



## Presentation April 2021



TSXV FO.V AIM FOG.L

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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.

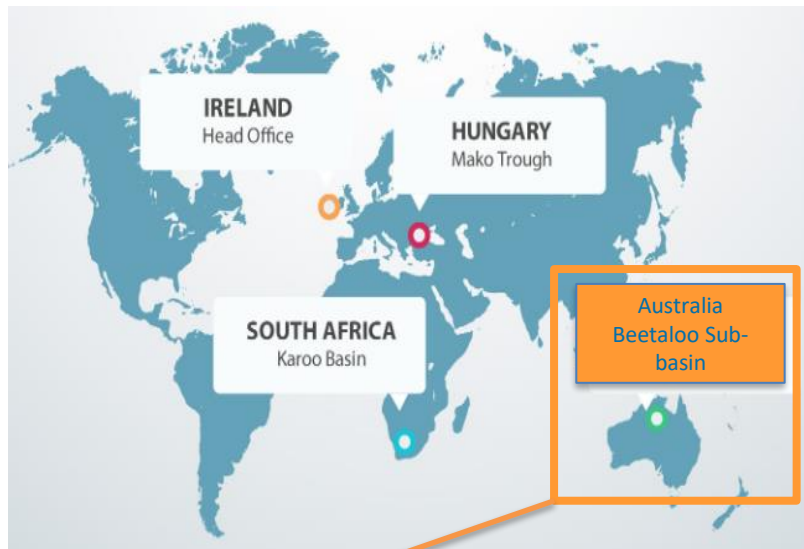
This Presentation provides certain information relating to properties in close proximity to the Company's properties, which is "analogous information" as defined by applicable securities laws. This analogous information is derived from publicly available information sources, which the Company believes 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 gases) 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 effective as of February 15, 2017, please refer to Falcon's Annual Information Form dated April 28, 2020, which is available on SEDAR at [www.sedar.com](http://www.sedar.com).

# Company Overview and Strategy



- International oil and gas company focused on the exploration and appraisal of unconventional oil and gas assets

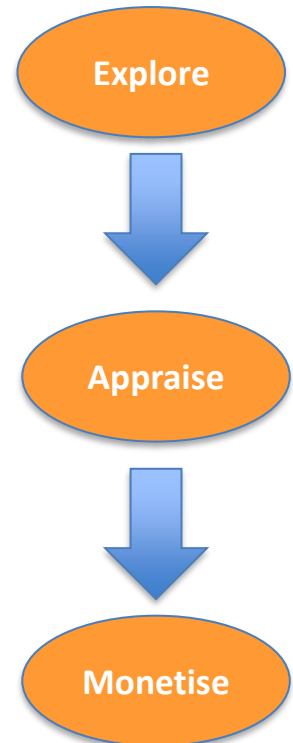


## Australia

- 4.6 million gross acres
- Successful Stage 1 drilling program in 2015-2016
- 6.6 TCF 2C gross contingent resource estimate discovered so far
- Stage 2 drilling operations ongoing

## Corporate strategy is to:

- Explore unconventional oil and gas basins
- Following successful exploration, continue with appraisal programs to determine commercialisation options
- Monetise assets prior to production

