



## Corporate Presentation January 2022



# Important Notice & Disclaimer



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## *Advisory regarding forward-looking information*

All statements contained herein that are not clearly historical in nature are forward-looking. Forward-looking statements may be identified by use of forward-looking words, such as "expects", "estimates", "plans", "assumes", "anticipates", "believes", "opinions", "forecasts", "projections", "guidance", "may", "could", "will", "potential", "intend", "should", "suggest", "predict" (or the negative thereof) or other statements that are not statements of fact. Similarly, forward-looking statements in this Presentation include, but are not limited to, anticipated developments of Falcon's drilling projects and the timing thereof, capital investment levels and the allocation thereof, pipeline capacity, government royalty rates, reserve and resources estimates, the level of expenditures for compliance with environmental regulations, site restoration costs including abandonment and reclamation costs, exploration plans, acquisition and disposition plans including farm out plans, the shale oil and shale gas potential of the Beetaloo Sub-basin; information relating to the 2021 work programme, information relating to normalised gas flow rates for Amungee NW-1H, the 2021 work programme, results of operations at Kyalla 117 N2-1H ST2 ("Kyalla 117"), comments made with respect to the results of drilling at Velkerri-76 S2-1, drilling in the Velkerri Formation Amungee Member/Middle Velkerri play, the prospectivity of the Velkerri Formation Amungee Member /Middle Velkerri play and the prospect of the exploration programme being brought to commerciality, the contingent resource estimate for the Amungee NW-1H Velkerri B shale gas pool, comments made with respect to the type, number, schedule, stimulating, testing and objectives of the wells to be drilled in the Beetaloo Sub-basin Australia, the prospectivity of the Velkerri Formation Amungee Member /Middle Velkerri and Kyalla plays and the prospect of the exploration programme being brought to commerciality; 2022 Beetaloo activities; prospect of declaration of commerciality in 2022; treatment under governmental regulatory regimes and tax laws; the quantity of petroleum and natural gas resources or reserves including details of what was submitted to the Northern Territory Government; statements relating to the Company's activities in the Beetaloo Sub-basin; COVID-19 and the impact on the work programme, net cash flows, geographic expansion and plans for seismic surveys. In addition, statements relating to "reserves" or "resources" are deemed to be forward-looking statements, as they involve the implied assessment, based on certain estimates and assumptions, that the reserves and resources described can be profitably produced in the future. Falcon's discovered resources are not reserves. Such statements represent Falcon's internal projections, estimates or beliefs concerning, among other things, an outlook on the estimated amounts and timing of capital expenditures, anticipated future debt levels and incentive fees or revenues or other expectations, beliefs, plans, objectives, assumptions, intentions or statements about future events or performance.

The forward-looking statements are based on current expectations that are subject to significant risks and uncertainties that are difficult to predict. The risks, assumptions and other factors that could influence actual results include risks associated with fluctuations in market prices for shale gas; risks related to the exploration, development and production of shale gas reserves; general economic, market and business conditions; substantial capital requirements; uncertainties inherent in estimating quantities of reserves and resources; extent of, and cost of compliance with, government laws and regulations and the effect of changes in such laws and regulations; the need to obtain regulatory approvals before development commences; environmental risks and hazards and the cost of compliance with environmental regulations; aboriginal claims; inherent risks and hazards with operations such as mechanical or pipe failure, cratering and other dangerous conditions; potential cost overruns; drilling wells is speculative, often involving significant costs that may be more than estimated and may not result in any discoveries; variations in foreign exchange rates; competition for capital, equipment, new leases, pipeline capacity and skilled personnel; the failure of the holder of licenses, leases and permits to meet requirements of such; changes in royalty regimes; failure to accurately estimate abandonment and reclamation costs; inaccurate estimates and assumptions by management and their joint venture partners; effectiveness of internal controls; the potential lack of available drilling equipment; failure to obtain or keep key personnel; title deficiencies; geo-political risks; and risk of litigation.

Readers are cautioned that the foregoing list of important factors is not exhaustive and that these factors and risks are difficult to predict. Actual results might differ materially from results suggested in any forward-looking statements. Falcon assumes no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those reflected in the forward looking-statements unless and until required by securities laws applicable to Falcon. Additional information identifying risks and uncertainties is contained in Falcon's filings with the Canadian securities regulators, which filings are available at [www.sedar.com](http://www.sedar.com), including under "Risk Factors" in the Company's Annual Information Form.

## *Advisory regarding oil and gas information*

Any references in this Presentation to initial production rates are useful in confirming the presence of hydrocarbons; however, such rates are not determinative of the rates at which such wells will continue production and decline thereafter and are not necessarily indicative of long-term performance or ultimate recovery. While encouraging, readers are cautioned not to place reliance on such rates in calculating the aggregate production for Falcon. Such rates are based on field estimates and may be based on limited data available at this time.

This Presentation provides certain information relating to properties in close proximity to the Company's properties, which is "analogous information" as defined by applicable securities laws. This analogous information is derived from publicly available information sources, which the Company believes are independent in nature. Estimates by engineering and geotechnical practitioners may vary and the differences may be significant. The Company believes that the provision of this analogous information is relevant to its activities and forecasting, given its interest in properties in the area; however, readers are cautioned that there is no certainty that any forecasts provided herein based on analogous information will be accurate.

Contingent resource estimates are those quantities of gas (produced gas minus carbon dioxide and inert gasses) that are potentially recoverable from known accumulations, but which are not yet considered commercially recoverable due to the need for additional delineation drilling, further validation of deliverability and original gas in place, and confirmation of prices and development costs. There is uncertainty that it will be commercially viable to produce any portion of the resources. For additional information relating to contingent resource estimates in respect of the Amungee NW-1H Velkerri B Shale Gas Pool which were prepared by an Origin employee and a Qualified Reserves and Resources Evaluator effective as of February 15, 2017, please refer to Falcon's Annual Information Form dated April 26, 2021, which is available on SEDAR at [www.sedar.com](http://www.sedar.com).

## Share Capital & Cash

Common shares in issue	981,847,425
Share options outstanding	47,000,000
Fully diluted share capital	1,028,847,425
Cash at 30 September 2021	US\$9.4m

## Major Shareholders

Lamesa Holding S.A.	16.00%
Burlingame Asset Management	4.97%
Nicolas Mathys	4.07%

## Trading Details

Toronto: TSXV	Ticker: FO.V
London: AIM	Ticker: FOG.L

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# Falcon's Board of Directors



**Joe Nally**  
Chairman &  
Non-Executive Director

Mr. Nally has over 45 years' experience in London's capital markets including 18 years at Cenkos Securities PLC, a firm he co-founded, where he was Executive Director and Head of Natural Resources and helped build, develop and give strategic advice companies in the oil and gas sector. Prior to this, Mr Nally was a partner and director at Williams de Broe and an individual member of the International Stock Exchange of London.



**Philip O'Quigley**  
CEO & Executive Director

Mr. O'Quigley brings over 30 years' experience in senior management positions in the oil and gas industry. His career spans a number of London and Dublin listed exploration and production companies, and includes experience working in countries such as Argentina, the United States, Algeria, the UK and Ireland.



**Daryl Gilbert**  
Non-Executive Director

Mr. Gilbert has over 40 years' experience in both the Canadian and international oil and gas industries. Mr. Gilbert serves as a director of several energy related public entities. He is also a Managing Director of Carbon Infrastructure Partners, a private equity firm targeting risk-adjusted returns across the carbon life cycle, from hydrocarbon-based energy production through to carbon capture utilisation and storage.



