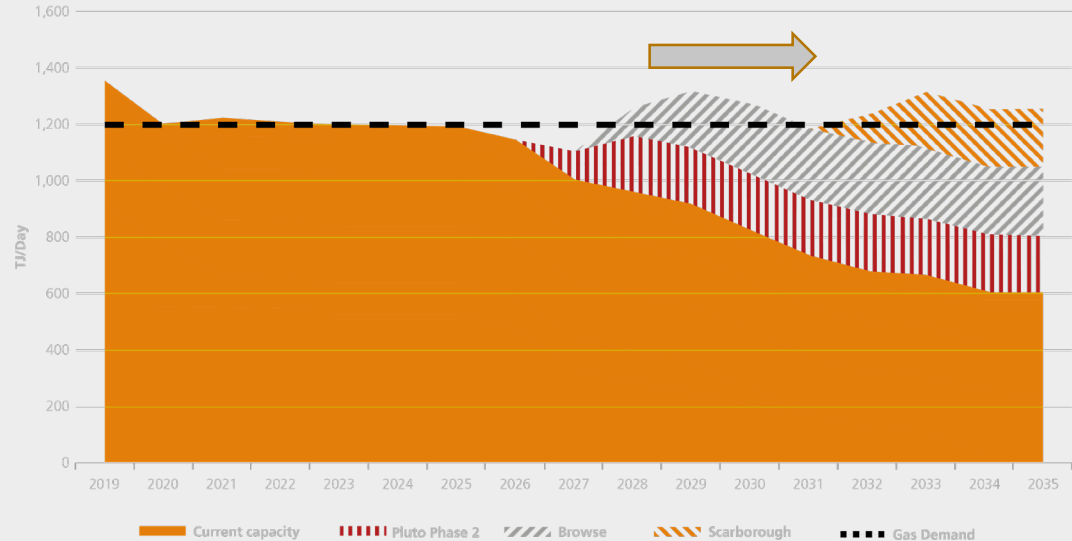
## AEMO 2018 WA Gas Statement of Opportunities

Western Australia's (WA) domestic gas market is well supplied until 2020, however prospective gas sources may be required to ensure there is sufficient supply to serve the WA domestic gas market in the longer term.

“Our findings highlight a tightening of the domestic gas market in 2021 as supply contracts begin to expire and some existing domestic gas facilities face reserve depletion,” said AEMO’s Executive General Manager WA, Cameron Parrotte.

