

# Comet Ridge Limited

ASX: COI



Comet Ridge Limited

## Good Oil Conference 2017

**Tor McCaul**  
Managing Director

Perth, 14 September 2017

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## Future performance

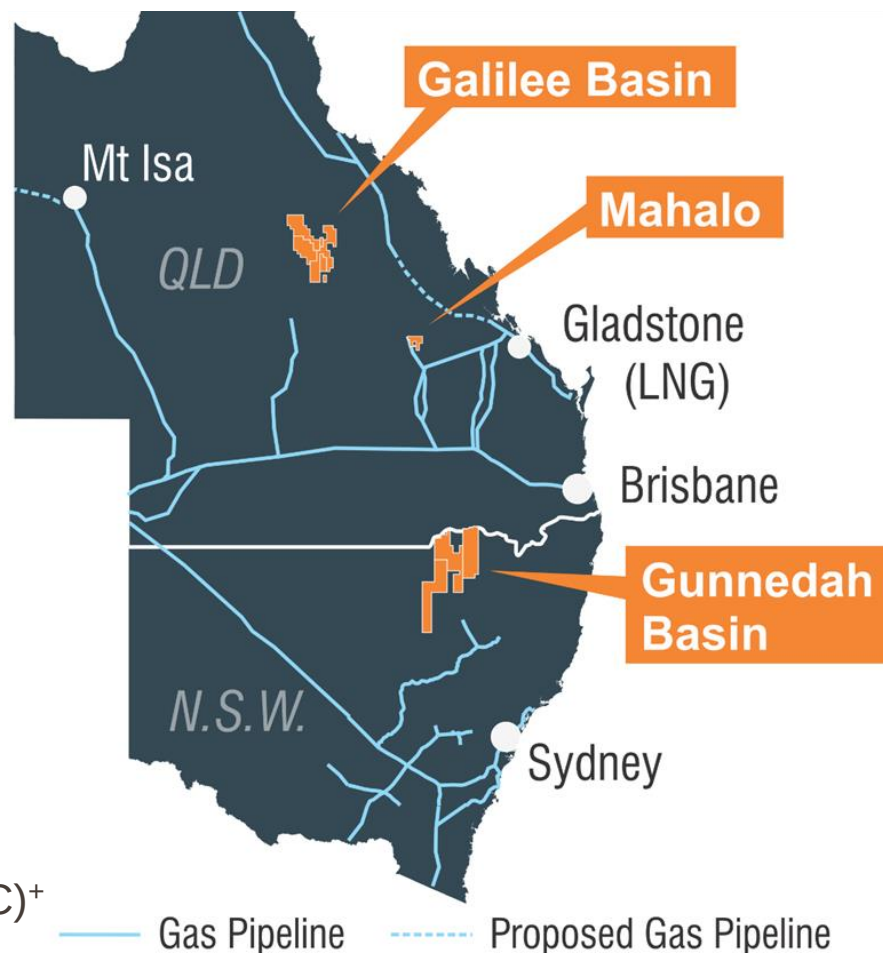
This Presentation contains certain "forward-looking statements". Forward looking words such as, "expect", "should", "could", "may", "plan", "will", "forecast", "estimate", "target" and other similar expressions are intended to identify forward-looking statements within the meaning of securities laws of applicable jurisdictions. Indications of, and guidance on, future earnings and financial position and performance are also forward-looking statements. Forward-looking statements, opinions and estimates provided in this Presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Such forward-looking statements, opinions and estimates are not guarantees of future performance.

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- **ASX listed - based in Brisbane**
- **Focus on natural gas in eastern Australia**
- **Very large blocks & multi-basin presence:**
  - ✓ Galilee – Queensland
    - Significant resource base northwest of Gladstone (over 2200 PJ 3C)<sup>+</sup>
  - ✓ Southern Bowen (Mahalo) – Queensland
    - Coal Seam Gas (CSG) pilot schemes running with initial 2P and 3P reserves
  - ✓ Gunnedah – NSW
    - Resources strategically located to meet NSW gas requirements (over 560 PJ 3C)<sup>+</sup>

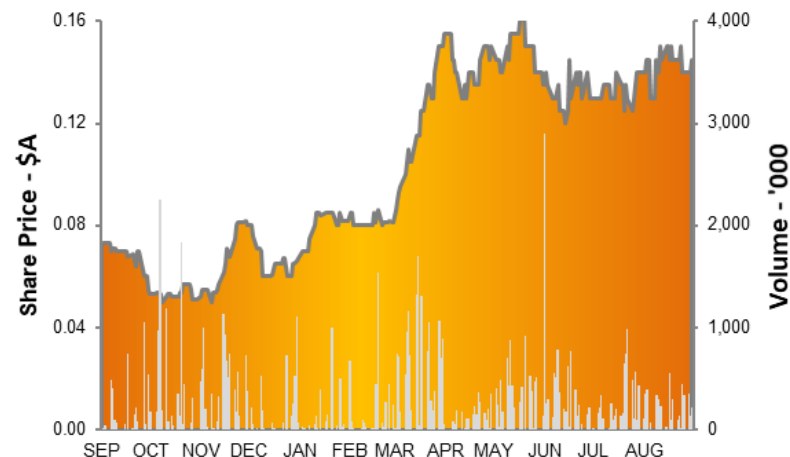


# Corporate Overview

## Capital Structure – ASX: COI

|                                 |         |
|---------------------------------|---------|
| Share price (13 September 2017) | \$0.145 |
| Shares on issue                 | 617.7m  |
| Performance rights              | 5.0m    |
| Diluted market cap              | \$90.3m |
| Cash (30 June 2017)             | \$6.0m  |

## 12 Month Share Price Performance



**James McKay**  
Non-Exec Chairman

- 28 years in business (commerce/law background)
- Former Chairman, Sunshine Gas



**Chris Pieters**  
Commercial Director

- Geologist with 12 years in oil & gas
- Former Chief Commercial Officer, Sunshine Gas



**Tor McCaul**  
Managing Director

- Petroleum engineer with 29 years in oil & gas
- Former Head of Commercial for Cairn plc in India



**Mike Dart**  
Non-Exec Director

- 20 years experience in M&A and Finance
- Director of Dart Capital Partners, private venture capital fund



**Gillian Swaby**  
Non-Exec Director

- 30+ years in Finance & Resources
- Former Chair of WA Council of Chartered Sec.