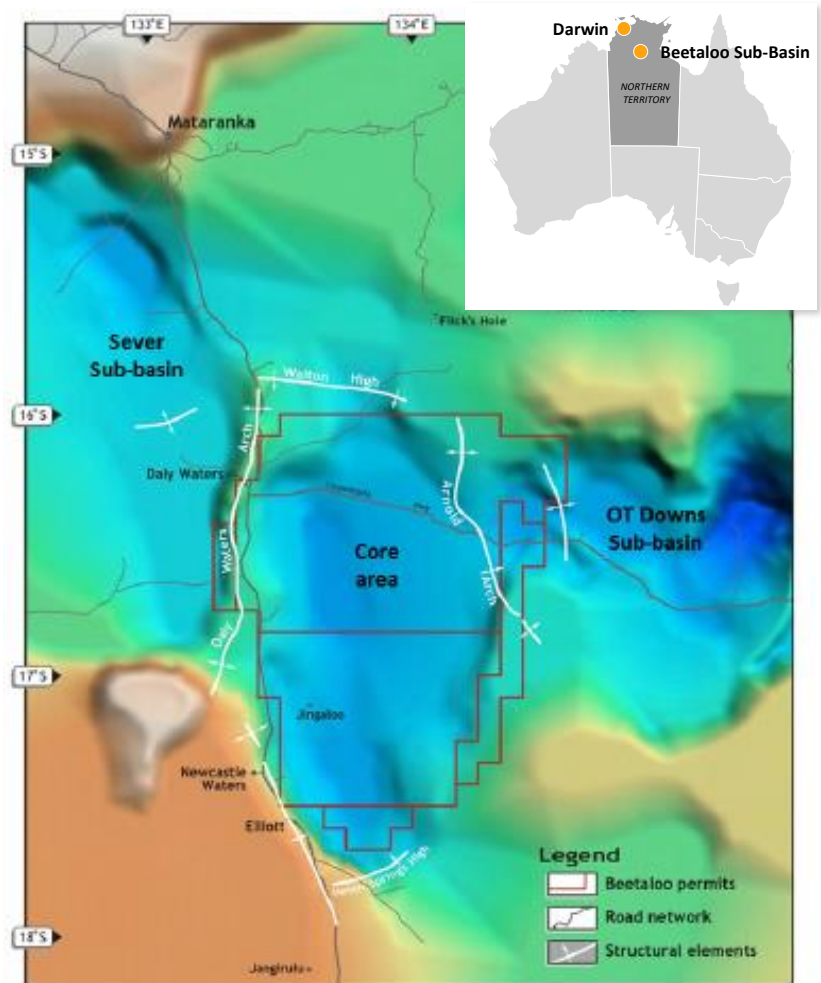


# Beetaloo Sub-basin

## - 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 for the 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 ongoing



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

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

<sup>(2)</sup>Subsidiary of Origin Energy Limited.

