

# Comet Ridge

**Taylor Collison  
East Coast Gas Day  
11 April 2019**

ASX Code : COI  
[www.cometridge.com.au](http://www.cometridge.com.au)



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# Comet Ridge - Corporate Overview

## Capital Structure – ASX: COI

Share price (10 April 2019 close)	\$0.29
Shares on issue	727.9m
Performance rights	5.5m
Market capitalisation	\$211m
Cash (31 December 2018)	\$23.3m

## Directors



**James McKay**  
Non-Exec Chairman

- 30+ years in business (commerce/law background)
- Considerable public company experience including Sunshine Gas



**Tor McCaul**  
Managing Director

- Petroleum Engineer 31 years oil & gas
- Previously Head of Commercial for Cairn plc in India & LNG Contract Manager for VICO (Bontang)



**Gillian Swaby**  
Non-Exec Director

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



**Chris Pieters**  
Executive Director

- Geologist with 15 years in oil & gas
- Previously Chief Commercial Officer, Sunshine Gas

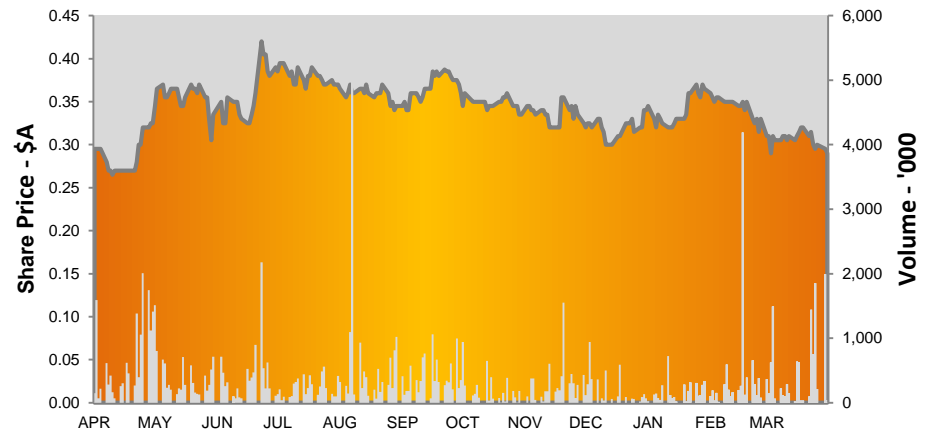


**Martin Riley**  
Non-Exec Director

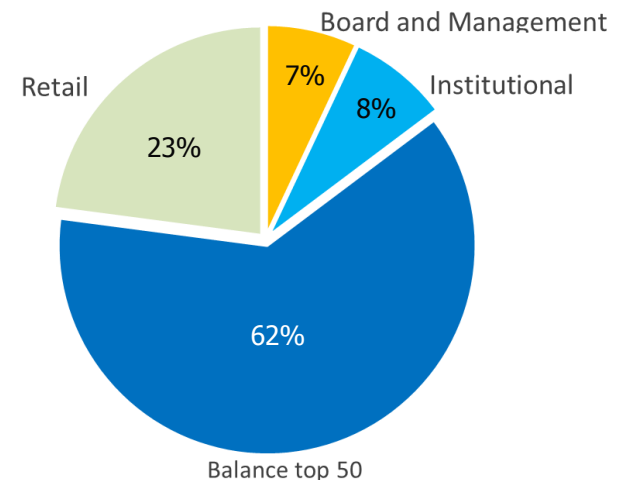
- 34 years upstream oil & gas
- Influential in commercial inception and development of CSG industry in QLD with Origin Energy