# Eastern Australia – More Gas Required



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- Substantial green activism against gas despite the significant contribution gas makes to industry & the national economy
- Some (MOST) states and territories – limiting gas supply as demand increases dramatically !
- Queensland and South Australia have been blessed with gas common sense
- Additional gas supply is the only effective and rational response



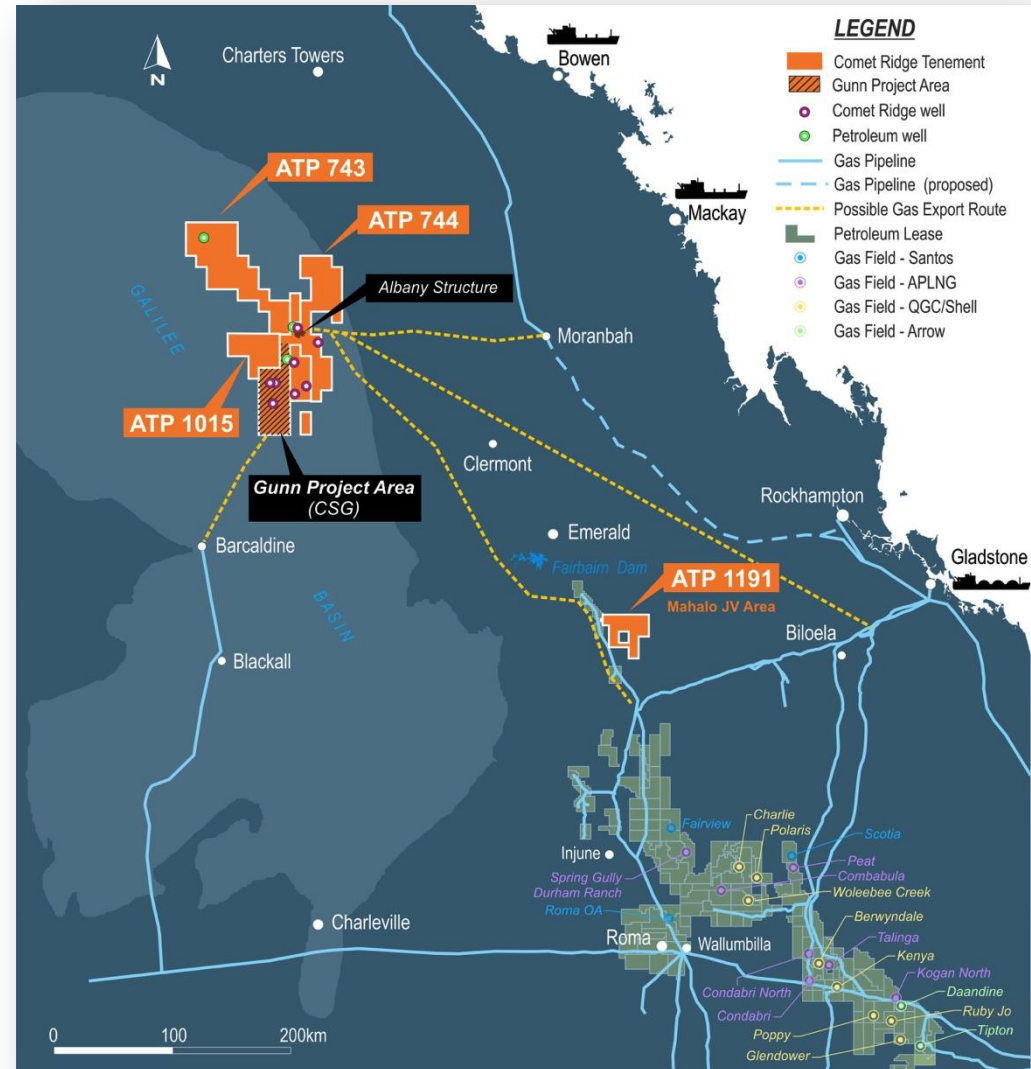


# Comet Ridge – Supply Solutions



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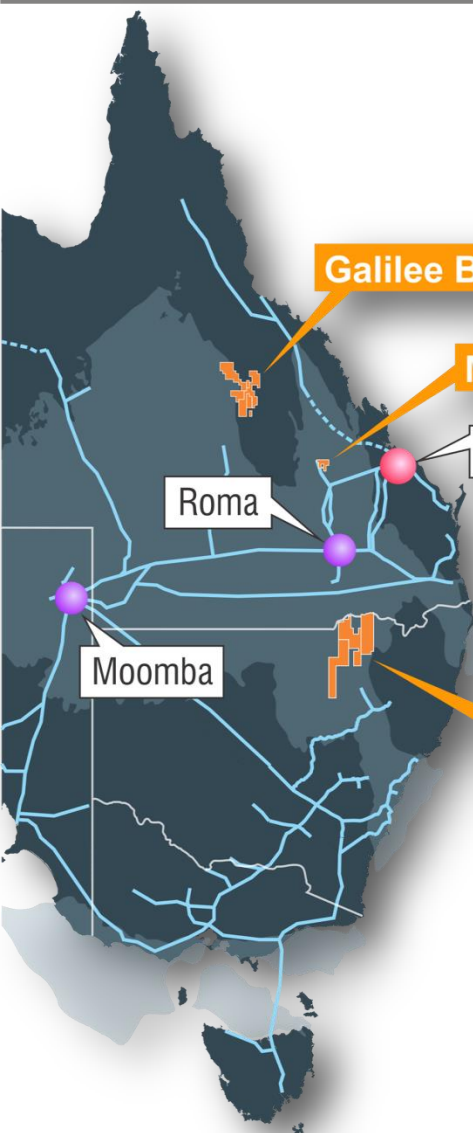
- Comet Ridge assets can form part of the supply solution for eastern gas market
- Near term – Mahalo:
  - Complete current programme to substantially increase 2P reserves base
  - Develop asset with JV partners (Santos 30% & APLNG 30%)
- Medium term – Galilee:
  - Substantial resources - 2,200 PJ 3C<sup>+</sup> across coals & sandstones
  - Substantial scale - 9,700 km<sup>2</sup>
  - 100% equity position allowing farm-down options
- Longer term – Gunnedah:
  - Assets cover 17,000 km<sup>2</sup> & are located north of Santos' Narrabri development
  - Longer term hold-then-follow strategy