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

# Beetaloo Sub-basin JV Work Program Strategy



**From Exploration -> Appraisal -> Commerciality**

**Stage 1** Prove the presence, quality and continuity of the Velkerri shale dry gas play

**Stage 2** Evaluate the potential of liquids rich gas fairways in the Kyalla and Velkerri shales

**Stage 3** Prove flow rates of gas/liquids that provide a range of commercialisation options



# Stage 1 – Successful Initial Drilling Program

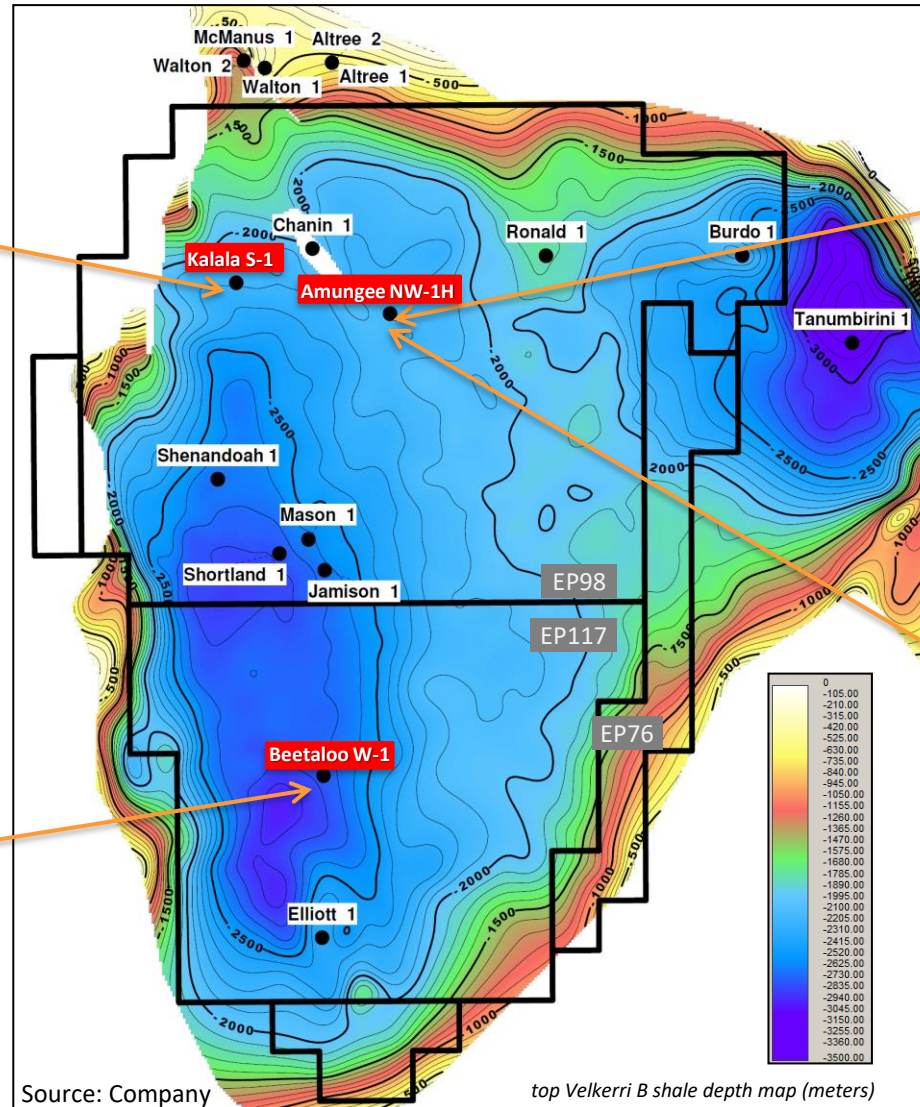


## Kalala S-1 (2015)

- 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

