



# Vintage Energy Ltd RIU Good Oil Conference

September 2018





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#### For Information

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### **Overview of Vintage Energy Ltd**

#### Vision

"to become a unique, dynamic, financially strong, growth-focussed energy company, respected by the industry, shareholders, employees and public"

 Proven and well respected board and technical teams (Reg Nelson as Chairman)

#### Assets

- East Coast gas focused
- Near term gas production potential in Queensland
- High impact exploration with strong discovery potential onshore Queensland, South Australia and Bonaparte Basin

#### **Bonaparte** Darwin Basin QLD Townsville Headland Mount Isa Galilee Basin Gladstone Alice Springs WA Moomba Brisbane SA Geraldton Kalgoorlie NSW Whyalla Perth Sydney Bunbury Adelaide Canberra Melbourne Basin VE18-020

#### Strategy

- Take advantage of favourable energy market dynamics
- Acquire, explore and develop energy assets principally within Australia, to create value for shareholders



### **Investment Highlights**

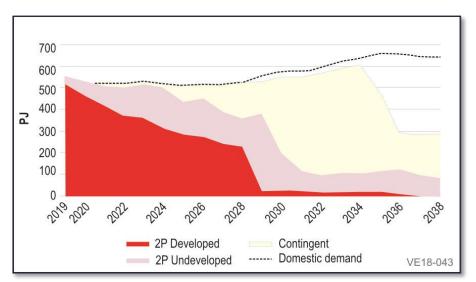
- ✓ Completed \$30million IPO at 20cents/share
- ✓ Listing on 17 September 2018, subject to ASX confirmation
- ✓ Proven Board and Management
- ✓ High Impact Exploration and Appraisal Program
- Assets with leverage to East Coast gas market dynamics
- ✓ Near term appraisal of Galilee Basin Carmichael gas field (2C Recoverable Gas of 142 Bcf (gross))
- ✓ Significant further Galilee Basin exploration potential with numerous leads across 3 permits
- Drill ready gas prospect in Penola Trough, Otway Basin adjacent to recent Beach Energy discovery
- ✓ 2 additional potential high impact exploration tenements in Otway and Bonaparte Basins



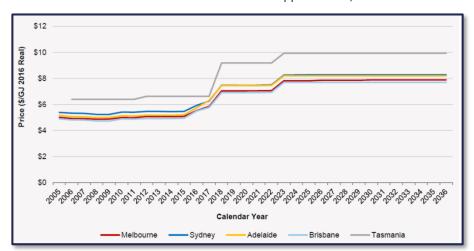


### **Investment Thematic**

- Supply Crisis in East Coast Gas Market
  - Ramp-up of gas supply to export LNG markets
  - Adverse state government policies on exploration
    - Fraccing and exploration moratoria
  - Accelerated decline in traditional gas sources
    - Underinvestment during downturn
  - Crisis in Victorian gas supply
    - Victorian gas supply is expected to fall from 435 PJ in 2017 to only ~187 PJ by 2022\*
    - "The Gippsland Basin is not a magic pudding"+
- Gas Power Generation is volatile and increasing in the long term
  - Security of supply issues
  - Retirement of Hazelwood coal fired power station
- Significant increase in domestic gas price
- Focused Strategy to capitalise on
  - East coast gas demand
  - Rising gas and oil prices



Status of reserves and resources to meet domestic demand, 2019-38 Source AEMO 2018 Gas Statement of Opportunities, June 2018



Delivered wholesale gas price forecast

Source: AEMO National Gas Forecasting Report, Eastern and SE Australia, Dec 2017

<sup>\*(</sup>AEMO-Victorian Gas Planning Report Update March, 2018)

†(Chairman of Esso – Operator of GBJV)