# Comet Ridge - Strategic East Coast Gas Portfolio



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**Galilee Basin**

**Mahalo**

Gladstone (LNG)

Roma

Moomba

**Gunnedah Basin**

| Type             | +Reserve (PJ) |    | +Contingent Resource (PJ) |     |      |
|------------------|---------------|----|---------------------------|-----|------|
|                  | 2P            | 3P | 1C                        | 2C  | 3C   |
| CSG              |               |    |                           | 67  | 1870 |
| Albany Structure |               |    | 56                        | 153 | 417  |

| Type | +Reserve (PJ) |     | +Contingent Resource (PJ) |     |     |
|------|---------------|-----|---------------------------|-----|-----|
|      | 2P            | 3P  | 1C                        | 2C  | 3C  |
| CSG  | 30            | 219 | 112                       | 232 | 372 |

| Type | +Reserve (PJ) |    | +Contingent Resource (PJ) |    |     |
|------|---------------|----|---------------------------|----|-----|
|      | 2P            | 3P | 1C                        | 2C | 3C  |
| CSG  |               |    |                           |    | 562 |

**2017 target to significantly grow Mahalo 2P reserves**



# Mahalo Project





# Mahalo Production Performance



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## JV Equity:

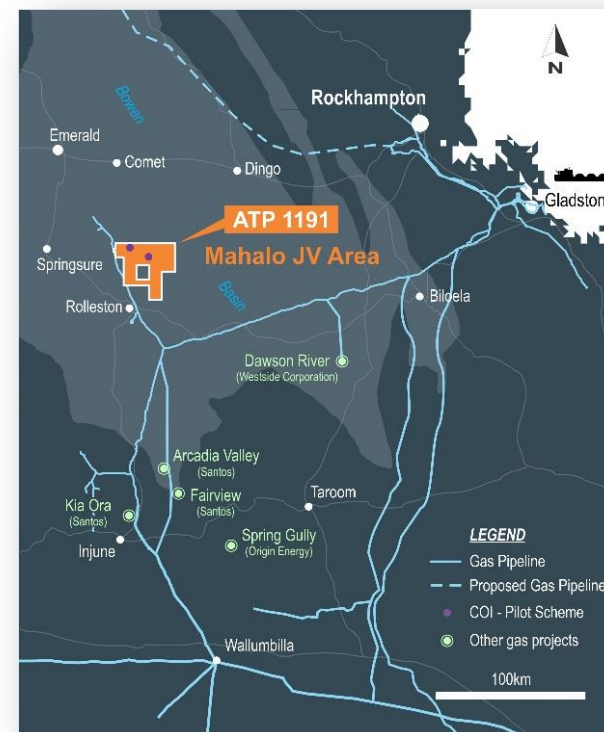
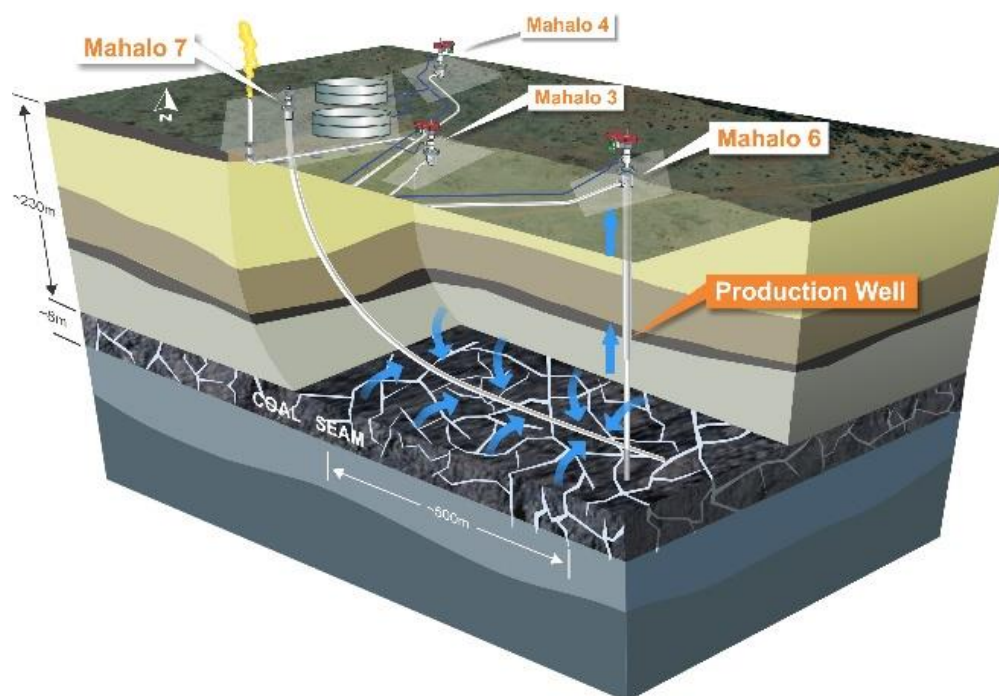
Comet Ridge 40%