# Stage 1 - Middle Velkerri B Shale Gas Volumetrics



## Middle Velkerri B Shale P50 Volumetric Estimates as of 15 February 2017<sup>\*(1)</sup>

	Gross Best Estimate	Net Attributable Best Estimate <sup>(2)</sup>
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

## Middle Velkerri B Shale Pool 2C Contingent Gas Resource Estimates within EP76, EP98 and EP117 as of 15 February 2017<sup>\*(5)</sup>

Measured and Estimated Parameters	Units	Best Estimate
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

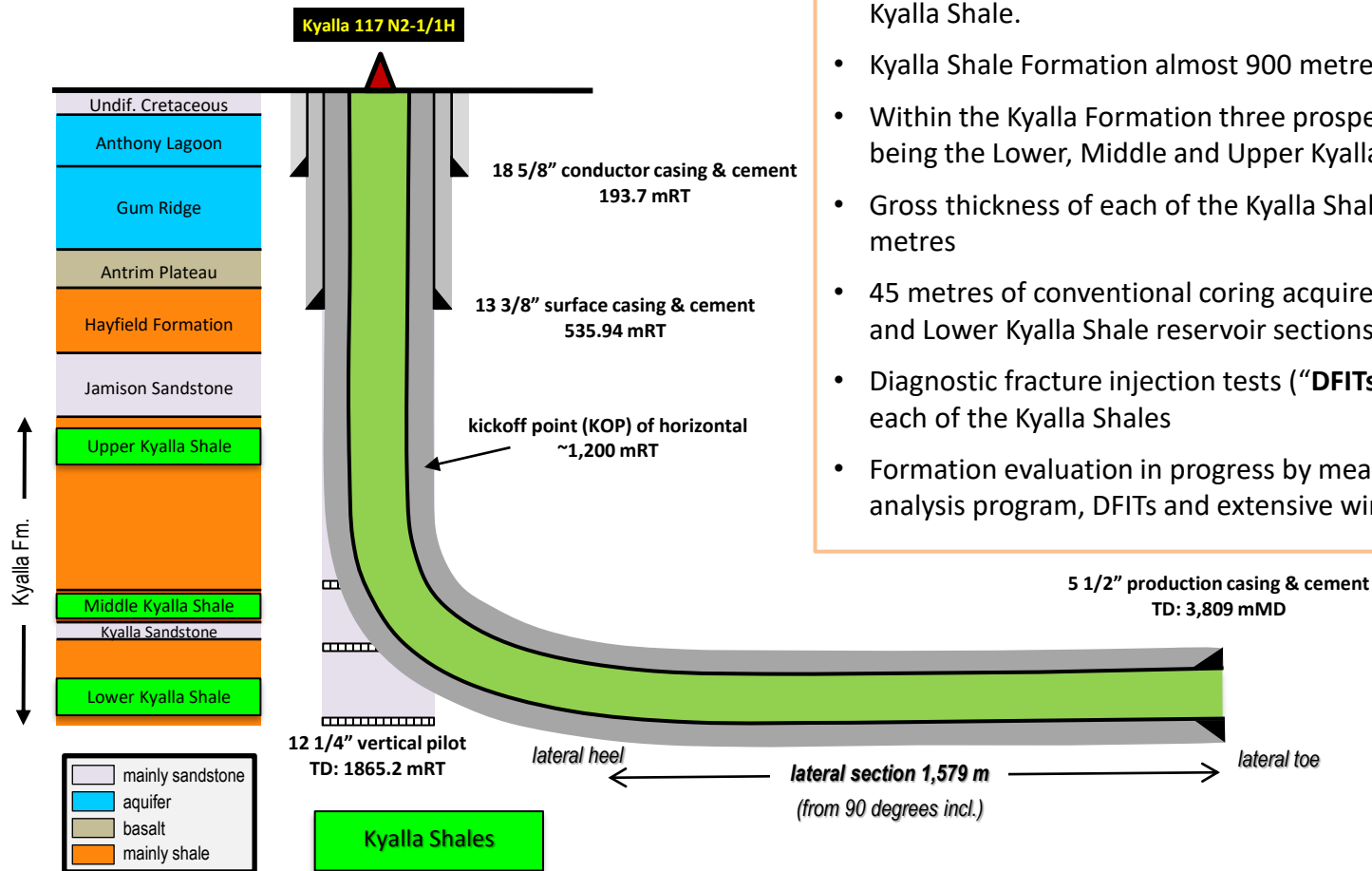
<sup>6</sup> P50 area from the contingent resource area distribution