13 Dec 2018.<sup>1</sup>

1. AEMO press release, 13 Dec 2018, “AEMO releases 2018 Western Australia Gas Statement of Opportunities”

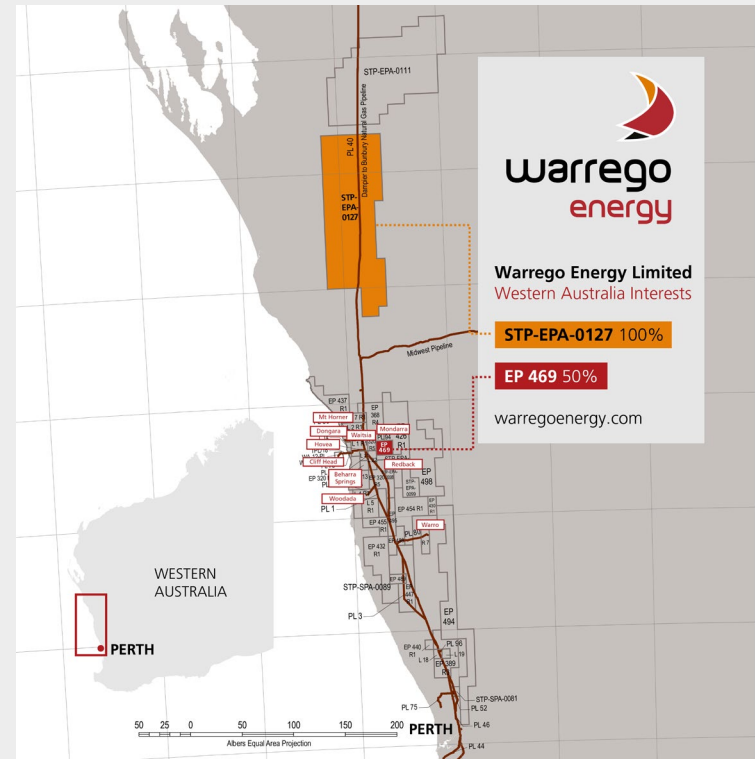


Source: Warrego Energy and various market participants

# Additional potential in the Perth Basin



- Warrego holds EPA-0127 through 100% owned subsidiary Palatine Energy
- EPA-0127 extends to 2.2m acres (8,700 km<sup>2</sup>) across much of the Coolcalalaya sub-basin providing both potential Permian and Devonian targets. Further possible analogues to Waitsia are feasible
- Traversed by the Dampier to Bunbury Gas Pipeline and immediately north of the Midwest Pipeline
- Native Title negotiations are close to conclusion





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# Exciting potential in Spain

Potential to create value in high demand market



# Tesorillo Project, Spain

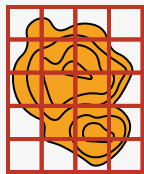


## Targeting conventional sandstone gas reservoirs in Southern Spain

- Warrego currently holds an 85% interest in Tarba Energia S.R.L. which owns the Tesorillo Project in Cadiz Province in southern Spain
- Prospec Oil and Gas plc holds the other 15% and has an option to acquire a further 34.9% at an exercise price of €1.725 million
- MT survey/geophysical work in hand and well planning underway for a possible 2020 spud date

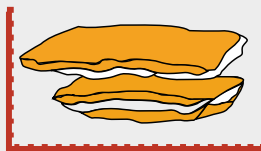


# Tesorillo appraisal well planned for 2020



## Potential

- Almarchal-1 well drilled in 1956 tested gas to surface
- DST test and log analysis confirmed 48m of gas pay with a further 492m of potential pay interpreted from logs but not tested



## Resource

- 2013, Netherland Sewell certify up to 2.3Tcf of prospective resources



## Partner

- Prospex Oil & Gas Plc has an option to acquire a further 34.9% in Tarba Energia for a further payment of €1,725,000 (approximately \$2.83 million) sufficient to cover the current projected cost of the well with Prospex's own contribution



## Drilling

- MT survey work and reprocessing historical 2D seismic lines complete
- Planning and preparation for 2020 well underway
- Delays in forming coalition government in Spain risk delaying approvals and permitting processes



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**Looking ahead**

# Catalysts and news flow



## Near term:

- **Sep 2019** – Encounter second primary target, High Cliff sands, at WE-2 well in EP469
- **Sep 2019** – Wireline logging, side-wall coring, completion and flow testing of WE-2
- **Q4 2019** – Initial Resource estimate for West Erregulla fields
- **Late 2019** – Nearby drilling at Beharra Springs by Waitsia JV
- **Late 2019** – Commence gas marketing

## Medium-term:

- **2020** – Likely 3D seismic survey over remainder of EP469
- **2020** – Delineation appraisal well (WE-3) likely in EP469
- **2020** – Appraisal well planned at Tesorillo Project, Spain
- **2020** – Reserves and Resources certification for West Erregulla fields

# Warrego has...



A Board and Management team with **deep E&P experience** and **skin in the game**



A portfolio of material projects at differing stages of development, each with the capacity to be **“company transforming”** in their own right in a success case



Announced **major onshore discoveries** at West Erregulla - an analogue to the play opening Waitisia gas field – with final target of the WE-2 well yet to be encountered



Multiple **pathways to commercialisation** for West Erregulla fields



**Significant upside potential** from the Tesorillo Project in Spain





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# Appendix

# Glossary



2D	2 dimensional
3D	3 dimensional
ASX	Australian Securities Exchange
BCF	Billion Cubic Feet
EP	Exploration Permit
GIIP	Gas Initially In Place
IRCM	Irwin River Coal Measures
KHC	Kingia High Cliff
Km	kilometres

m	Metres
MT	Magnetotellurics
P50	50% probability that the quantities recovered will equal or exceed the best estimate
RTO	Reverse Takeover
TD	Total Depth
TVD	True Vertical Depth
WE-2	West Erregulla-2 Well



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