Santos 30%

APLNG 30%

- Overall performance of horizontal well and Mahalo Pilot has been very pleasing
- Gas flowrate 426 mcf/d from horizontal with only 361 metres in coal

- Scale up of short Mahalo 7 horizontal well to longer development wells is logical and achievable

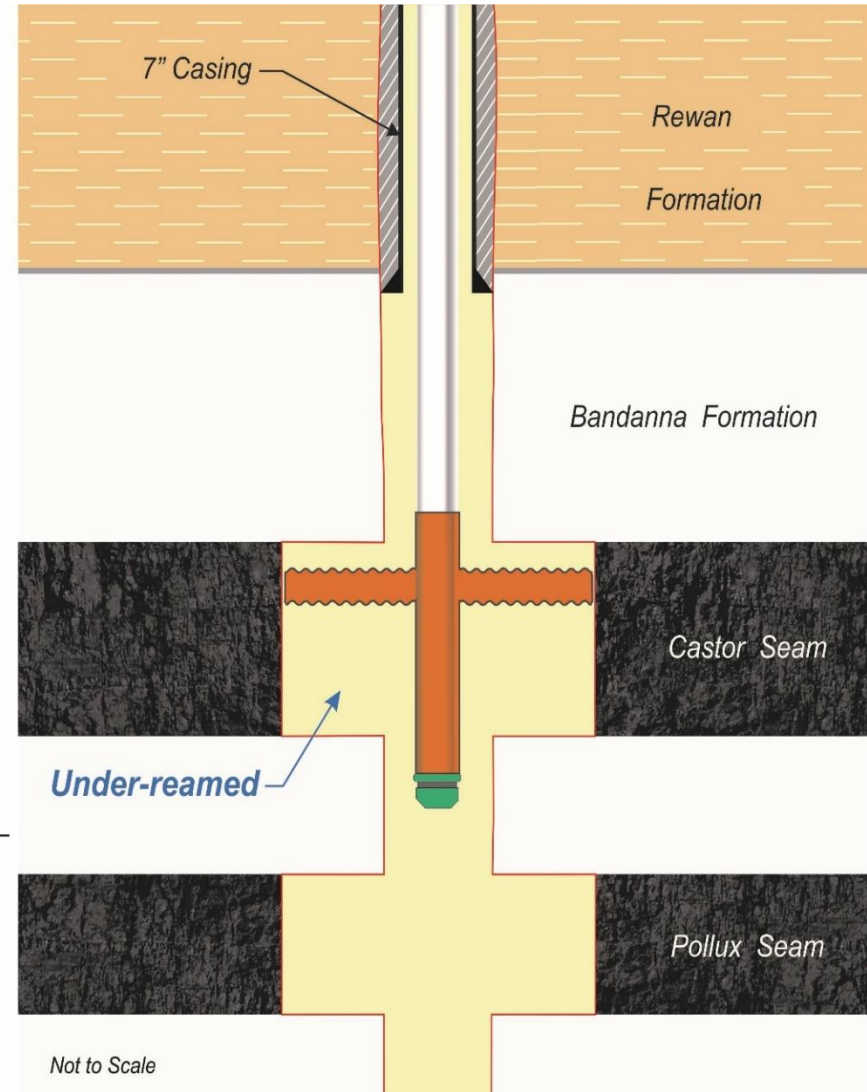


# Mira Production Performance – Mira 3, 4 & 5



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- Well production enhancement process
- Coal (fractures plugged by fines) is removed from around wellbore
- Provides easier pathway for gas and water to flow to well
- Drilling tool run inside casing with expandable arms
- Tool placed across coals and rotated at high speed
- Water pumped down inside of drillpipe carries coal material back to surface outside of drillpipe and inside of casing
- Production tubing and downhole pump then run back into the well and well returned to production
- Wells on line late August - already producing minor gas with flare intermittently lit



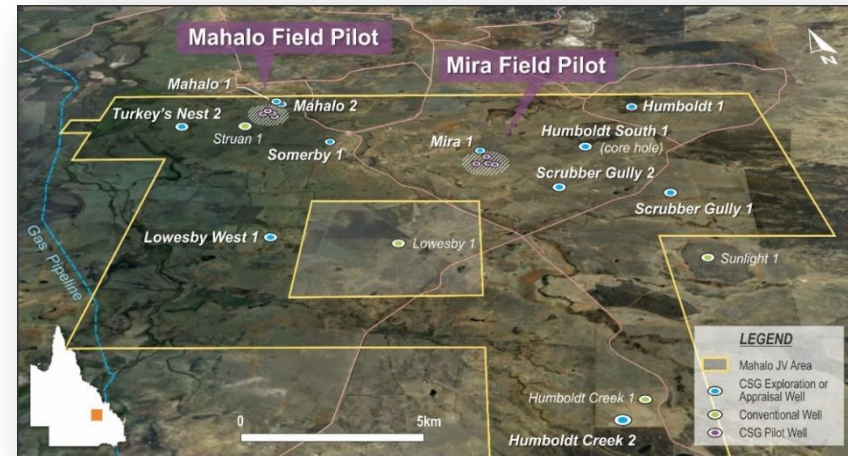
# Mahalo – Comet Ridge Managing Subsurface Work



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## Target – move significant volume of 219 PJ 3P+ across to 2P this year

- March - Executed agency agreement for Comet Ridge to manage subsurface ✓
- April - Work Program and Budget approved by Santos and APLNG ✓
- August - Field work commenced ✓
- Program focused in north of block:
  - Mira 3, 4 & 5 successfully under-reamed ✓
  - Humboldt South 1 corehole drilled – good results ✓
  - Mira 6 Horizontal well – spud October



**Full work programme to be completed for under \$5m gross JV spend – currently on track**



# Mahalo Development Concept



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Significant analysis work completed – examining the most efficient and effective way to move the northern pilot schemes into production via available export pipeline capacity and field infrastructure