## 12 Month Share Price Performance

Share Price and Volume Last 12 months to 10 April 2019



## Share Registry Breakdown

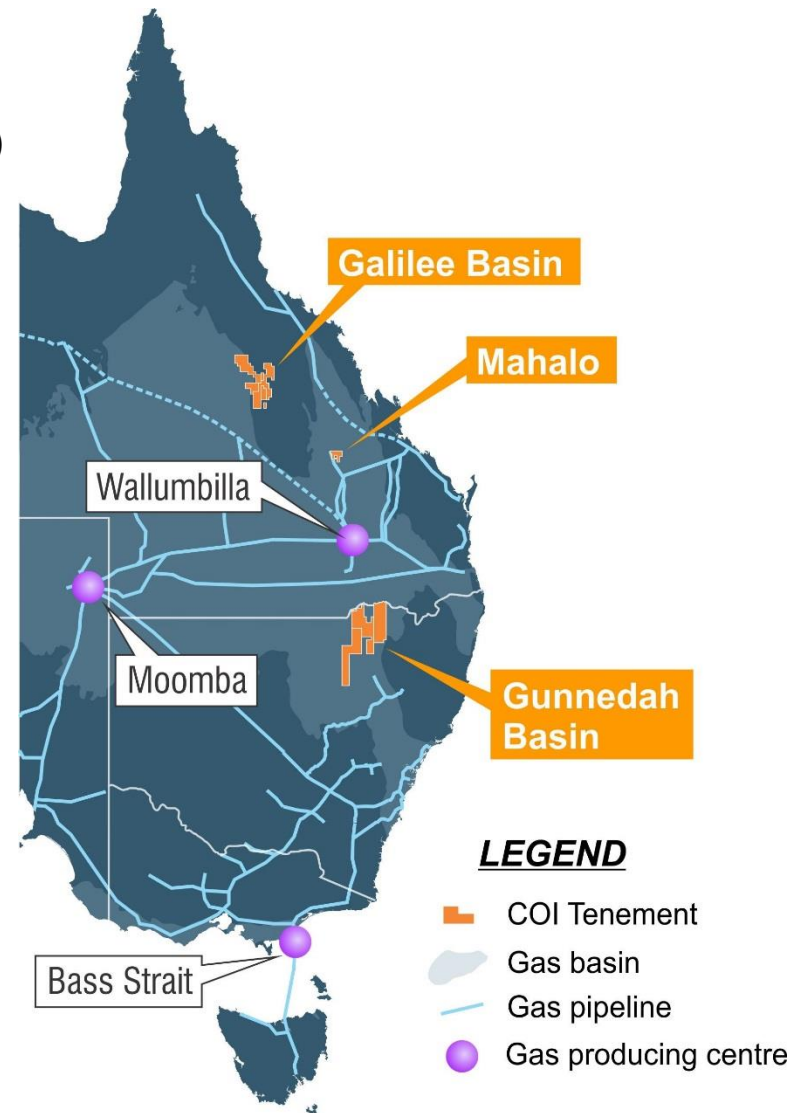




# Comet Ridge - Summary



- ✓ **Mahalo Gas Project – Southern Bowen – CSG**
  - Significant net to Comet 2P<sup>+</sup> (172PJ) & 3P<sup>+</sup> (374PJ) reserves located 240 km west of Gladstone
  - Production testing on 5 well evaluation programme
  - JV with Santos and APLNG
- ✓ **Galilee Basin – CSG, Sandstone and Shale**
  - Appraisal well, Sandstone target - June 2018
  - First measured gas flow from Sandstones
  - Significant resource base northwest of Gladstone (over 2200 PJ 3C)<sup>+</sup>
  - Opportunities for early commercialisation
  - Resources certified in Sandstone & CSG
- ✓ **Gunnedah Basin – CSG – NSW**
  - Assets cover ~17,000 km<sup>2</sup> located north of Santos' Narrabri development
  - Longer term, hold-then-follow strategy



# Comet Ridge – 2018 Achievements



- ✓ 2018 work programme resulted in significant Reserves and Resources Upgrade for Mahalo – 172 PJ 2P + net to Comet Ridge
- ✓ Re-appointed Exploration Agent for Mahalo by Santos, with Comet managing 2018 drilling programme
- ✓ Mira 6 (short single lateral) well producing 1.4 mmcf/d, exceeding expectations
- ✓ Farmed-out 15% of Galilee Sandstone to Vintage
- ✓ First Measured Gas Flow from Lake Galilee Sandstone Reservoir – 230,000 scf/d
- ✓ \$17.4 million placement, at market price



# 2019 activities and expected key work flow



## Mahalo

- ✓ Production testing data from Memooloo 2, Struan 2 and Sirius Road 1 Underway
- ✓ Project definition for the development of Mahalo, leading to FID Underway
- ✓ Lodgement of Environmental applications with Federal and State governments Preparing
- ✓ Lodgement of Petroleum Lease applications Follows formal project definition

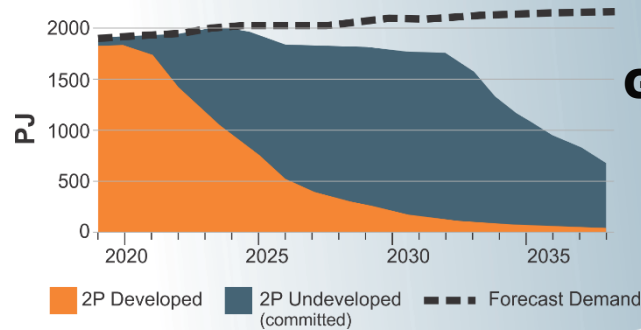
## Galilee

- ✓ 2D seismic programme - identifying broad structural trends and delineating drilling targets Acquisition Complete
- ✓ Drilling results from Albany 1 (deepening) and 2, potential for follow up stimulation activities Rig soon to mobilise
- ✓ Potential for CSG pilot in “shallows” Planning underway
- ✓ Progressing gas sales options for nearby power generation Ongoing