<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/>

# Stage 2 - Kyalla 117 N2-1H ST2 Well



- 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
- 45 metres of conventional coring acquired in each of the Upper and Lower Kyalla Shale reservoir sections.
- Diagnostic fracture injection tests (“**DFITs**”) were performed on each of the Kyalla Shales
- Formation evaluation in progress by means of extensive core analysis program, DFITs and extensive wireline logging

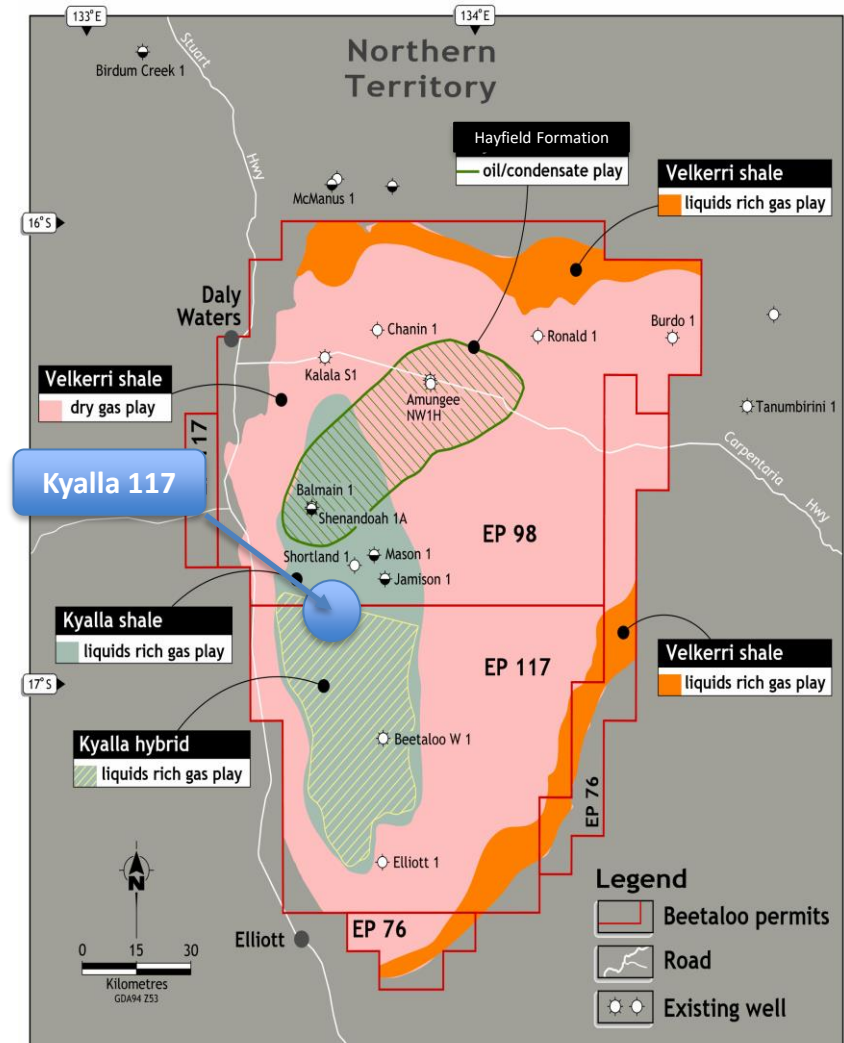
not to scale



# Stage 2 - Kyalla 117 N2-1H ST2 (“Kyalla 117”)



- 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
- Introduced nitrogen to lift the fluids in the well and lower pressures to assist with achieving a gas breakthrough
- Notification of discovery in January 2021



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

# Kyalla 117 – Notification of Discovery & Gas Composition Data



## Notification of Discovery

- 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.