## Three Step Process:

### 1. Conversion of existing 3P to 2P reserve

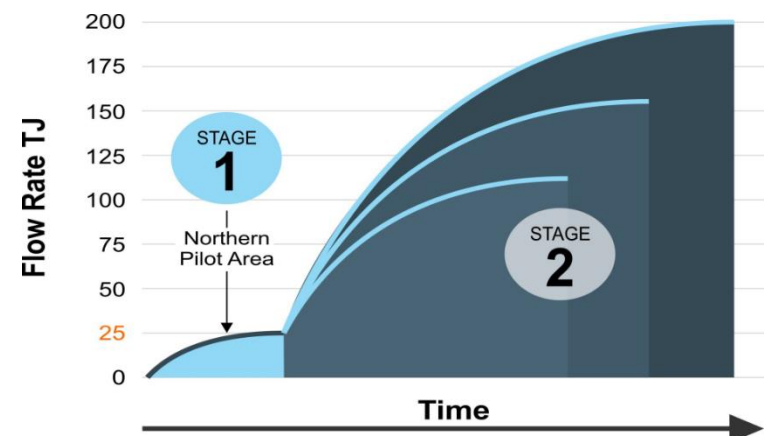
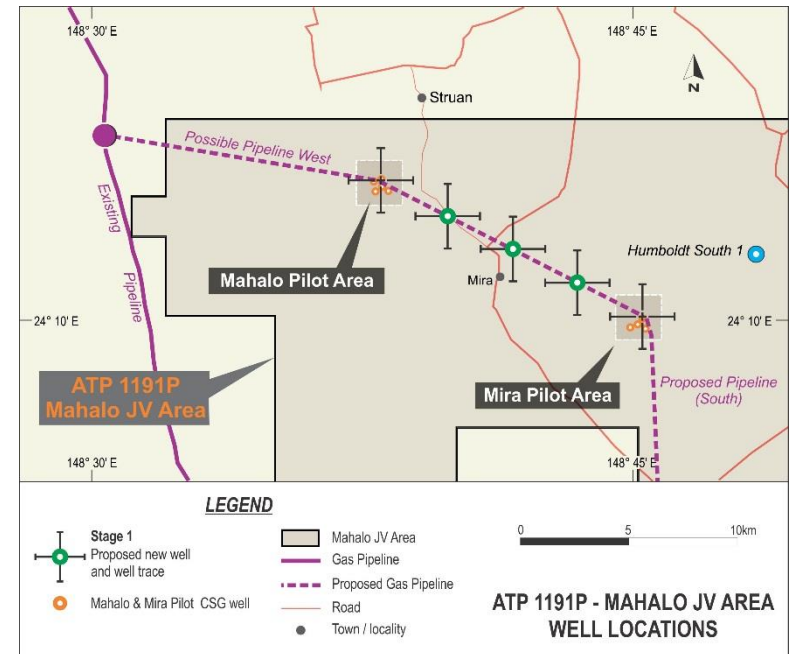
- Production enhancement at Mira Pilot
- Single step-out corehole in north east

### 2. Initial production phase targeting 25 TJ/d from northern part of the block

- Utilise existing facilities to minimise capex spend and construction time

### 3. Expand initial production phase to full field target of 100+TJ/d

- Based around well production rates from initial production phase to guide field development



# The Right Ingredients For Development



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- ✓ **Shallow**
  - ❑ Mahalo Pilot only 225 metres to coal
  - ❑ Lower drilling and completion costs
- ✓ **Permeable**
  - ❑ Mahalo 7 flowed 1.2 mcf/d gas per metre of coal intersected along horizontal well
  - ❑ Higher flowrates / less wells
- ✓ **Low water rates**
  - ❑ Mahalo 7 peaked at only 30 bwpd so exceptionally low water-gas ratio
  - ❑ Lower water handling capex and opex / less workovers
- ✓ **Gas Quality**
  - ❑ No expensive CO<sub>2</sub> or H<sub>2</sub>S removal to get to sales gas spec
  - ❑ Use basic carbon steel in wells, flowlines and plant
- ✓ **Close to infrastructure**
  - ❑ 14 km - nearest pipeline connection
  - ❑ 60 km - Mira Pilot to Jemena pipeline
  - ❑ 63 km - Mira Pilot to GLNG pipeline



**These key parameters will place Mahalo at the low end of the cost curve**

# Galilee Basin



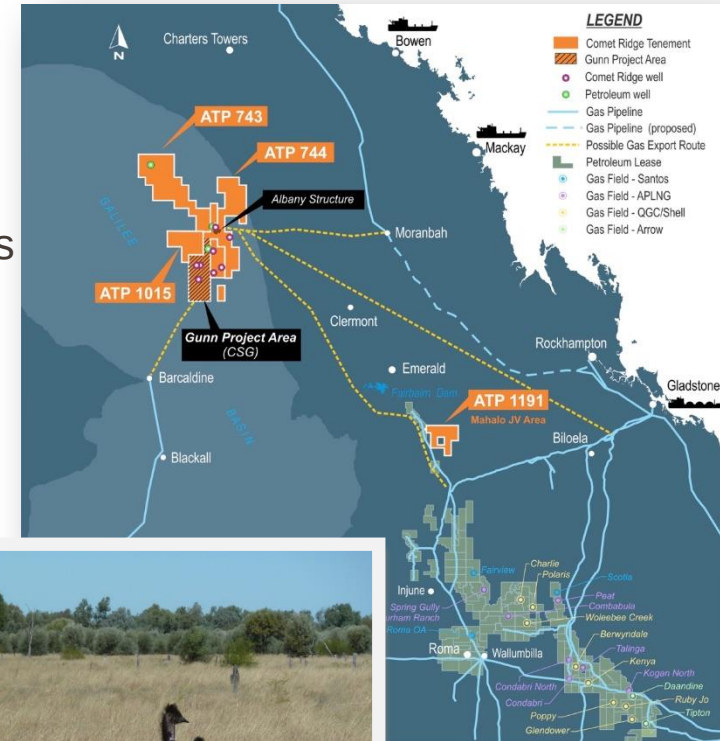


# Galilee Basin – Significant Scale



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- Basin covers a large part of central western Queensland (~250,000km<sup>2</sup>)
- Comet has a massive position in the east at 100%
- Land use is grazing on very large stations
- Historic oil exploration (1964 & 1995) includes gas flows from Sandstones at 2800 metres
- Comet has a dual sandstone and CSG opportunity
- Significant 3C resources certified in both
- Planned Galilee coal mine just to the east