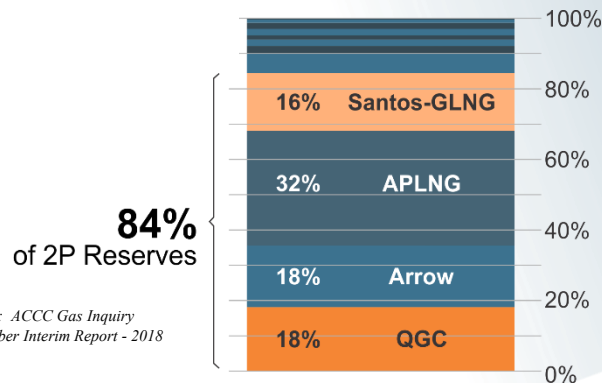
## Corporate

- ✓ Additional tenure through Government land release programmes Ongoing

# Three **Favourable** External Trends for Comet Ridge...



Source: AEMO – Gas Statement of Opportunities, March 2019



Source: ACCC Gas Inquiry  
December Interim Report - 2018

**Resource Ownership Currently Highly Concentrated**

**Proactive Queensland Government Policy for new tenure release**

New Block Objectives

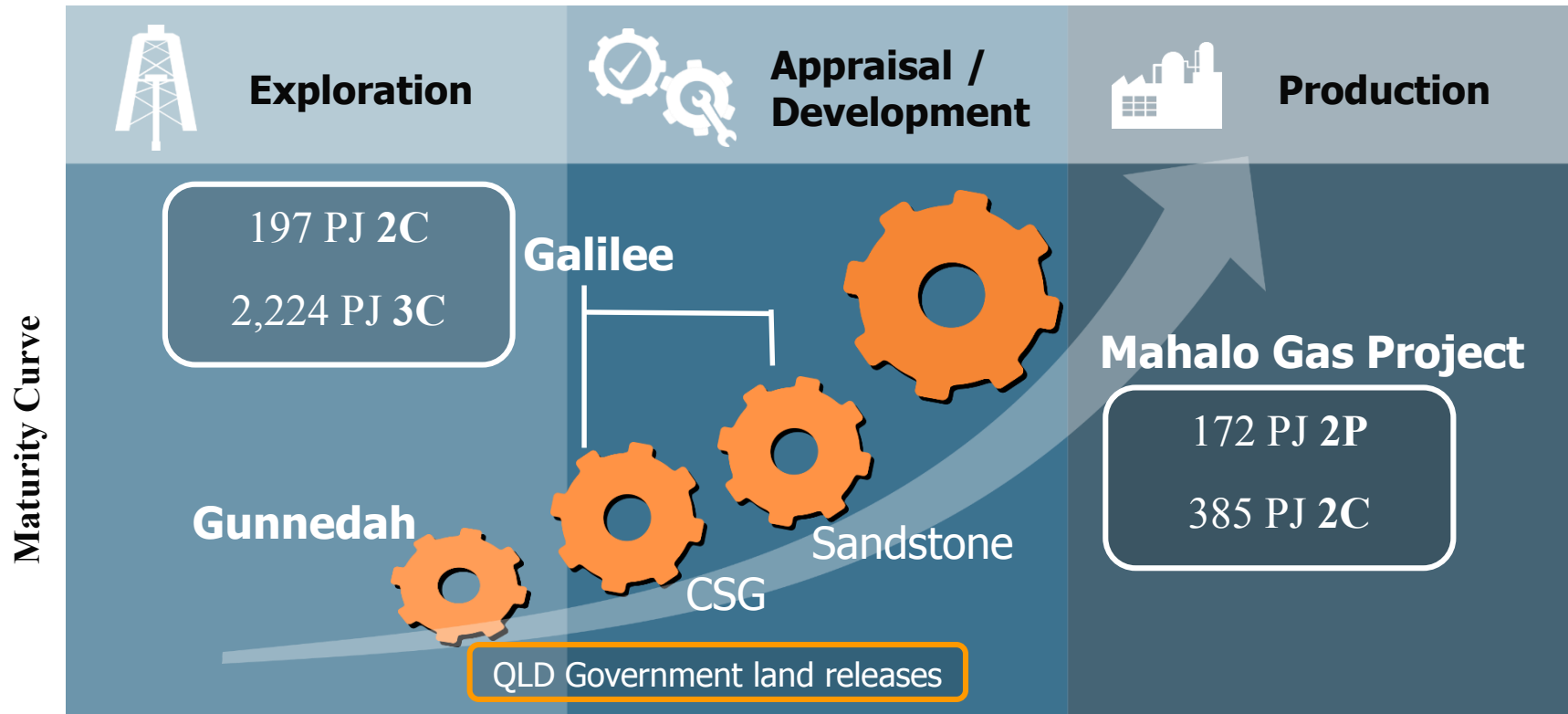
- open up the market to junior and mid-tier explorers and producers, and new entrants
- take the gas to the Australian market to help address gas supply concerns - specifically for the Australian manufacturing sector
- explore and develop the area
- drive growth in the regions

**Comet Ridge is well positioned...**

# Comet Ridge – Growth Pipeline



- ✓ Moving Resources to Reserves as quickly and capital efficiently as possible





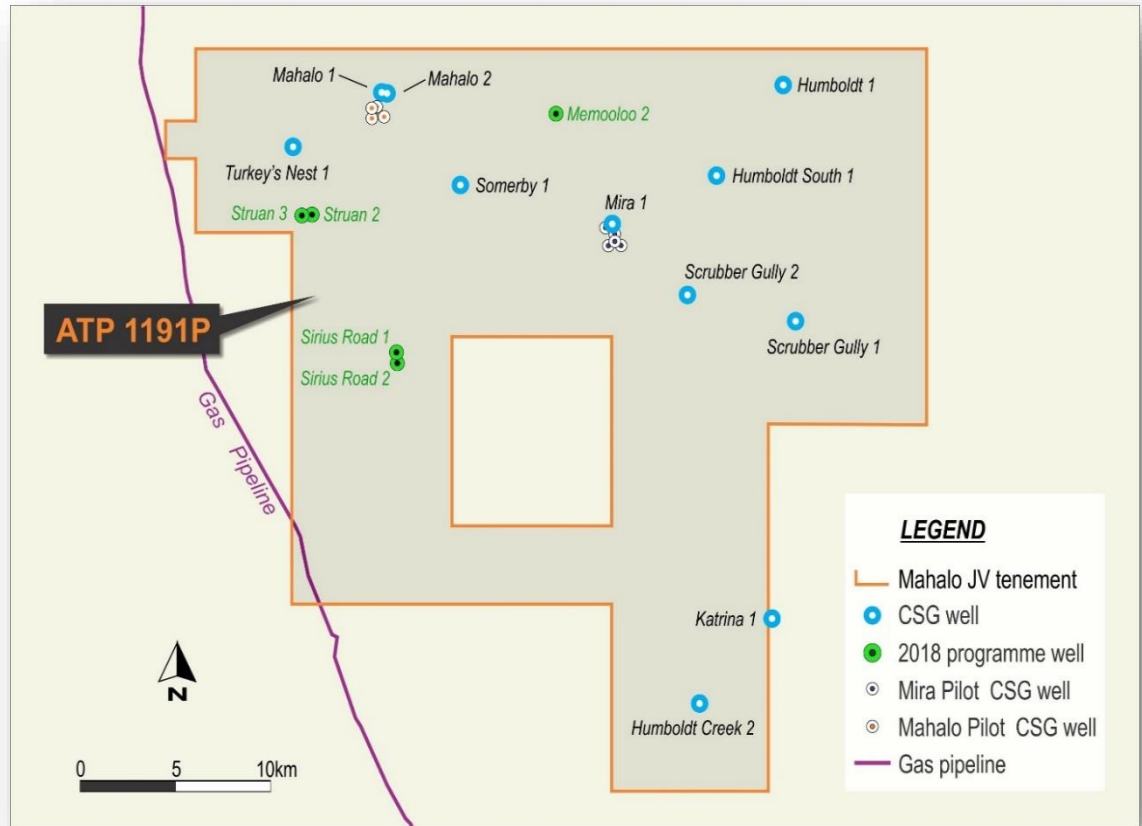
# Comet Ridge – Experienced Management Team