**JoAchim Conrad**  
Non-Executive Director

Mr. Conrad is the Chairman of the Advisory Board of Germany, Berlin-based energy services company MegaTop Solutions. He is also the Chairman of the Board of the German Institute for Energy Efficiency. Mr. Conrad served as Executive Managing Director, Member of the Board of Directors of Bosphorus Gaz Corporation, Istanbul, Turkey, and Senior Advisor to the Management of Gazprom Germania GmbH. He was also the Managing Director of Gazprom Marketing & Trading GmbH.



**Gregory Smith**  
Non-Executive Director

Mr. Smith is Chairman of the Audit Committee. He is President of Oakridge Financial Management Inc., a provider of financial and management consulting services to private and public companies. He is also the CFO of Maglin Site Furniture Inc.. He is a director and treasurer of Rhode & Liesenfeld Canada Inc.; a director of CanadaBis Capital Inc and a director of a number of private corporations.



**Maxim Mayorets**  
Non-Executive Director

Mr. Mayorets is the Managing Partner at RPI Capital LLC. Mr. Mayorets has held various positions in the International Business Division at OAO Gazprom, acted as head of several Gazprom subsidiaries, was on the boards of directors of the company's businesses and was deputy head of the international business department of OAO Gazprom. Mr. Mayorets held the position of the M&A Director at Renova Group. Between July 2018 and October 2019, Mr. Mayorets was a M&A Director at ComplexProm.

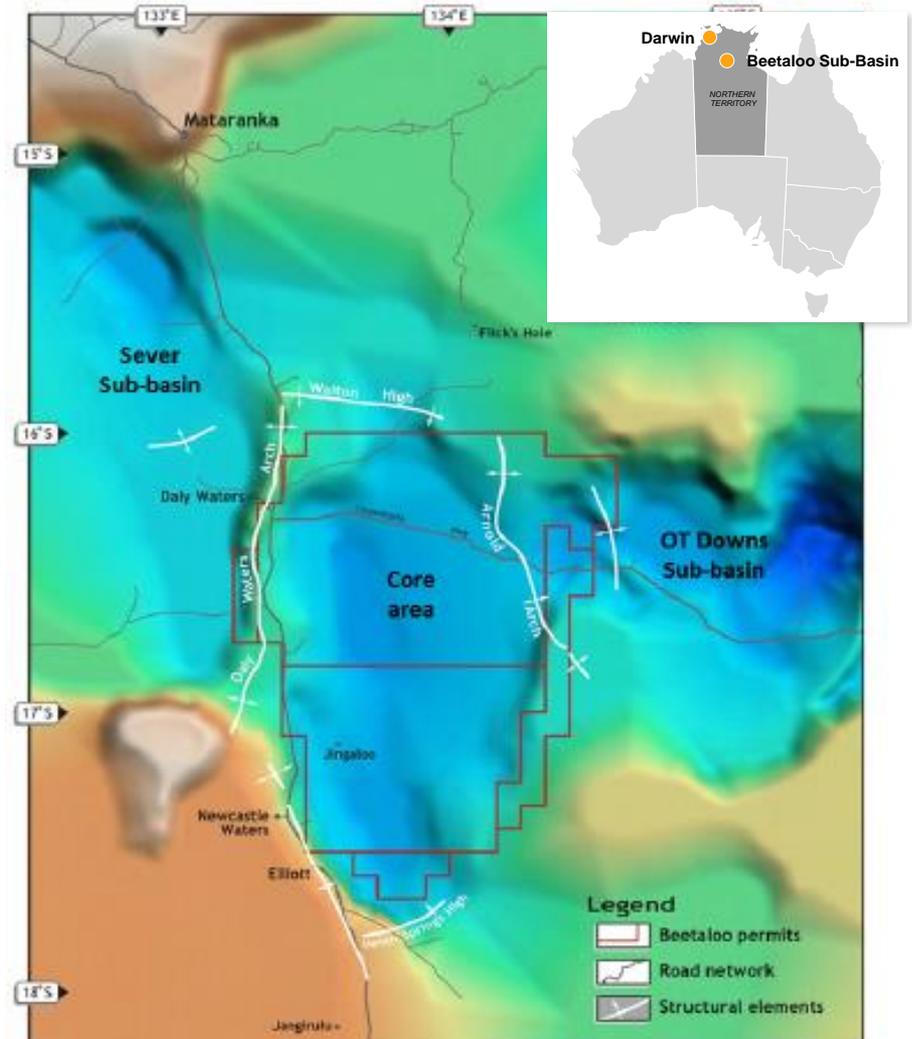




## **Beetaloo Sub-basin**

# Beetaloo Sub-basin – Asset Overview

- Falcon Australia<sup>(1)</sup> owns 22.5% of three exploration permits in the Beetaloo Sub-basin (EP76, EP98, EP117)
- Total gross acres 4.6 million, net 1 million acres to Falcon Australia's 22.5% participating interest
- In 2014 Falcon Australia farmed out 70% of the Beetaloo exploration permits to Origin<sup>(2)</sup> (who became Operator) in a deal worth A\$200<sup>(3)</sup> million
- In 2020 Falcon Australia farmed out a further 7.5% to Origin, increasing the carry by A\$150 million.
- Falcon is carried up to A\$263.8 million on gross costs for Stage 2 and Stage 3 in accordance with the terms of the farm-out deal
- The joint venture drilled four wells in the Stage 1 work program
- Stage 2 drilling operations completed with the drilling of two wells and the re-testing of one well
- Stage 3 drilling operations to commence in 2022



<sup>(1)</sup> Falcon Oil & Gas Australia Limited (c. 98% subsidiary of Falcon Oil & Gas Ltd.)

<sup>(2)</sup> Origin Energy B2 Pty Ltd. a subsidiary of Origin Energy Limited.

<sup>(3)</sup> Included cash consideration, contributions to Stages 1, 2 and 3 and reduction of ORRs

Source: Close et al. 2016 AAPG, "Unconventional Gas Potential in the Northern Territory, Australia: Exploring the Beetaloo Sub-Basin"



## Origin / Falcon

1. 1 vertical well drilled, cored and logged
2. 1 horizontal well flow tested, and notification of discovery issued
3. 1 horizontal well production tested and five-fold increase in normalised gas flow rates to 5,000 mcf/d per 1,000m established



## Santos / Tamboran

4. 1 vertical well flow tested
5. 1 horizontal well drilled, will be fracture stimulated and flow tested, with initial results expected by year end
6. A second horizontal well drilled, will be fracture stimulated and flow tested, with initial results expected by year end