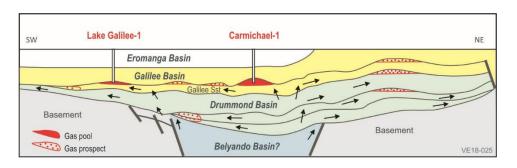


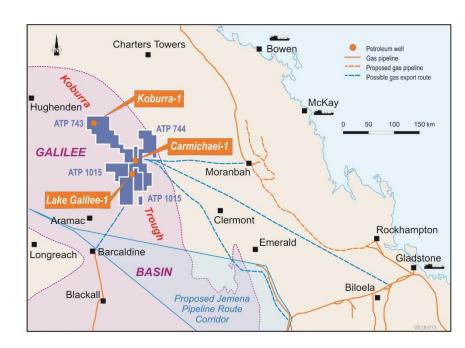
### Galilee Basin: ATPs 743, 744, 1015 ("Deeps")

- Large (>9,000km²), cattle grazing area, central western QLD
- Comet Ridge 100% and Operator
- Earning 30% with potential to increase to 48.5%

#### Koburra Trough

- Working petroleum system with 3 historic wells
- Gas recovered from all 4 wells, oil recovery in 1 well
- Appraised Carmichael-1 gas discovery (Albany-1)
- Vintage to earn proportional share of Contingent Gas Resource (2C of 142 Bcf (gross))
- Indicative forward plan
  - Albany-2, 2D and 3D seismic, further drilling
- Potential for additional structures with large gas accumulations
  - Exploration planned with more seismic required





#### **Market Opportunities**

- Power to mines (adjacent proposed Adani mine)
- Industrial gas supply
- Comet Ridge pipeline MOU with APA
- LNG project shortfalls
- Short time required to appraise
- Jemena well progressed on a feasibility assessment to expand the NGP to the Wallumbilla gas hub



### Galilee Basin: ATPs 743, 744, 1015 ("Deeps")

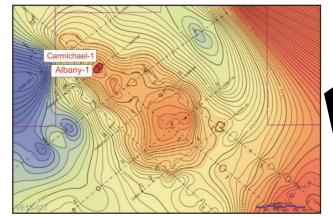
#### Albany (Carmichael) Structure

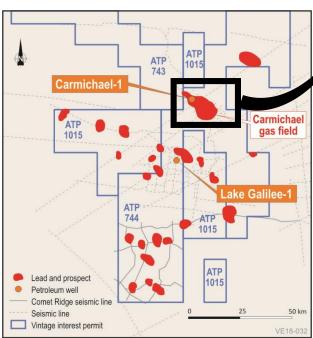
- Large 61 km<sup>2</sup> conventional gas discovery in robust anticline
- Defined by 1980's 2D seismic grid (2.5 x 2.5km)
- Contingent Resource booked:

- Wasn't pursued in low gas price environment
- Albany-1 (Carmichael-1 twin)
  - Drilled May/June 2018 (2,595m TD)
- Target (Lake Galilee Sandstone) drilled with air/nitrogen
- Fraccing may further enhance flow rate

Stage	Farm-in Program	~ Gross Cost (\$million)	~ Net Cost (\$million)
1a	Drill Albany-1, flow test	5.4*	3.7*
1b	Stimulate and flow test (optional)	1.2	0.3
2	Drill Albany-2, stimulate (?) flow test		
	2D Seismic (Lead/Prospect definition)	10.0	5.0
	3D Seismic (Albany/Carmichael)		
Total		15.4-16.6	8.7 – 9.0