Name	Position	Commenced	Experience	CSG Experience	Prior Experience
Tor McCaul	MD	2009	31	11	LASMO, VICO, Cairn plc
Peter Harding-Smith	CFO	2018	28	2	Armour Energy, Orbis Gold
Dale Aaskow	COO	2010	34	12	Oil Tools Int'l, Weatherford
Ashley Edgar	Subsurface & Exploration	2012	33	24	Santos, Oil Company of Australia, Origin, Eastern Star Gas
Tony Papinzcak	Development	2015	33	20	Origin, APLNG
Daniel Freed	Gas Marketing	2017	23	8	Total, GLNG
David Woodley	Business Development	2018	31	13	Origin, QGC, Challenger

- ✓ Experienced management team, deep knowledge of the CSG industry
- ✓ Significant upstream experience
- ✓ Considerable development knowledge,
- ✓ Deep understanding of risk management
- ✓ Strong commercial acumen

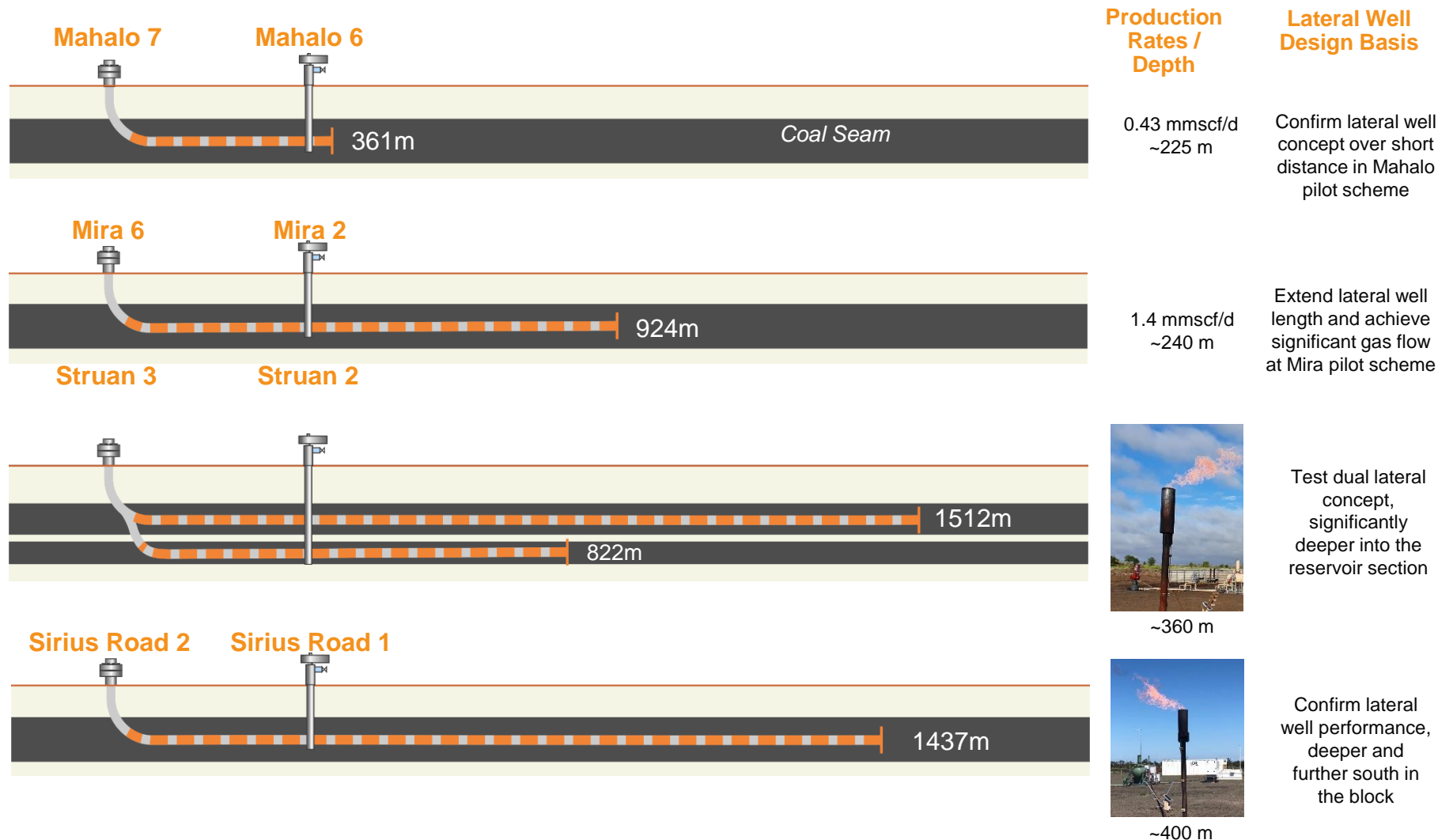
- Joint Venture Equity
  - Comet Ridge 40%
  - Santos 30%\*
  - APLNG 30%#
- Central QLD
  - between Emerald & Rolleston
- Area 911 km<sup>2</sup>
- Close to pipeline infrastructure (to Gladstone)
- Great well productivity
- Low end of the cost curve
- Near term production potential



# Mahalo – Summary of lateral wells



Evolution of various lateral well styles to feed into project definition/FID



# Mahalo - likely to be at **low end of cost curve**



Mahalo will get development priority because:

- ☐ **Shallow**
  - ✓ Only 225 to 500 metres to coal
  - ✓ Lower drilling and completion costs
- ☐ **Permeable**
  - ✓ Mahalo 7 and Mira 6 flowed 1200 to 1500 scfd per metre of coal intersected
  - ✓ Higher flowrates means less wells
- ☐ **Less Water**
  - ✓ Low water-gas ratio on both Mahalo 7 & Mira 6
  - ✓ Lower water handling capex and opex
- ☐ **Low maintenance**
  - ✓ No coal fines - minimising 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