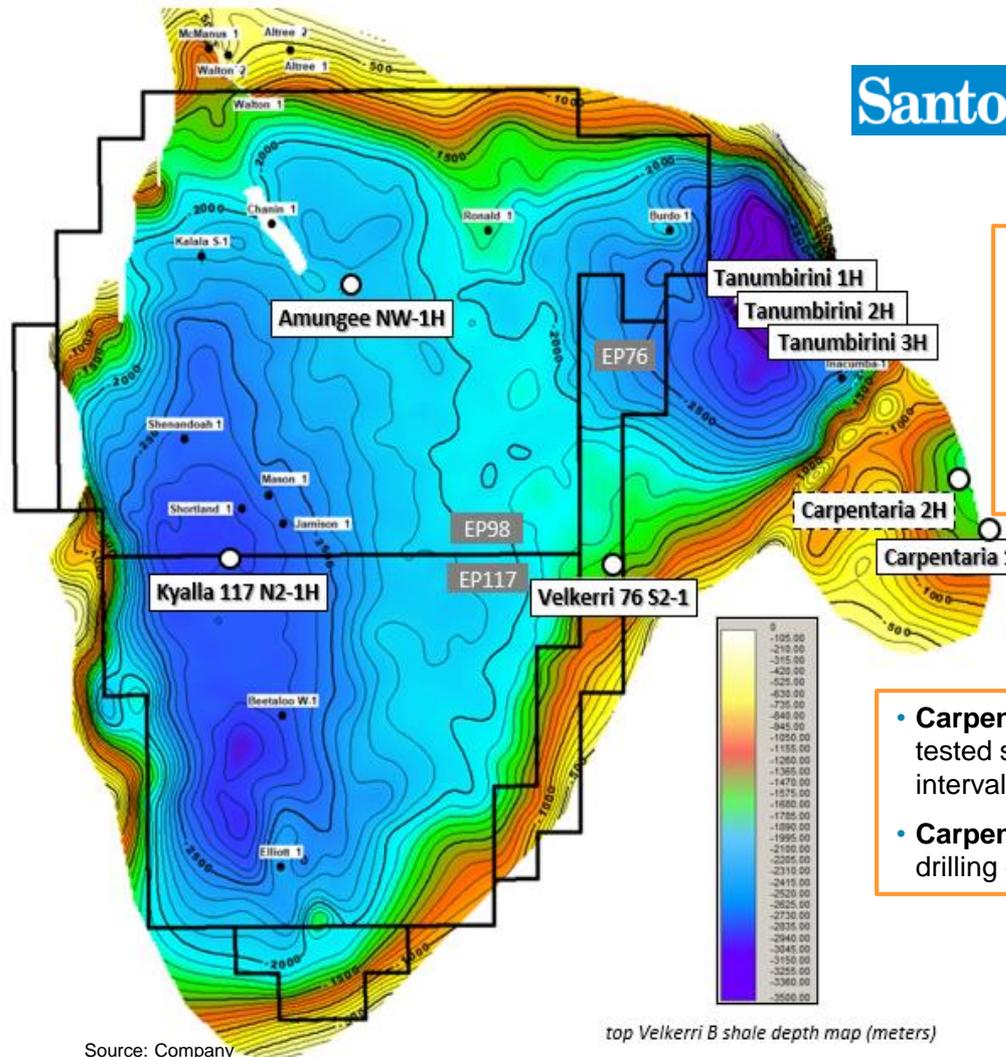
## Empire Energy

7. 1 vertical well flow tested
8. 1 horizontal well due to commence in Q4 2021

# Beetaloo 2021 Activities



- **Amungee NW-1H re-entry** repeated extended production test & PLT operation. Average gas flow rate of 1.02 MMscf/d observed over 45 days from only a portion of the horizontal well section.
- **Kyalla 117 N2-1H re-entry** repeated extended production test. Well flowed unassisted at rates 0-1.5 MMscf/d for 5 days with traces of condensate.
- **Velkerri 76 S2-1 drilling** vertical pilot to explore the Velkerri wet gas. TD 2,129m, four prospective shale intervals in Velkerri Formation Amungee Member (formerly known as Middle Velkerri). 93m conventional core taken, DFIT and extensive wireline logging performed.



Source: Company

top Velkerri B shale depth map (meters)



- **Tanumbirini 2H & 3H** drilling completed will be fracture stimulated and flow tested, with initial results expected by year end. Lateral wells targeting Middle Velkerri shales.



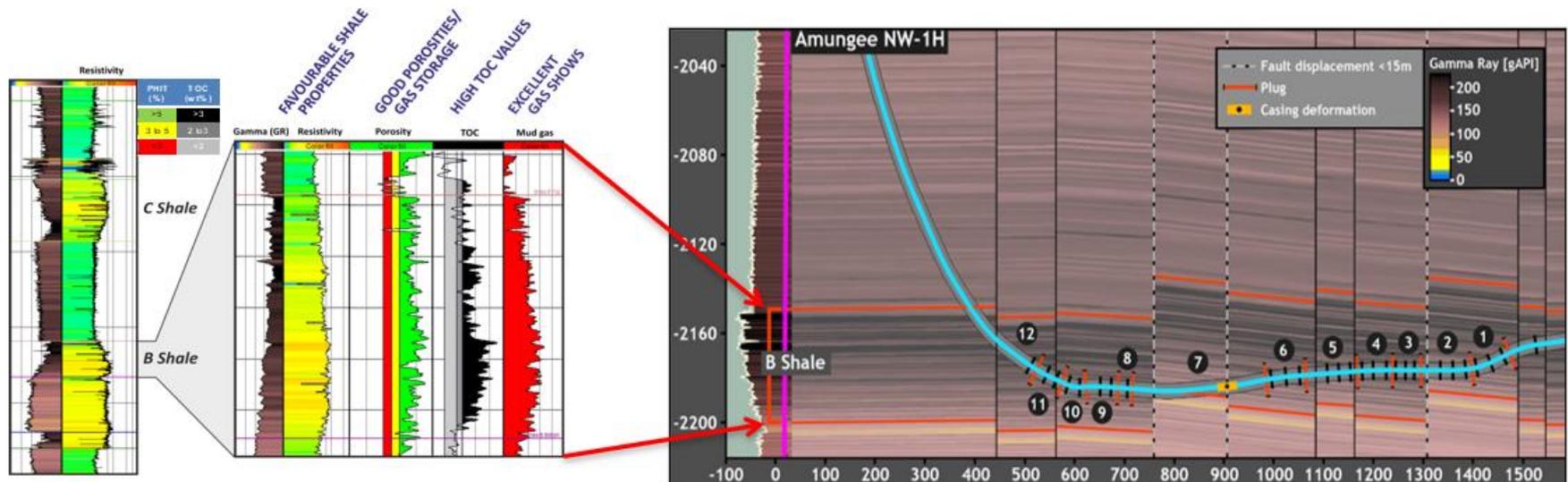
- **Carpentaria 1** drilled in 2020, tested several Middle Velkerri intervals in 2021.
- **Carpentaria 2H** horizontal drilling commenced in Q4/2021.



**Falcon 2021  
Well Details**

## Amungee operations recap (2015-2017)

- The first horizontal well to be drilled and first well to be fracked with Falcon's JV partner, Origin
- **November 2015:** Successfully drilled to a total measured depth of 3,808m, including a 1,100m horizontal section. Landed in the Middle Velkerri B shale, drilled through excellent quality and laterally consistent shales. High gas saturation across entire horizontal section, favourable shale properties
- **September 2016:** 11 hydraulic stimulation stages successfully executed in the horizontal section in the Middle Velkerri B shale zone
- **December 2016:** Extended production testing (EPT) for 57 days, average gas flow rate 1.1 MMscf/d
- **February 2017:** Confirmed a gross contingent resource of 6.6 TCF, 1.46 TCF net to Falcon<sup>(2)</sup>