## Further Information

- Longer-term measures to be put in place to flow back sufficient hydraulic fracture stimulation water to allow Kyalla 117 to flow continually without assistance
- An EPT will be required to determine the long-term performance of Kyalla 117

## Gas Composition Data Confirm Kyalla Liquids Rich Gas Play

Initial analysis by gas chromatography confirms a liquids-rich gas flow low in CO<sub>2</sub>:

- C<sub>1</sub> = 65.03 mol% • nC<sub>4</sub> = 2.03 mol%
- C<sub>2</sub> = 18.72 mol% • C<sub>5+</sub> = 2.73 mol%
- C<sub>3</sub> = 8.37 mol% • CO<sub>2</sub> = 0.91 mol%
- iC<sub>4</sub> = 1.29 mol% • N<sub>2</sub> = 0.92 mol%
- The elevated C<sub>3+</sub> gas component of 14.42 mol% confirms the Lower Kyalla Shale as a liquids rich gas play.
- Gas composition data also supports the view that the Kyalla gas stream will have elevated LPG and condensate yields.

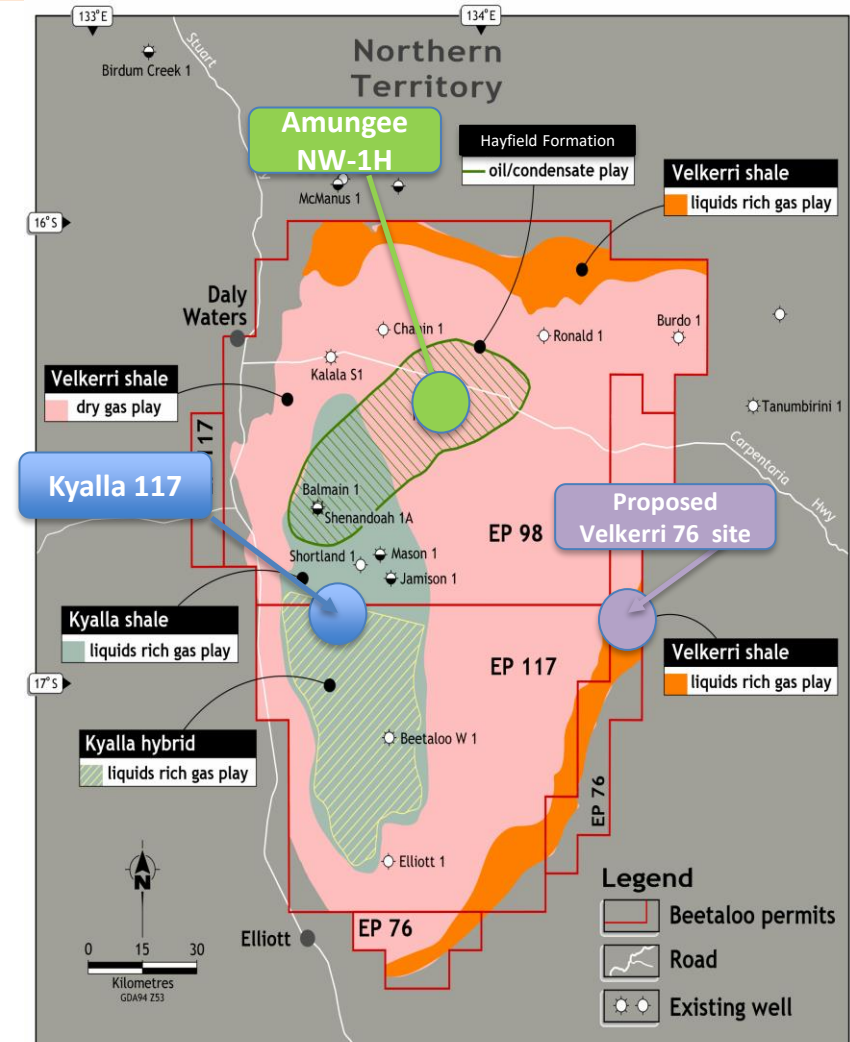


# Planned 2021 Work Programme



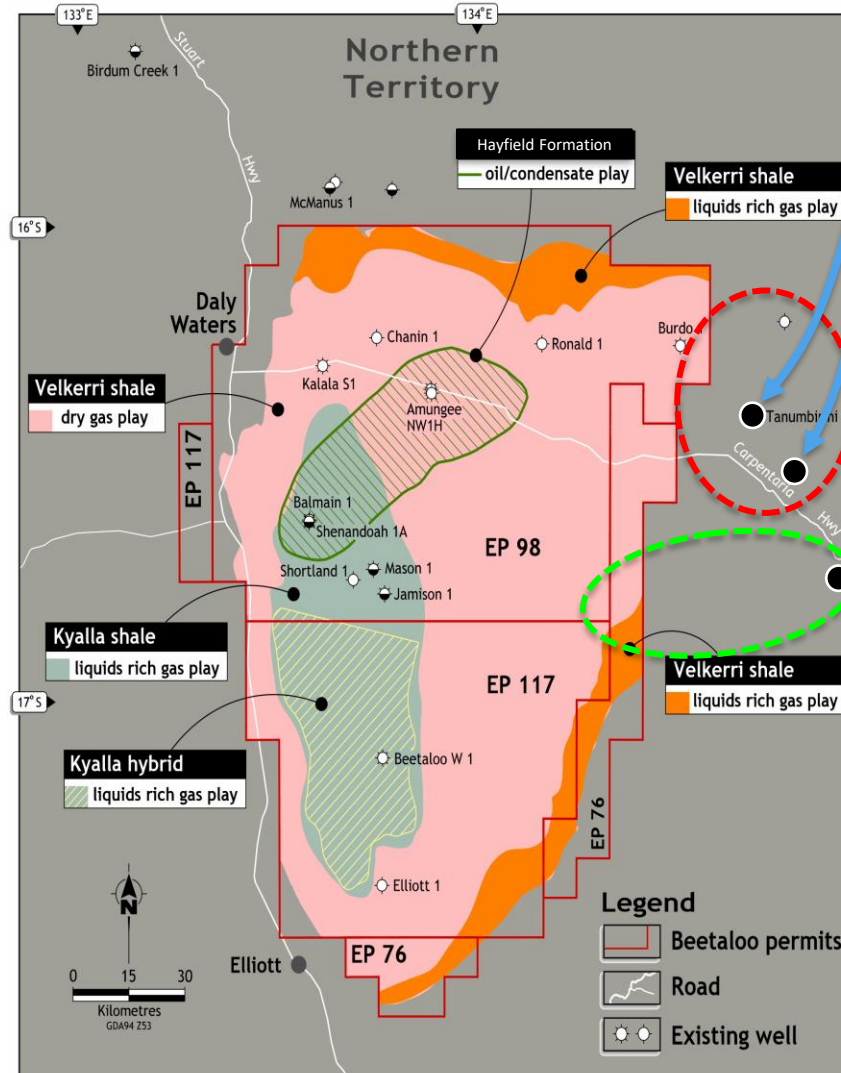
The 2021 work programme is expected to include the following:

- Resume clean-up operations of the Kyalla 117 N2-1H ST2 well (“**Kyalla 117**”) and upon success progress to an extended production test (“**EPT**”)
- Drill a vertical pilot well to evaluate the Velkerri liquids rich gas play (“**Velkerri 76**”) by acquiring cores and running logs and diagnostic fracture injection test (DFIT)
- Perform a production test at Amungee NW 1H to determine if all frack stages contributed to the initial EPT conducted in 2016



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

# Potential Regional Activity 2021-22



- Tanumbirini-1 lateral wells  
Tanumbirini #2H and Tanumbirini #3H, targeting the Middle Velkerri formation

Source: Tamboran Resource press release 10 December 2020

**Velkerri shale dry gas play**

**Velkerri shale liquids rich gas play**



- Fracture stimulation and testing Carpentaria-1 vertical well
- Upon success, Carpentaria-1 lateral wells into Velkerri liquids rich play