<sup>\*</sup> Based on Operator final forecast cost of 28 June 2018





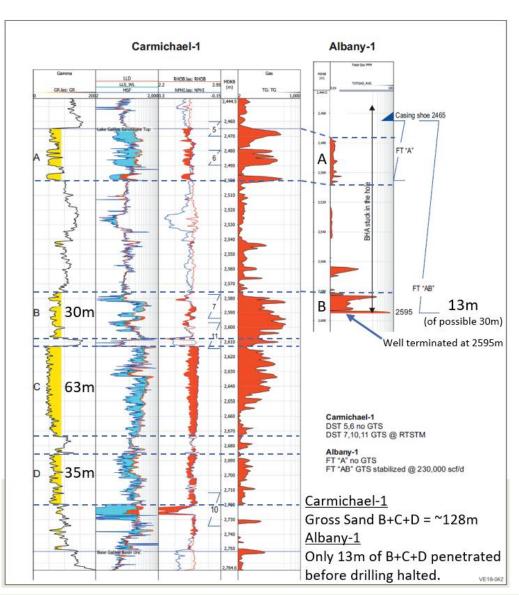


### **Albany-1: Proof of Concept**

#### **Albany-1 Key Results**

- Stabilised gas flow of 230,000 scfd from top of 'B' sand
- Flared for 23 hours with no decline or water production observed
- 13 metre interval of 'B' sand represents approximately 10% of targeted sandstone interval
- Pre-Drill Objectives met:
  - Improve flow through underbalanced drilling
  - Confirm interval as fracture stimulation candidate
- Program curtailed due to mechanical issues
- Remainder of 'B' plus the 'C' and 'D' sandstone interval remain untested in Albany-1

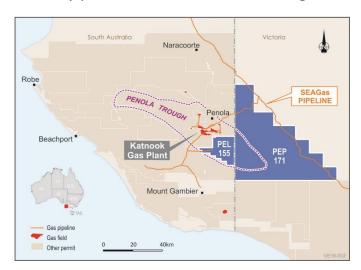


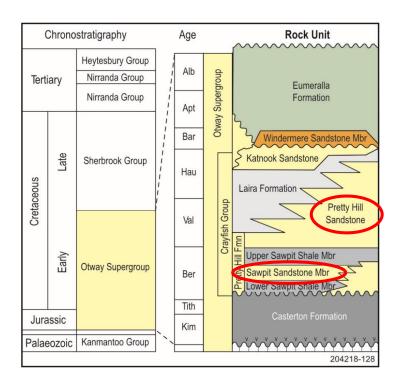




### Penola Trough, Otway Basin

- Exploration began 1866
- Modern day exploration began in 1961
  - Katnook Gas Plant commissioned in 1991
  - Approximately 70 PJ of sales gas has been produced
  - Depleted fields shut-in, plant mothballed (Beach awarded \$6million Federal Govt Grant to upgrade)
- Commercially proven Early Cretaceous Katnook/Top Pretty Hill Sandstone targets
- Sawpit Sandstone (discovery formation at Haselgrove-3ST1) considered additional strong target
- All SA Otway production from Penola Trough





- Trap style 3-way dip, fault sealed closures
  - Stacked fluvial sandstones with up to 25% porosity
  - Flow rates up to 25 MMscfd
     (Haselgrove-3/ST1, Beach Energy Sawpit Sst discovery)
  - Fault seal considered the major risk
- Region connected to the SEAGas pipeline via local pipeline network
- Local and Eastern Australia market opportunities



### PEL 155 - Otway Basin

- Vintage 50%, Otway Energy 50% (Subsidiary of Rawson Oil & Gas<sup>+</sup>)
- Ready to drill prospect at Nangwarry-1
  - Drilling planned for late 2018
  - Well location covered by 3D seismic and within pine plantation
  - On trend with Otway Basin, Penola Trough fields
  - 3-way dip, fault sealed closure, high chance of gas charge
  - Analogous to Haselgrove-3/ST-1, Katnook, Ladbroke Grove

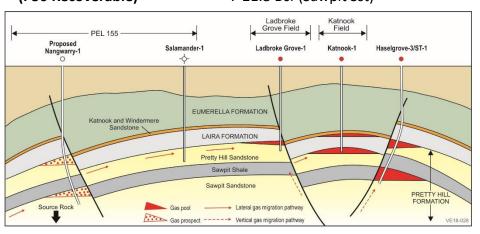
Primary Targets : Top Pretty Hill Fm/ Sawpit Sst

**Target Depths** : 3,200m/ 4,150m

Total Depth : 4,350m

Closure : ~2.4km<sup>2</sup>

Prospective Resource\* : 35.2 Bcf (Top Pretty Hill)
(P50 Recoverable) : 21.8 Bcf (Sawpit Sst)



<sup>\*</sup> Rawson Oil and Gas is subject to a takeover by Lakes Oil N.L. (Lakes control >51% of Rawson and the offer is now unconditional)