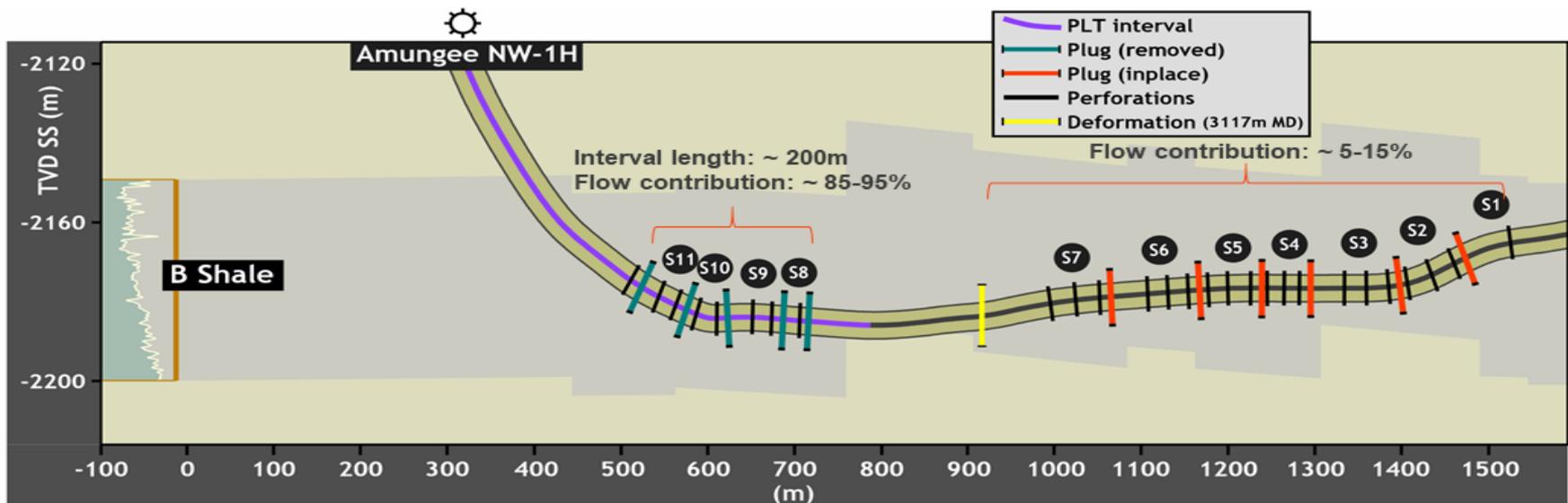


Sources: Close et al. 2017

<sup>(2)</sup> Full details are contained in Falcon's Annual Information Form for the year ended 31 December 2020, dated 26 April 2021

# Amungee NW-1H 2021 Testing

- Successfully put back on production testing
- Initial flow rates during the first 48 hours of testing ranged between 2-4 MMscf/d with rates averaging 1.23 MMscf/d over the first 23 days
- A production logging tool (PLT) was run on 19 August 2021 confirming:
  - 5-15% of production came from stages 1-7 beyond the casing deformation point at 3,112 mMD
  - 85-95% of production came from stages 8-11 spanning a 200m horizontal section prior to casing deformation
- Stages 1-7 low contribution likely due to restriction from the casing deformation and/or the plugs having not milled out
- Stages 8-11 may be representative of the deliverability that is achievable in the Middle Velkerri B shale
- PLT test results suggest a normalised gas flow rate equivalent of between 5.2 - 5.8 MMscf/d per 1,000m of horizontal section significantly improving the prospectivity of the Velkerri dry gas play
- Results put the Beetaloo on a par with other shale gas basins in North America and provide line of sight to commercialisation



# Middle Velkerri B Shale Gas Volumetrics



<b>Middle Velkerri B Shale P50 Volumetric Estimates as of 15 February 2017<sup>(1)</sup></b>		
	<b>Gross Best Estimate</b>	<b>Net Attributable Best Estimate<sup>(2)</sup></b>
Area km <sup>2</sup> <sup>(3)</sup>	16,145	4,751
Original Gas In Place (“OGIP”) (TCF)	496	146
Combined Recovery / Utilisation Factor <sup>(4)</sup>	16%	16%
<b>Technically Recoverable Resource (TCF)</b>	<b>85</b>	<b>19</b>
OGIP Concentration (BCF/km <sup>2</sup> )	31	31

<b>Middle Velkerri B Shale Pool 2C Contingent Gas Resource Estimates within EP76, EP98 and EP117 as of 15 February 2017<sup>(5)</sup></b>		
<b>Measured and Estimated Parameters</b>	<b>Units</b>	<b>Best Estimate</b>
Area <sup>(6)</sup>	km <sup>2</sup>	1,968
OGIP <sup>(7)</sup>	TCF	61.0
<b>Gross Contingent Resource<sup>(8)</sup></b>	<b>TCF</b>	<b>6.6</b>
<b>Net Contingent Resource<sup>(2,8)</sup></b>	<b>TCF</b>	<b>1.46</b>

**Notes:**

- <sup>1</sup> The estimates included in the table above were not prepared in accordance with the Canadian Oil and Gas Evaluation Handbook (“COGEH”)
- <sup>2</sup> Falcon’s working interest is 22.07% (as of 7 April 2020, previously 29.43%), net attributable numbers do not incorporate royalties over the Beetaloo JV Permits (EP76, EP98, EP117)
- <sup>3</sup> Area defined by a depth range at a maturity cut-off consistent with the dry gas window within the Beetaloo JV Permits (EP76, EP98, EP117)
- <sup>4</sup> The factor range was applied stochastically to the OGIP range to calculate the range of technically recoverable resource within the Beetaloo JV Permits
- <sup>5</sup> Contingent resource estimates have been prepared on a statistical aggregation basis and in accordance with the Society of Petroleum Engineers Petroleum Management System (SPE-PRMS). Contingent resource estimates are those quantities of gas (produced gas minus carbon dioxide and inert gasses) that are potentially recoverable from known accumulations but which are not yet considered commercially recoverable due to the need for additional delineation drilling, further validation of deliverability and original gas in place, and confirmation of prices and development costs. If the estimates were to be prepared in accordance with COGEH, Falcon is highly confident that there would be no change to the contingent resource estimates above
- <sup>6</sup> P50 area from the contingent resource area distribution
- <sup>7</sup> OGIP presented is the product of the P50 Area by the P50 OGIP per km<sup>2</sup>
- <sup>8</sup> Estimated contingent gas resource category of 2C. There is no certainty that it will be commercially viable to produce any portion of the resources

\*Reference should be made to the Company’s most recent Annual Information Form for further particulars regarding the resource estimates, details found at the following link <https://falconoilandgas.com/reports-and-filings-new/>

## Velkerri 76

- Drilled to a vertical total depth (“TD”) of 2,129 metres
- Preliminary evaluation is very encouraging and confirms:
  - The presence of four prospective intervals within the Amungee Member (formerly known as the Middle Velkerri), the A, AB, B and C shales, as established in the Amungee NW-1 / 1H, Beetaloo W-1 and Kalala S-1 wells.
  - The continuation of the regionally pervasive Amungee Member within the Velkerri Formation towards the eastern flank of the Beetaloo Sub-Basin approximately 78 kilometres from the Amungee NW-1H and 73 kilometres from the Beetaloo W-1 wells.
  - The Amungee Member is likely within the wet gas maturity window as evidenced by mud gas data during drilling.
- 93 metres of continuous conventional core was acquired in the Velkerri B and AB shales and extensive wireline logging data was collected to enable detailed formation evaluation of the prospective zones within the Amungee Member.
- A diagnostic fracture injection test (DFIT) was also carried out and will provide further understanding for future appraisal of the Velkerri wet gas play.