# Galilee Basin – Sandstones



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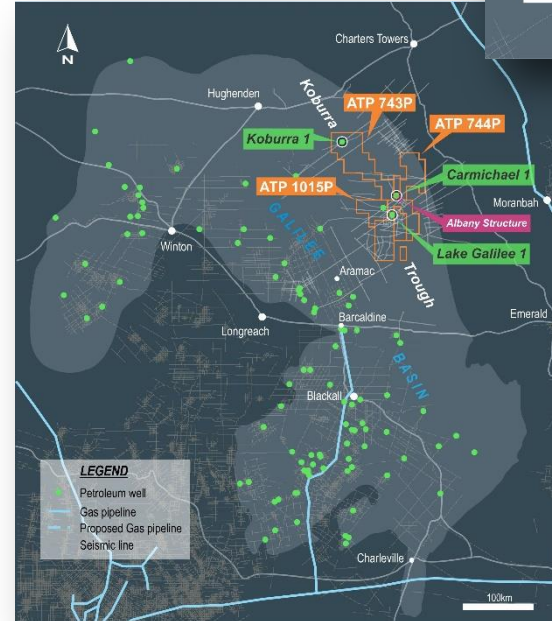
## Koburra Trough

- 3 historic petroleum wells recovered oil gas & flowed gas from Lake Galilee Sandstone - all now in Comet Ridge acreage
- Koburra 1, Carmichael 1 and Lake Galilee 1 flowed gas to surface at low rates - active petroleum system
- However early basin wells were targeting oil and not designed to evaluate gas potential (high mud overbalance / not tested immediately on penetration etc.)



- Lake Galilee 1 – oil recovered
- Potential for significant gas volumes
- Targeting Late Carboniferous to Permian sandstones to depths of ~2800 metres
- Comet Ridge has Basin's first sandstone contingent resource

153PJ (2C)<sup>+</sup> over Albany structure in Koburra Trough



- GTS – flowed gas to surface
- OTS – recovered oil to surface

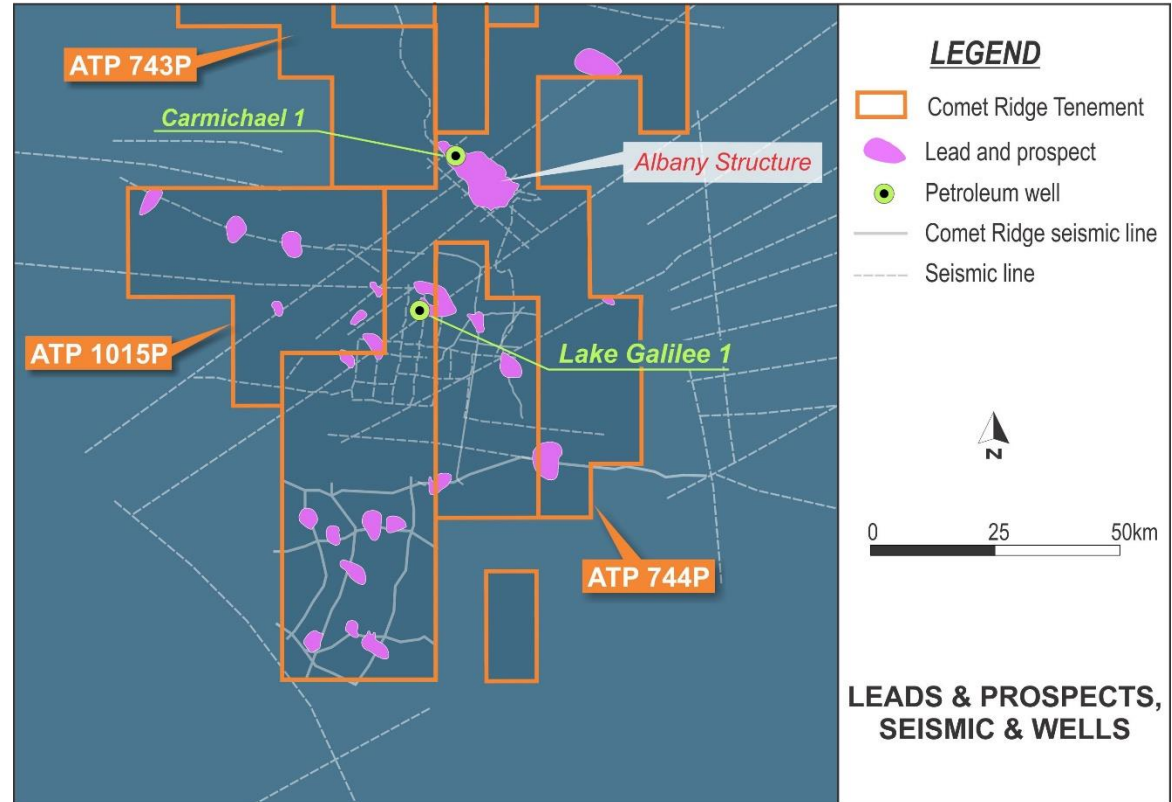
# Galilee Basin – Sandstone Leads & Prospects



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## Galilee Sandstone Targets