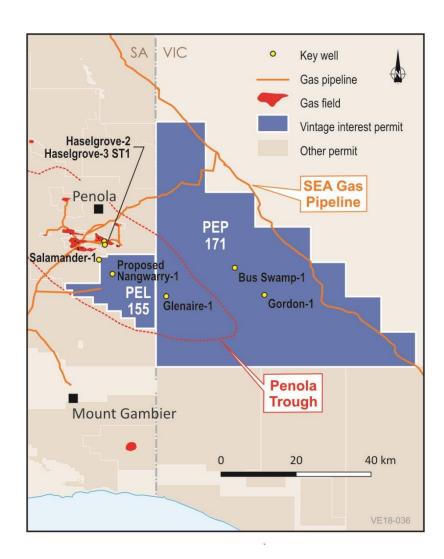
- JV received \$4.95million PACE Gas Grant
  - Awarded for ~ 50% of Nangwarry drilling costs (~\$11.5 million including contingency)
  - Share remaining costs & grant 50:50 with Otway
- Katnook Gas Plant ~10 km to the north-west
- Haselgrove 3/ST-1 discovery ~8 km north
- Follow-up potential

<sup>\*</sup> Independently certified in accordance with SPE-PRMS guidelines



### **PEP 171 - Onshore Otway Basin**

- Initial equity Vintage 25%, Somerton Energy 75%
  - Cover all permit costs and studies during moratorium (Minimum \$450k)
  - Binding HoA with Somerton (wholly owned subsidiary of Cooper Energy)
  - Counter-cyclical opportunity for low cost entry
- Right to earn additional 25% post moratorium
  - fund 65% of 100 km<sup>2</sup> 3D seismic (capped at \$1.82 million net)
- Secures extension of Penola Trough into Victoria
- Gives scale to Otway opportunity
  - Very large area (1,974 km²)
- Multiple prospects and leads
  - Sawpit play extends into PEP 171
  - Oil recoveries at Glenaire-1 ST-1 and Gordon-1
- Forward Plan
  - Geophysical re-interpretation
  - Prospects and Leads evaluation
  - Seismic planning

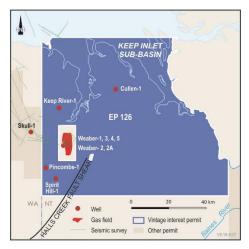


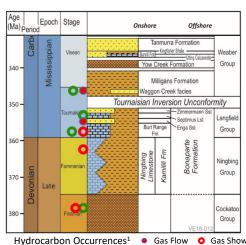


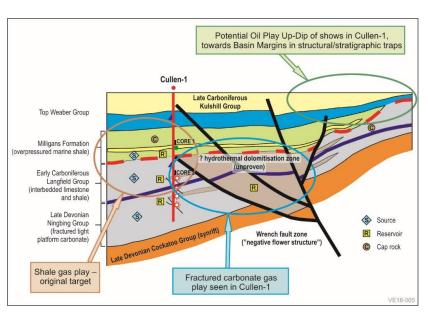
Oil Show

### **EP126 - Bonaparte Basin**

- Low cost entry at 100% equity
  - SPA with Beach Energy
  - Large 6,700km<sup>2</sup> permit
  - Higher risk/higher reward exploration asset
- Proven Petroleum System
  - Onshore Bonaparte wells have flowed gas
- Onshore is underexplored frontier region
  - 4 petroleum exploration wells in EP 126
- Multiple Play Types
  - Conventional carbonate and clastic reservoirs
- Good hydrocarbon shows in Cullen-1 (2014)
  - Cased and suspended, available to flow test
  - Fractured carbonate gas play defined (Ningbing Limestone/Langfield Group)
  - Oil shows in shallower Weaber Group
- Multiple potential routes to market
- Flexibility to bring in partners to fund forward programs
  - One or more tests of Cullen-1
  - Possible infill seismic and drilling







<sup>1</sup>Reference: Petroleum geology and potential of the onshore Northern Territory, 2014. Report 22. TJ Munson, Northern Territory Geological Survey