Source: Company, Origin

- Preliminary petrophysical interpretation has confirmed positive indications in particular from the B shale of the Amungee Member. Other intervals also show positive indications, and further analysis undertaken to confirm these results.
- The Amungee Member B shale was the principal area of focus with Falcon’s operations at Amungee NW-1H and the results obtained to date compare very favourably to some of the most commercially successful shale plays in North America.
- Mud gas composition data also provides evidence that the Amungee Member is within the wet gas maturity window and contains good LPG yields and high heating gas value.

<b>Preliminary petrophysics and mud gas composition Amungee Member B Shale</b>			
Gross thickness (metres)	53.9	C <sub>1</sub> (mol%)	79.65
Total Porosity Ave. (%BV)	7.7	C <sub>2</sub> (mol%)	16.49
Total organic carbon Ave. (TOC, %wt)	4.3	C <sub>3+</sub> (mol%)	3.86

The results of preliminary petrophysical interpretation confirm:

- The prospectivity of the Amungee Member B shale.
- Reservoir quality of the B shale (TOC, porosity and gross thickness) compares strongly with commercial shale plays in the United States.
- The Velkerri 76 S2-1 well provides yet another robust data point for the joint venture to consider various commercialisation options across its permits.

Additional analysis of the conventional core acquired during the drilling of Velkerri 76 will be required to confirm the preliminary petrophysics interpretation. Laboratory analysis of gas samples will also be carried out to refine gas composition data.

# Kyalla 117 N2-1H ST2 Well (“Kyalla 117”)

- TD 3,809m MD, including a 1,579m lateral section in the Lower Kyalla Shale.
- Kyalla Shale Formation almost 900 metres thick
- Within the Kyalla Formation three prospective intervals identified, being the Lower, Middle and Upper Kyalla Shales (“Kyalla Shales”)
- Gross thickness of each of the Kyalla Shales is between 45-80 metres
- Confirmed continuation of the Kyalla formation between Beetaloo W-1 and Amungee NW-1H
- Completed 11 hydraulic stimulation stages along the lateral section, with stimulation treatments successfully executed

## Notification of Discovery in January 2021

- Supported by preliminary production test data and petrophysical modelling
- Unassisted gas flow rates ranging between 0.4-0.6 MMscf/d over 17 hours
- Flow back of hydraulic fracture stimulation water over the same period, averaged 400-600 bbl/d.

## Production Testing

- Flowed liquids-rich gas without assistance for intermittent periods, production was not sustained
- Further analysis will be undertaken, including additional core analysis and well design considerations, to enable a conclusion to be reached on the results from operations



Source: Company



## **Market Overview and Gas Prices**



## Key LNG Projects

### Ichthys LNG

Major partners: Inpex, Total  
 Start date: 2018  
 Annual capacity: 8.9 MT (~427BCF)  
 Cost estimate: US\$45bn



### Darwin LNG

Major partners: Santos, SK E&S, Inpex, ENI  
 Start date: 2006  
 Annual capacity: 3.7 MT (~178BCF)  
 Cost estimate: US\$2.1bn



## New Pipeline Infrastructure

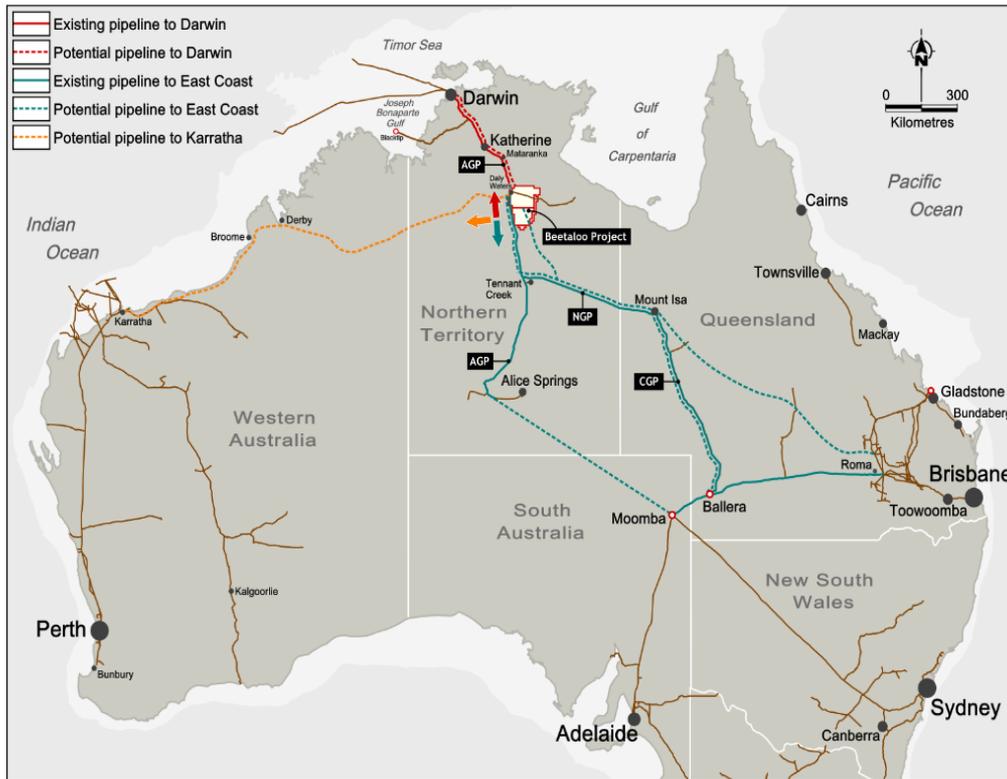
### Northern Gas Pipeline (NGP)

The A\$800m, 622km Northern Gas Pipeline, commenced operations in January 2019



November 2020 announced an MOU with Tamboran to expedite plans to invest over \$5 billion to increase the capacity of its NGP and extend the NGP from the Beetaloo Basin to the Wallumbilla Gas Hub in Queensland

# Market Overview – Potential Commercialisation Options



Source: Origin

**There are a variety of commercialisation options from an integrated LNG model as well as new energies strategies to assist with the energy transition thematic**

## Northern Australia LNG & NGL

- Production sent to the LNG hub in Darwin for processing and liquefaction

## East Coast Domestic Gas and LNG at Gladstone

- Gas can be sold domestically to the Australian East Coast markets
- Beetaloo gas is expected to be cost effective vs a significant portion of undeveloped Queensland CSG resource
- Potential also to access capacity at LNG projects in Gladstone
- Potential to sequentially increase capacity on existing pipeline network to reduce transport costs as well as options for new large scale greenfield pipelines

## LNG & NGLs at Karratha

- Options for a new large scale greenfield pipeline to Western Australia to access capacity at LNG Projects in Karratha

## CCS

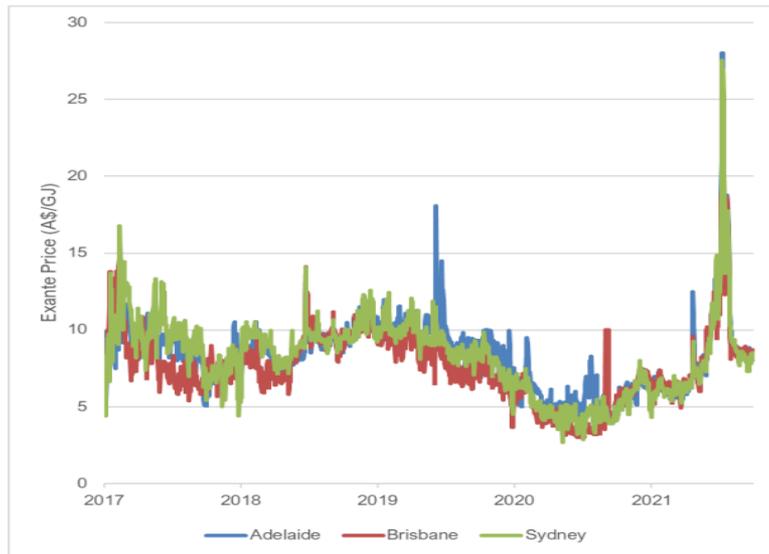
- Potential carbon capture and storage within local reservoirs which could also be made available to third parties as a service