- Galilee Basin lightly explored
- Previous gas flows from oil exploration wells in this area
- Seismic data set is sparse
- No targets (yet) in areas of no seismic
- Albany has approx. 150m of gross sandstone with approx. 40m of net
- Successful gas flow in the first well could foreshadow wider success right across the eastern basin

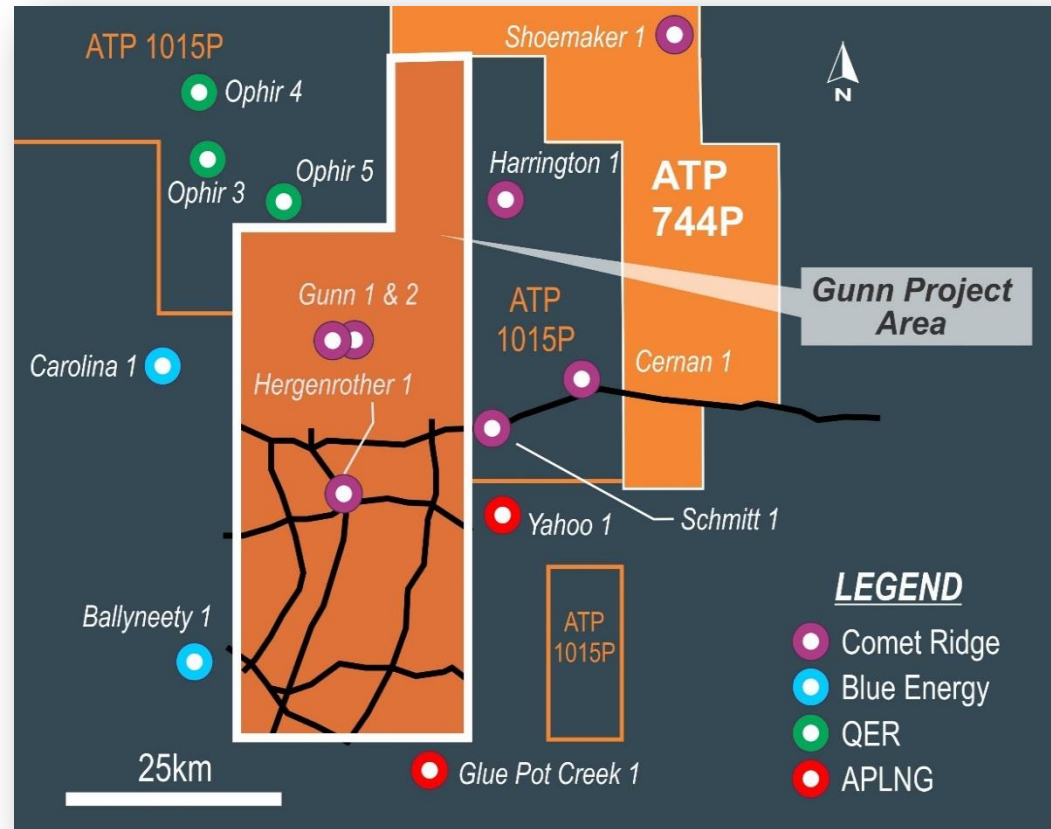


**Significant number of sandstone leads and prospects identified from relatively sparse seismic data set in the eastern Galilee**



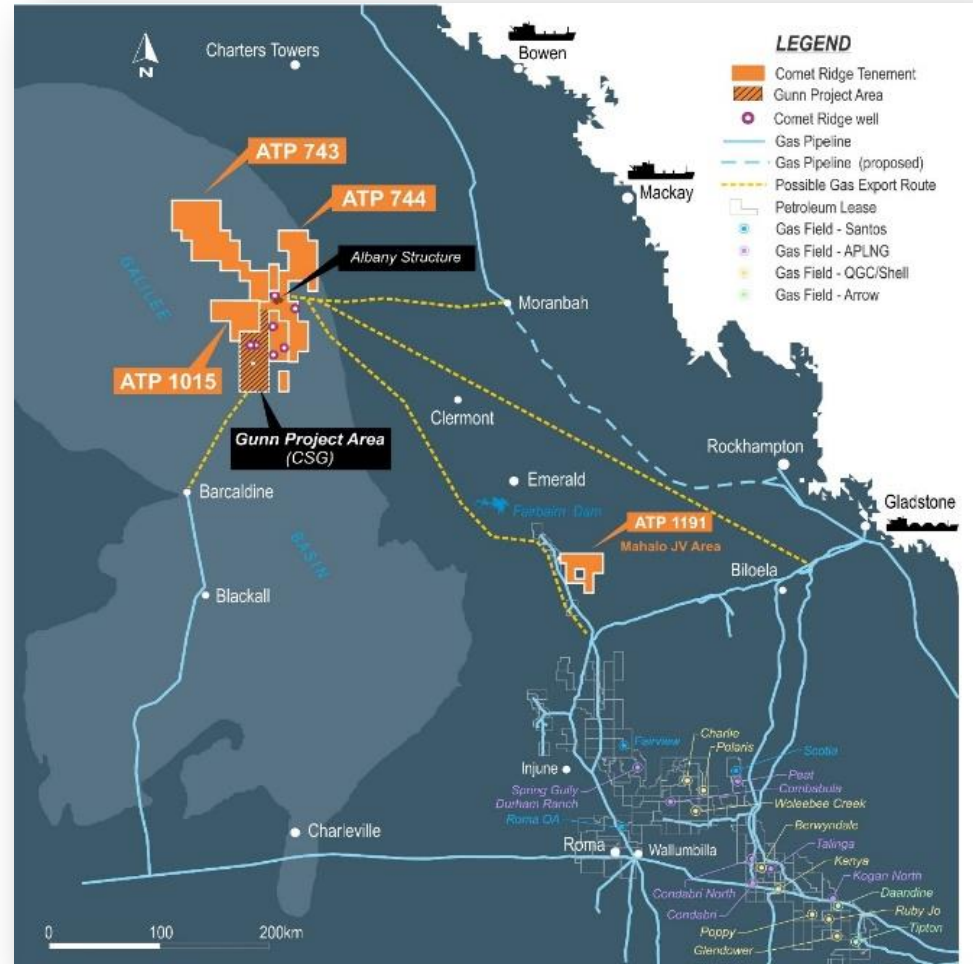
## Gunn Project Area

- 6 individual coal seams
- depth to coal 700-1,000m
- >16m net coal deposited over large area
- average gas content 4.3 m<sup>3</sup>/t (high 7.3 m<sup>3</sup>/t)
- good to excellent permeability within target coals
- Gunn-2 Production Test
  - perforated single 4m coal interval
  - seam isolated above and below by impermeable mudstone
  - established connectivity to coals
  - evaluated methods of formation water treatment
  - demonstrated long term production solution