### Work program / timing (FY18-20)

Galilee Basin	<ul> <li>Albany appraisal drilling, stimulation and flow testing</li> <li>Regional and prospect 2D and 3D seismic</li> <li>Lead and prospect delineation plus 1 exploration well</li> </ul>		
Otway Basin - PEL 155	<ul><li>Nangwarry-1 drill and flow test</li><li>Further exploration well</li></ul>		
Otway Basin - PEL 171	<ul><li>Geoscience studies, prospect and lead evaluation</li><li>3D seismic and well post moratorium</li></ul>		
Bonaparte - EP126	<ul> <li>Technical work in preparation for Cullen-1 testing and 3D seismic</li> </ul>		

Forward Work Plan and Expenditure (excludes potential additional work from a success case)							
Item	Units	FY18	FY19	FY20	Total		
Wells	no.	1	2	4	7		
3D Seismic	km²		120		120		
2D Seismic	km		275		275		
Aerogravity	km²		215		215		
Well Tests	no.		1	2	3		
Capital Expenditure	\$m	4.5	10.8	12.9	28.2		

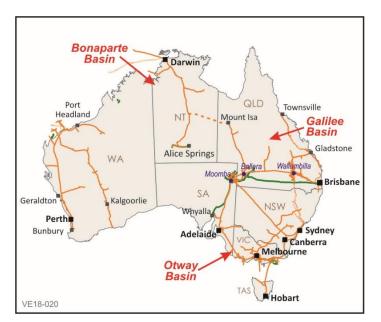


### **Summary / Forward Plan**

- Creating shareholder value a clear priority
  - Current assets
  - Future acquisitions/farm-ins
  - Portfolio optimisation
  - Corporate opportunities
- Exciting near and long term growth potential
  - Good asset mix
  - Diverse, highly skilled, experienced and proven team
- Drill ready projects
  - Appraisal and exploration opportunities
  - Access to 2C gas resource booking in Galilee Basin
- Clear pathways to development if successful
- Upside exploration potential
  - To be addressed by drilling, testing, 3D and 2D seismic
- Substantial news flow, including drilling results, throughout 2018/2019
- Build a revenue stream quickly to pursue material growth

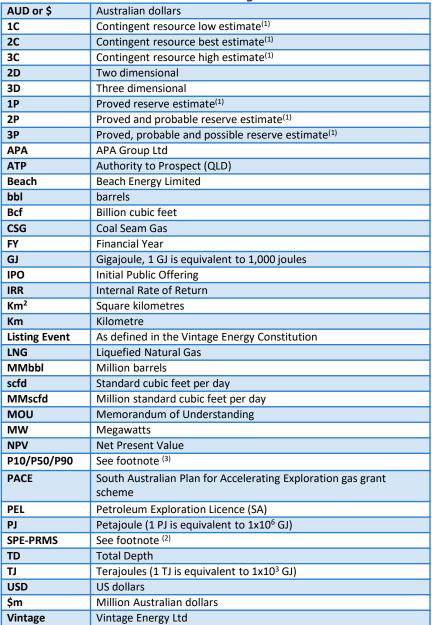
#### **Vision**

"to become a unique, dynamic, financially strong, growthfocussed energy company, respected by the industry, shareholders, employees and public"





### **Glossary**





- (1) Refer to "Guidelines for Application of the Petroleum Resources Management System" November 2011 (SPE PRMS) for complete definitions of Reserves and Contingent Resources.
- (2) Petroleum Resources Management System document, including its Appendix Sponsored by: Society of Petroleum Engineers (SPE) American Association of Petroleum Geologists (AAPG) World Petroleum Council (WPC) Society of Petroleum Evaluation Engineers (SPEE)
- (3) The <u>Securities and Exchange Commission</u> (SEC) define the reserves and resources estimates in terms of P90/P50/P10 ranges as: "The range of uncertainty of the recoverable and/or potentially recoverable volumes may be represented by either deterministic scenarios or by a probability distribution.

When the range of uncertainty is represented by a probability distribution, a low, best, and high estimate shall be provided such that:

- There should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the low estimate.
- There should be at least a 50% probability (P50) that the quantities actually recovered will equal or exceed the best estimate.
- There should be at least a 10% probability (P10) that the quantities actually recovered will equal or exceed the high estimate.



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