# Mahalo - Development Concept

- \* Development Concept: possible option displayed

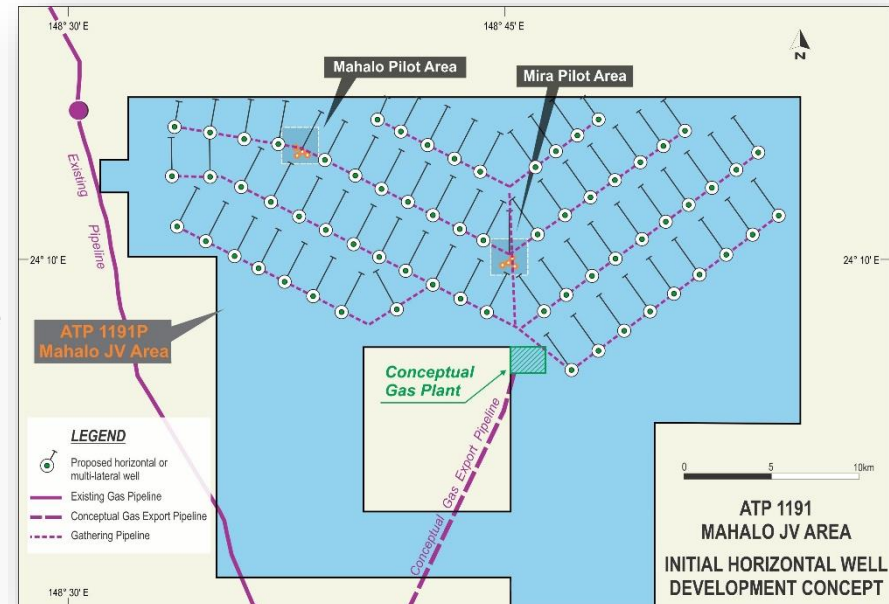
## Development concept – Targeting up to 100 to 120 TJ/d production

### ❖ Phase 1

- 50 to 60 TJ/d modular plant targeting the northern part of the block,
- 12 inch Gas Export Pipeline (120 TJ/d capability),
- Water treatment,
- Wells and gathering system.

### ❖ Phase 2 – following

- Second 50 to 60 TJ/d modular plant targeting remaining resources, increasing production to 100 to 120 TJ/d
- Increased water treatment,
- Wells and gathering system.



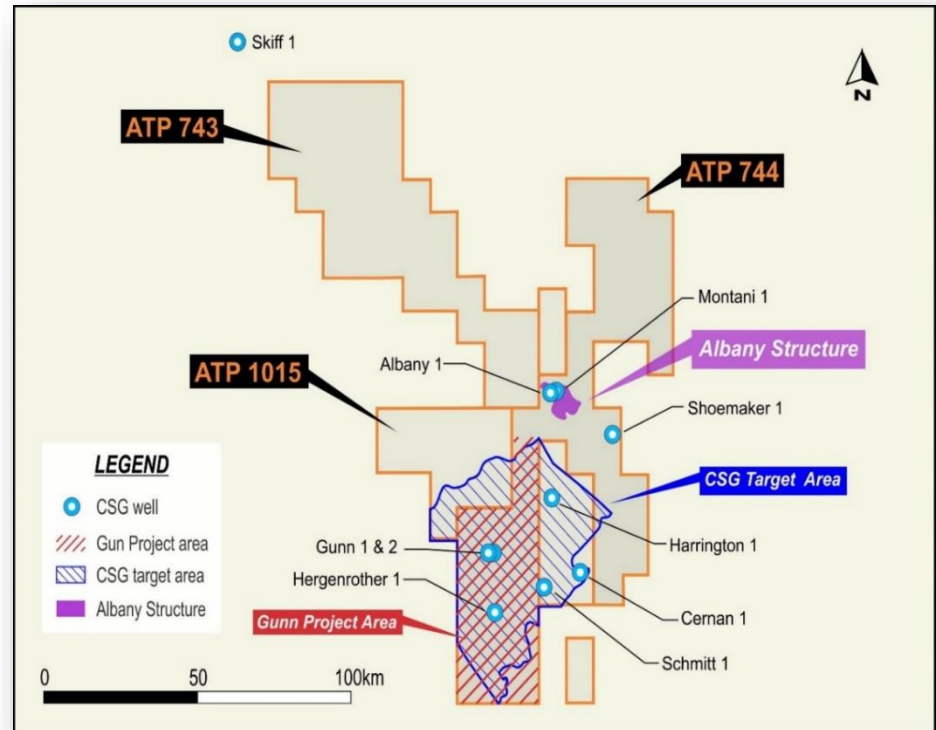
**Minimum gas processing required – only separation, compression and dehydration**

\*Comet Ridge internal concept. Development remains subject to approval of Joint Venture.