**Gunn Project area and ATP 1015 area  
coals contain recoverable gas over an  
estimated 1,865 km<sup>2</sup>**

- Comet Ridge Work Programme to be funded by gas pre-sale or equity farm-in (process underway)
- A structurally short east coast market is now looking to the Galilee Basin for gas volume
- Comet Ridge's eastern position with large gas resources will have increasing significance
- Sandstone Gas at Albany - logical first step due to size and position on the basin eastern edge
- Sandstone Gas at Lake Galilee structure - second step due to size and proximity to Albany (23km)
- CSG in the Gunn Project Area - third step due to the large volume and continuous nature of the coals
- Each of these three areas can be supported in the field as the one project with corresponding scale benefits



# Comet Ridge - Summary

## → Mahalo

- ✓ Production enhancement at Mira completed
- ✓ Single step-out corehole completed
- ✓ Planning for horizontal well commenced
- ✓ Major reserves upgrade targeted this year

## → Galilee

- ✓ Well planning for drilling finalised
- ✓ Various pipeline options under consideration
- ✓ Funding options developed via pre-sale / farm-in
- ✓ Local market developing just east

## → Gunnedah

- ✓ Long-term follower strategy to Narrabri development







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# ASX Listing Rule 5 Disclosure



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## Competent Person Statement and ASX Listing Rules Chapter 5 - Reporting on Oil and Gas Activities

The Contingent Resource for the Albany Structure ATP 744 are taken from an independent report by Dr Bruce McConachie of SRK Consulting (Australasia) Pty Ltd, an independent petroleum reserve and resource evaluation company. The Contingent Resources information has been issued with the prior written consent of Dr McConachie in the form and context in which they appear in this Annual Reserves Statement for 2016. His qualifications and experience meet the requirements to act as a qualified petroleum reserves and resource evaluator as defined under the ASX Listing Rule 5.42 to report petroleum reserves in accordance with the Society of Petroleum Engineers ("SPE") 2007 Petroleum Resource Management System ("PRMS") Guidelines as well as the 2011 Guidelines for Application.

The estimate of Reserves and Contingent Resources for the Mahalo Project as part of ATP 1191P provided in this presentation, is based on, and fairly represents, information and supporting documentation determined by Mr Timothy L. Hower of MHA Petroleum Consultants LLC Inc in accordance with Petroleum Resource Management System guidelines. Mr Hower is a full-time employee of MHA, and is a qualified person as defined under the ASX Listing Rule 5.42. Mr Hower is a Licensed Professional Engineer in the States of Colorado and Wyoming as well as being a member of The Society of Petroleum Engineers. Mr Hower has consented to the publication of the Reserve and Contingent Resource estimates for Mahalo in the form and context in which they appear in this presentation.

The reserve and contingent gas resource estimates for ATP 1191P provided in this presentation were originally released to the Market in the Company's announcement of 28 August 2014 and subsequently updated in an announcement date 2 December 2015, and were estimated using the deterministic method with the estimate of contingent resources for ATP 337P not having been adjusted for commercial risk.

The contingent resource estimates for ATP 744P provided in this presentation are based on and fairly represent, information and supporting documentation determined by Mr John Hattner of Netherland, Sewell and Associates Inc, Dallas, Texas, USA, in accordance with Petroleum Resource Management System guidelines. Mr Hattner is a full-time employee of NSAI, and is considered to be a qualified person as defined under the ASX Listing Rule 5.42 and has given his consent to the use of the resource figures in the form and context in which they appear in this presentation.

The contingent gas resource estimates for ATP 744P provided in this statement were originally released to the Market in the Company's announcement of 25 November 2010, and were estimated using the deterministic method with the estimate of contingent resources for ATP 744P not having been adjusted for commercial risk.

COI confirms that it is not aware of any new information or data that materially affects the information included in any of the announcements relating to either AYP 1191P or ATP 744P referred to above and that all of the material assumptions and technical parameters underpinning the estimates in the announcements continue to apply and have not materially changed.

The contingent resource estimates for PEL 6, PEL 427 and PEL 428 referred to in this presentation were determined by Mr Timothy L. Hower of MHA Petroleum Consultants LLC in accordance with Petroleum Resource Management System guidelines. Mr Hower is a full-time employee of MHA, and is a qualified person as defined under the ASX Listing Rule 5.42. Mr Hower consented to the publication of the resource figures which appeared in the announcement of 7 March 2011 made by Eastern Star Gas Limited (ASX:ESG) and any reference and reliance on the resource figures for PEL 6, PEL 427 & PEL 428 in this presentation is only a restatement of the information contained in the ESG announcement.

The contingent resource estimates for PEL 6, PEL 427 and PEL 428 were estimated using the deterministic method with the estimate of contingent resources for PEL 6, PEL 427 and PEL 428 not having been adjusted for commercial risk.

COI confirms that it is not aware of any new information or data that materially affects the information included in the ESG announcement of 7 March 2011 and that all of the material assumptions and technical parameters underpinning the estimates in the announcements continue to apply and have not materially changed.