## New Energies Hub

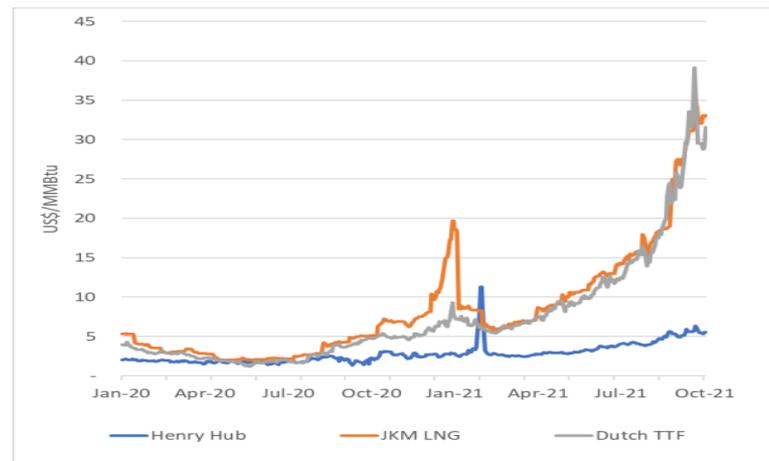
- New Energies hub under consideration at the Port of Darwin
- Potential to produce blue hydrogen or ammonia for export to Asia

# Gas Prices and Asian LNG Demand

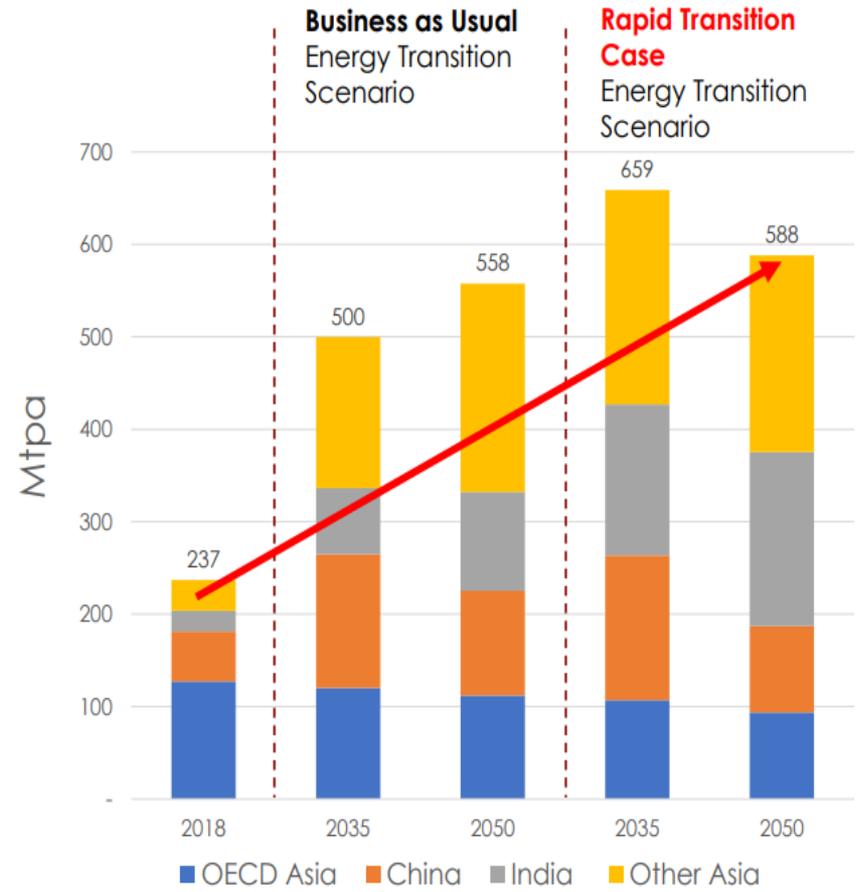
**Australian East Coast Domestic (A\$/GJ)**



**International (US\$/MMBtu)**



**Forecast Asian LNG Imports – BP World Energy Outlook 2020**

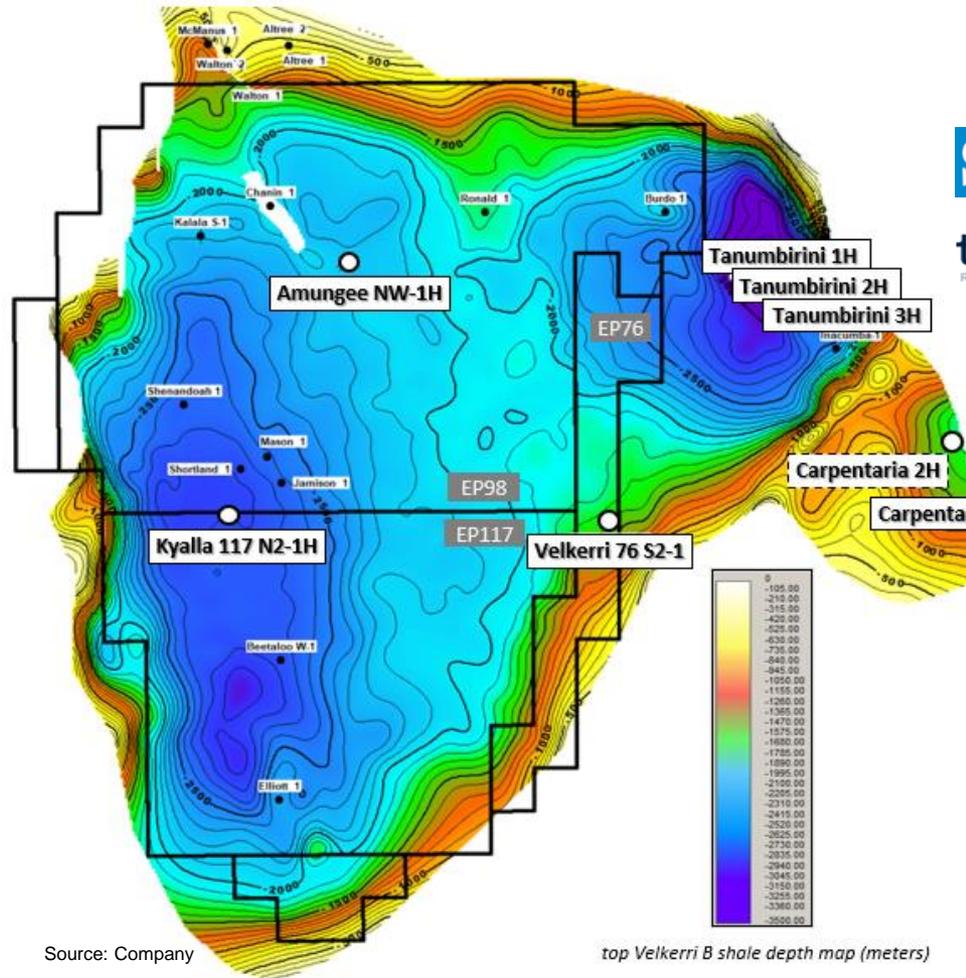


Source: Empire Energy Presentation October 2021



## **2022 Value Proposition**

# Beetaloo 2022 Activities?



## Declaration of commerciality in 2022?

- US\$100m Market Cap at 7.5p, 1 million net acres, current value per acre of **US\$100**
  - Possible shale valuations: Exploration US\$1,000->Appraisal US\$4,000->Production US\$12,000<sup>1</sup>
- **5X** increase in normalised flow rates at Amungee NW-1H – the play is on...
- **Multiple upcoming news events** to de-risk the play and drive it beyond appraisal
  - Santos expected to fracture and flow test **two 1,000m horizontal wells before year-end**
  - **Major 2022 capex programs** anticipated by all four operators in the Beetaloo
- 2022 activity could lead to a recategorization of **Contingent Resources to Reserves**
  - Net Contingent Resources of **1.46 TCF** – calculated only over 1/8 of Falcon's acreage
- Prospect of **Declaration of Commerciality** in 2022
- Falcon remains “carried” as part of current **A\$264 million work program**