# Galilee Basin – Targets at multiple levels

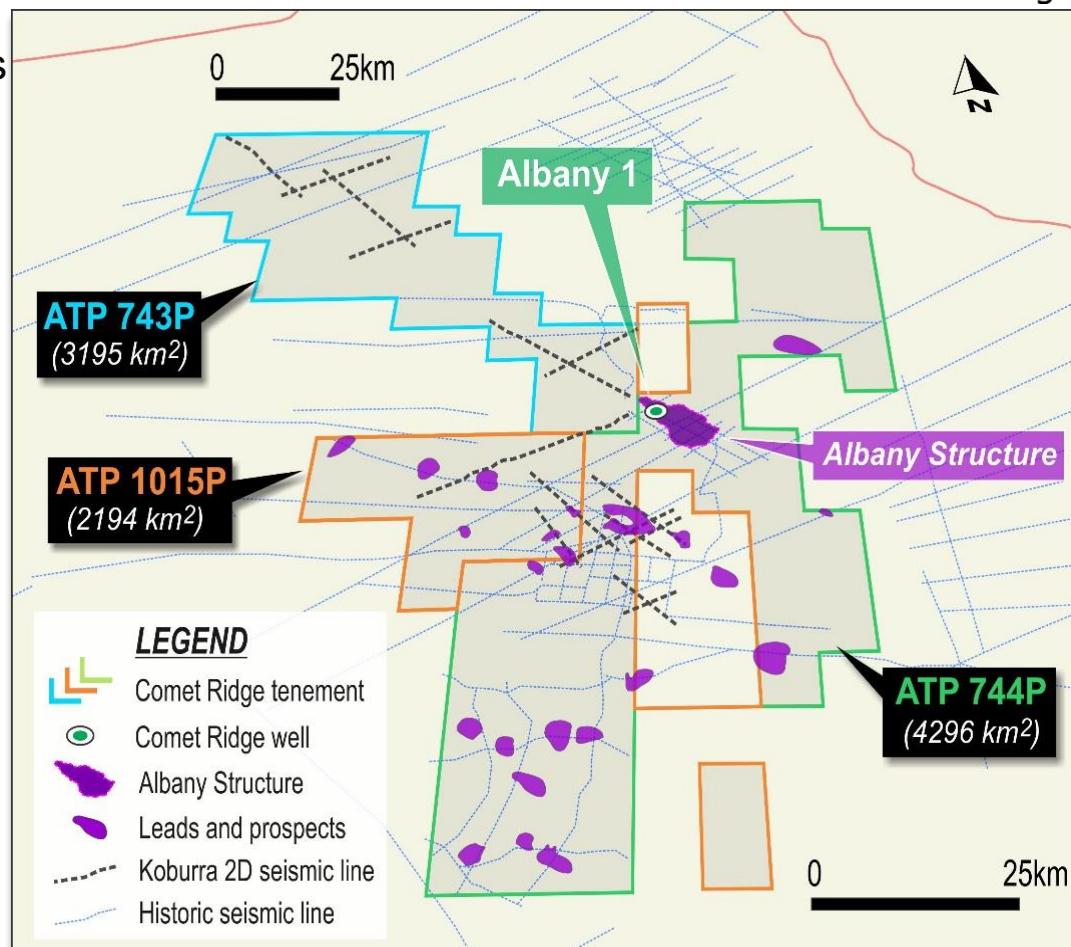
- Basin covers a large part of central western Queensland (~250,000 km<sup>2</sup>)
- Comet has a massive position in the east portion of the Basin – 9,685 km<sup>2</sup>
- CSG (Shallows) – Comet 100%
- Sandstone (Deeps) JV
  - Comet Ridge 85%, Vintage Energy (ASX:VEN) 15%, moving up to 30%
- Maiden gas flowrate of 230,000 scf/d from Albany 1 Sandstone (June 2018)
- Marine Shales in deeper section
- Potential for early commercialisation with nearby Mining and Industrial gas demand
- Significant interest from Infrastructure Providers to assist with gas transportation



# Galilee Sandstone – Large Number of Potential Targets



- Significant gross 3C+ resources certified in conventional Sandstones (417PJ gross) in one structure (Albany)
- Basin has up to 140m of gross sandstone section
- Koburra 336km 2D Seismic acquisition complete
  - ✓ Data processing is currently underway, complete 2Q 2019
  - ✓ Interpretation and mapping to follow
  - ✓ Several possible leads identified in the vicinity of Lake Galilee 1
  - ✓ New structural trends on regional lines

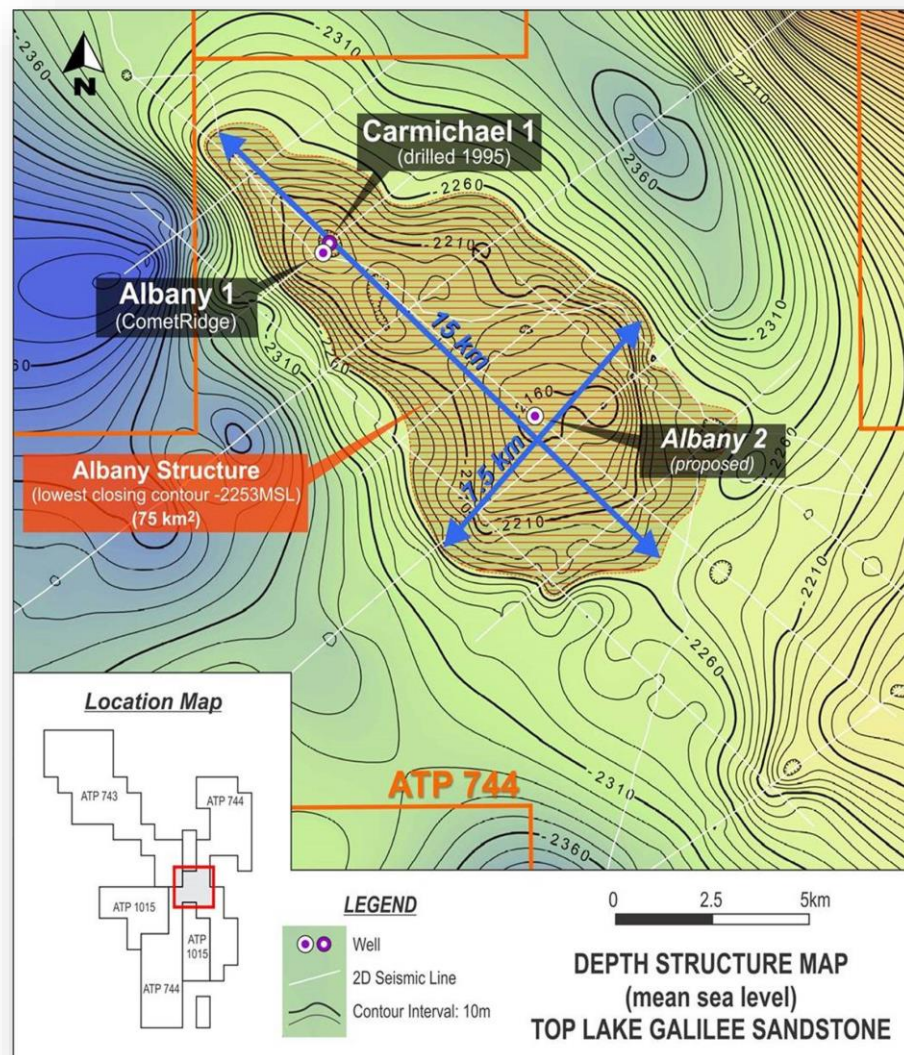


**Significant number of sandstone leads and prospects identified from relatively sparse seismic data set in the eastern Galilee**

# Galilee Sandstone – 2019 Work Programme



- Vintage Energy farming-in for 30% of the Sandstone reservoir sequence (“Deep”) of Comet Ridge’s ATP 743, 744 and 1015 (Galilee Permits) – Proven JV Partners.
- **Current work programme**
  - Drilling rig expected to move in April & spud in May
  - Albany 2 to appraise the scale of the Albany structure
  - Albany 1 to finish drilling all of the original target zone
  - Mud drilled with logs and core for maximum reservoir information
  - Fracture Stimulation - both wells 3Q 2019
- **Targeted Outcomes**
  - Additional drilling targets, data being interpreted now
  - Conversion of Resources to Reserves
  - Gas Sales Agreement(s)