<sup>1</sup> Possible shale valuations estimated from publicly available disclosures in the period from March 2018 to October 2021



## **Appendices**

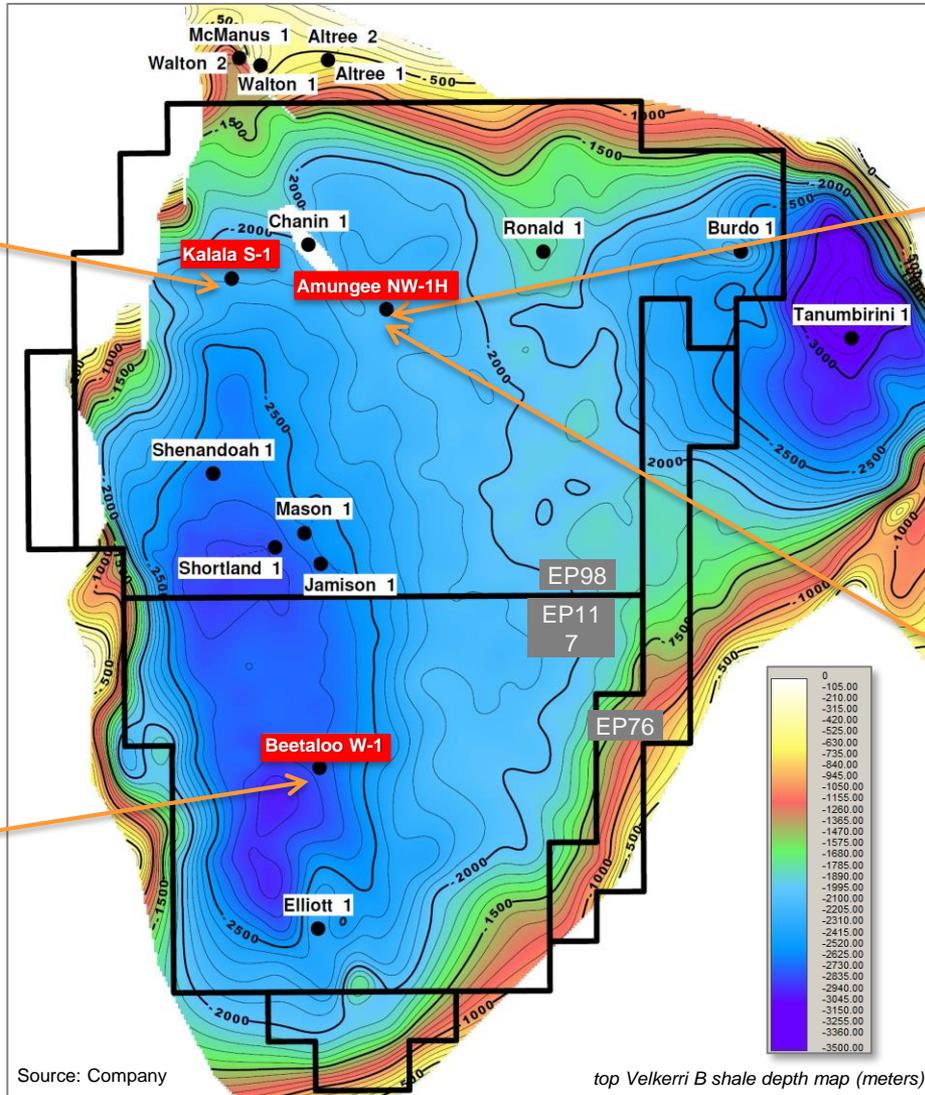
# Appendix A Stage 1 Recap – Successful Initial Drilling Program

## Kalala S-1 (2015)

- TD 2,622m MD (measured depth)
- Confirmed the presence of 3 organic rich intervals in the Middle Velkerri target (A, B & C shales)
- Full log suite
- Core vault, sidewall cores
- DFIT

## Beetaloo W-1 (2016)

- TD 3,172m MD
- Confirmed the presence and continuity of A, B & C Velkerri shales to the south
- Confirmed the presence and continuity of the Kyalla Shales
- Full log suite
- Full-diameter (Kyalla) and sidewall cores



## Amungee NW-1 (2015)

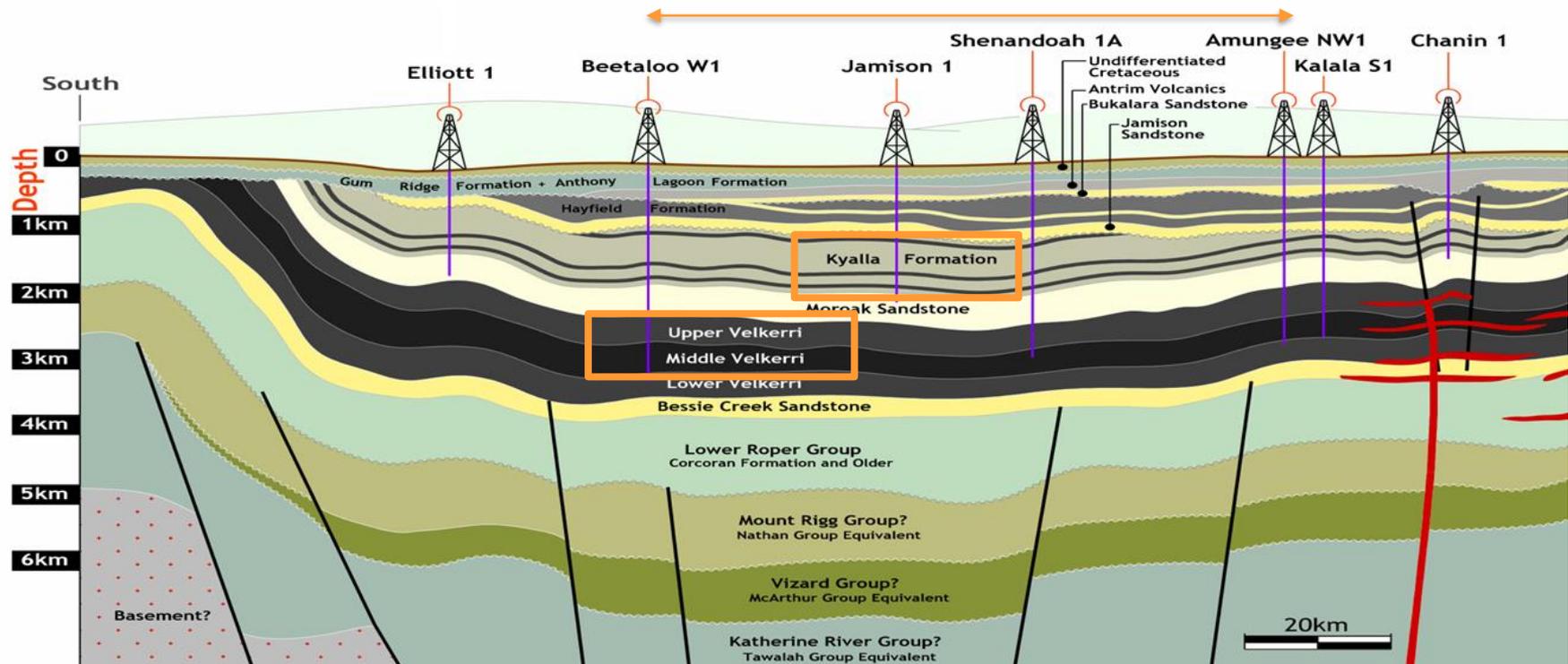
- TD 2,609m MD
- Confirmed the presence and continuity of A, B & C Velkerri shales
- Full log suite
- Full-diameter (C shale) and sidewall cores
- DST in Hayfield Sandstone

## Amungee NW-1H (2015-2016)

- Amungee NW-1 sidetrack
- Landed in the B shale, 100% in zone
- TD 3,808m MD
- Successful extended production test (57 days)
- Notice of discovery, basis of contingent resource estimate

# Appendix B Beetaloo Sub-basin – Petroleum Geology

- Identified plays in the Beetaloo Sub-basin include:
  - Velkerri shale dry gas play
  - Kyalla shale and hybrid liquids rich gas plays
  - Velkerri shale liquids rich gas play

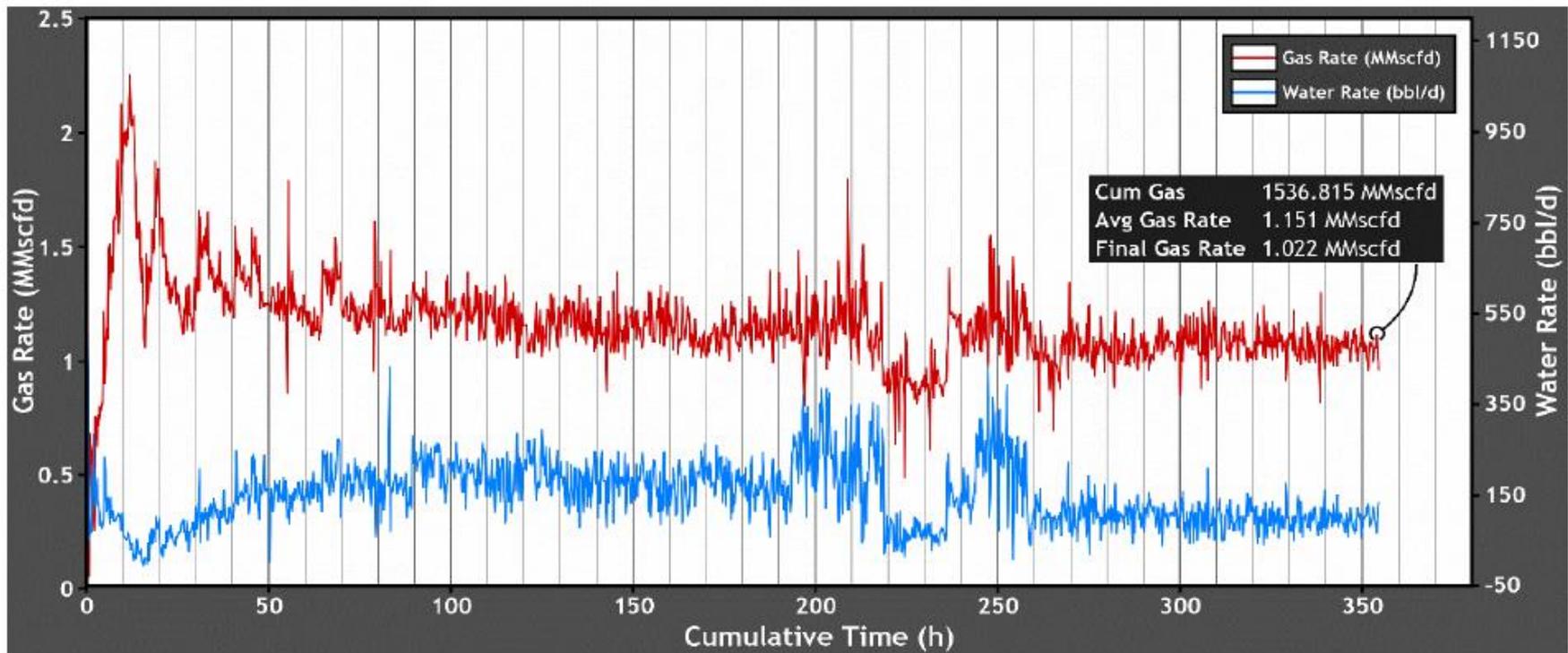


Source: Côté et al. 2018 APPEA, "Australia's premier shale basin: five plays, 1,000,000,000 years in the making"

# Appendix C Stage 1 – Amungee NW-1 Horizontal Test Results



- Extended well test duration: 57 days, with cumulative production of 63 MMscf
- Variable gas rates through 2-3/8" production tubing ranged between 0.8-1.2 MMscf/d
- Proved up discovery of shale gas accumulation



Source: Close et al. 2017 AGES presentation, "Proterozoic shale gas plays in the Beetaloo Basin and the Amungee NW-1H discovery"

# Appendix D Velkerri B Shale Characterisation – Comparison with US basins



	Marcellus Shale <sup>1</sup>	Barnett Shale <sup>1</sup>	B Shale, Amungee Member, Velkerri Fm.
Estimated Basin Area (km <sup>2</sup> )	246,050	12,950	17,000 <sup>2</sup>
Typical Depth (m)	1,220-2,590	1,980-2,590	1,000-3,500
Gross Thickness (m)	60	60-305	40-55 <sup>3</sup>
Reported Gas Contents (scf/ton)	60-150	300-350	148
Porosity (%)	4-12	4-6	5-7.7 <sup>3</sup>
Gas-filled Porosity (%)	4	5	4
Average Water Saturation (%)	43	38	43
Permeability Range (average) (nD)	0-70	0-100	10-100
Average Silica Content (%)	37	45	54
Maturity (% Ro, alginite reflectance)	0.9-5	0.85-2.1	1.5-2.5
Average TOC present-day	4.01 (2-13)	3.74 (3-12)	3.98 (3.5-4.4) <sup>3</sup>

Source: Company & Close et al. 2016 AGES, “Unconventional gas potential in Proterozoic source rocks: Exploring the Beetaloo Sub-basin” unless otherwise referenced

<sup>1</sup> Jarvie DM, 2012. Shale Resource Systems for Oil and Gas: Part 1—Shale-gas Resource Systems: in Breyer JA (editor). ‘Shale Reservoirs: Giant Resources for the 21st Century’. AAPG Memoir 97, 69–87

<sup>2</sup> Based on Beetaloo JV permit area, approximate value

<sup>3</sup> Based on Amungee NW 1, Beetaloo W 1, Kalala S1, Tanumbirin 1 and Velkerri 76 S2 1 wells0