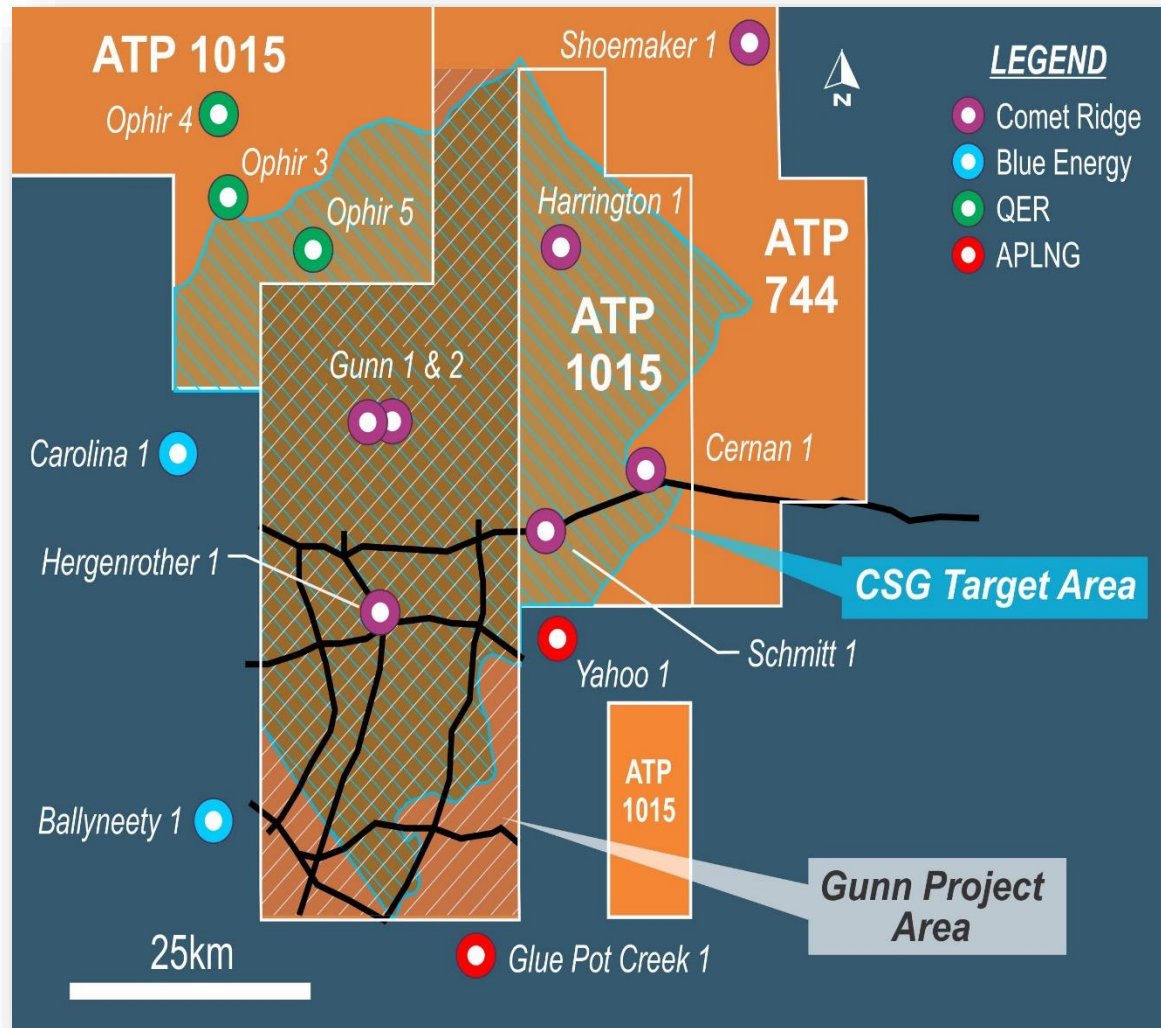




# Galilee CSG – recoverable gas over approx. 2,000 km<sup>2</sup>

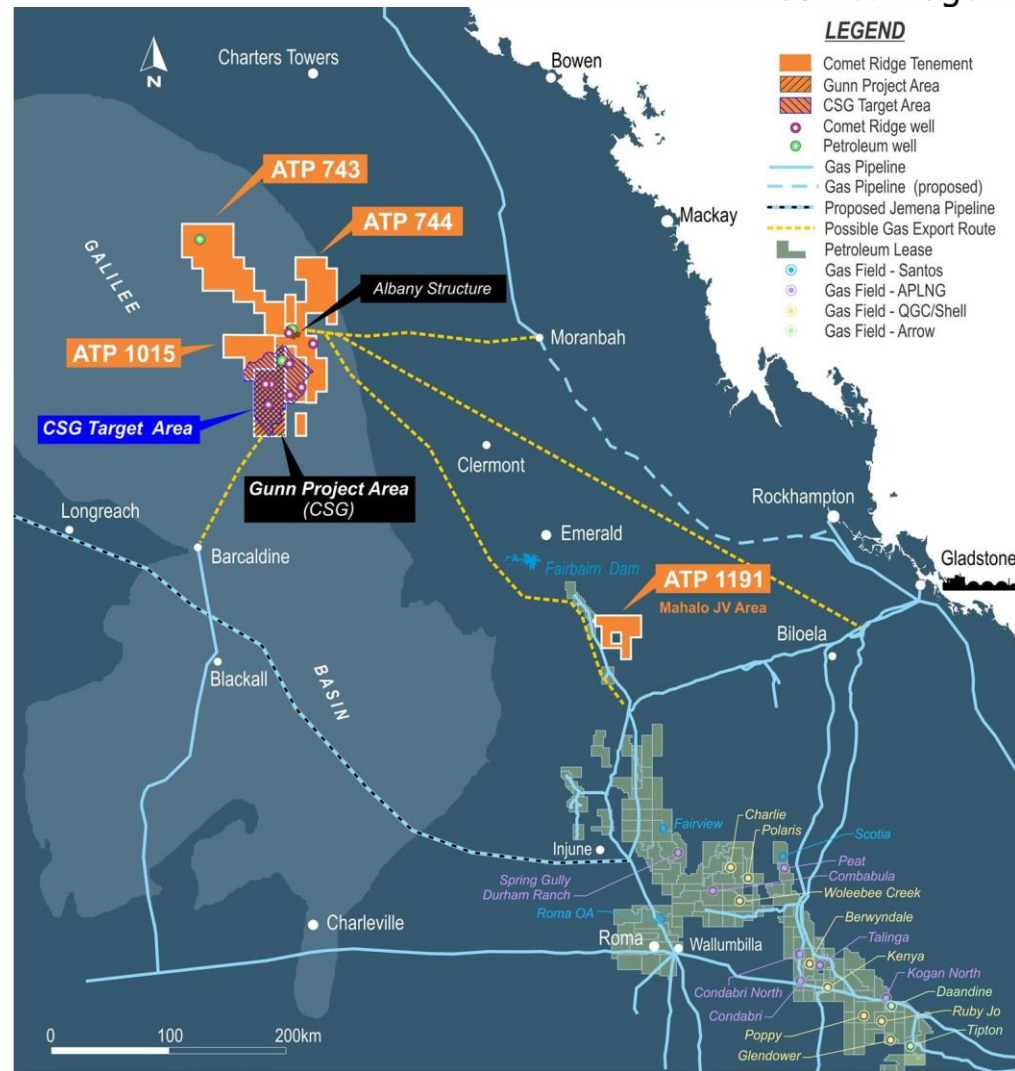


- Gunn Project area and ATP 1015 area (COI 100%) coals contain recoverable gas over approx. 2,000 km<sup>2</sup>
- 6 individual coal seams
- Depth to coal 700 - 1,000m
- 16 to 24m net coal deposited over large area
- Average gas content 4.3 m<sup>3</sup>/t (high 7.3 m<sup>3</sup>/t)
- Good to excellent permeability within target coals
- Significant CSG resource independently certified at over 1.8 Tcf in ATP 744
- COI working towards CSG pilot



# Comet Ridge – Key take away messages

- Mahalo is one of the east coast's largest, most productive and proximal to market gas fields not currently in production
- Significant upside from Galilee – Proof of concept with successful flow of gas from Albany 1 with targets also in shallower coals (CSG)
- East coast gas market continues to tighten due to moratoria on gas exploration, shut-down of coal fired generation and increasing LNG demand
- Comet Ridge well placed to form part of the supply solution for the east coast gas market







Comet Ridge Limited

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# ASX Listing Rule 5 Disclosure



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

The Contingent Resource for the Albany Structure located 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 (MHA) 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, updated in an announcement dated 2 December 2015, and further upgraded in an announcement dated 6 March 2018 and were estimated using the deterministic method with the estimate of contingent resources not having been adjusted for commercial risk.

The contingent resource estimates for the unconventional gas located in ATP 744 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 744 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 744 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 ATP 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.

# Comet Ridge - Strategic East Coast Gas Portfolio



Mahalo (QLD)		+Reserve (PJ)			+Contingent Resource (PJ)		
	Type	1P	2P	3P	1C	2C	3C
	CSG	18	172	374	224	385	389
Galilee (QLD)		+Reserve (PJ)			+Contingent Resource (PJ)		
	Type	1P	2P	3P	1C	2C	3C
	CSG					67	1,870
Gunnedah (NSW)		+Reserve (PJ)			+Contingent Resource (PJ)		
	Type	1P	2P	3P	1C	2C	3C
	CSG						562
Comet Portfolio (East Coast Australia)	COI Total	+Reserve (PJ)			+Contingent Resource (PJ)		
	Type	1P	2P	3P	1C	2C	3C
	CSG + Sandstone	18	172	374	272	582	3,175

+ Refer to the Competent Persons Statement at Page 20 and the ASX announcement dated 6 March 2018 for further information on COI's Reserves and Contingent Resources

\* Contingent Resource adjusted to reflect the interest earned by Vintage Energy Limited