Source: Empire Energy 2020 Annual Report

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

# Market Overview – Gas Infrastructure



## 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: ConocoPhillips, Santos, Inpex, ENI  
 Start date: 2006  
 Annual capacity: 3.7 MT (~178BCF)  
 Cost estimate: US\$1.5bn



## 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

## Other Beetaloo Explorers





## Appendices

# Appendix A

## Corporate Information



### Share Capital & Cash

Common shares in issue	981,847,425
Share options outstanding	44,000,000
Fully diluted share capital	1,025,847,425
Cash at 30 September 2020	US\$11.5 m

### Major Shareholders

Lamesa Holding S.A.	16.00 %
Nicolas Mathys	5.15 %
Burlingame Asset Management	4.97%
Bankruptcy Estate of Petrohunter Energy Corporation	4.90%

### Trading Details

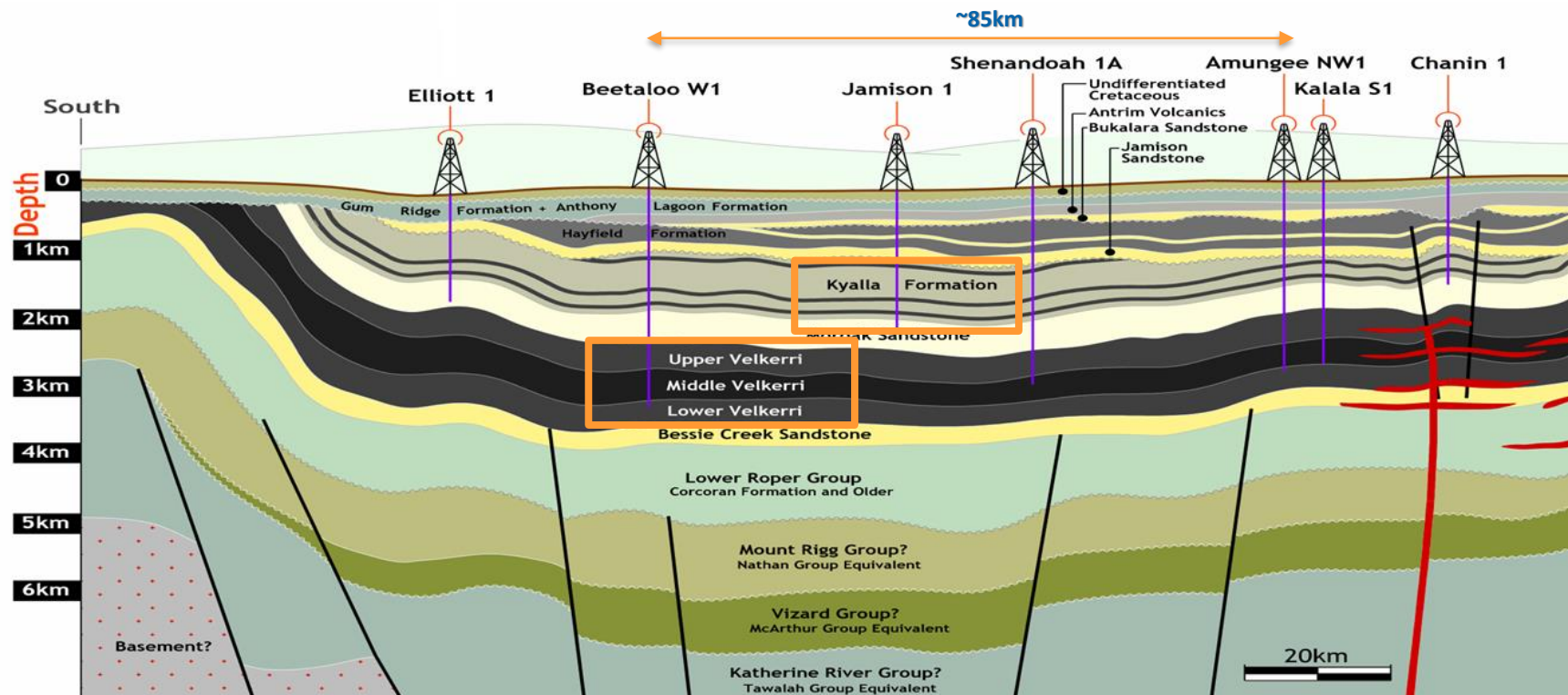
Toronto: TSXV	Ticker: FO.V
London: AIM	Ticker: FOG.L

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# 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

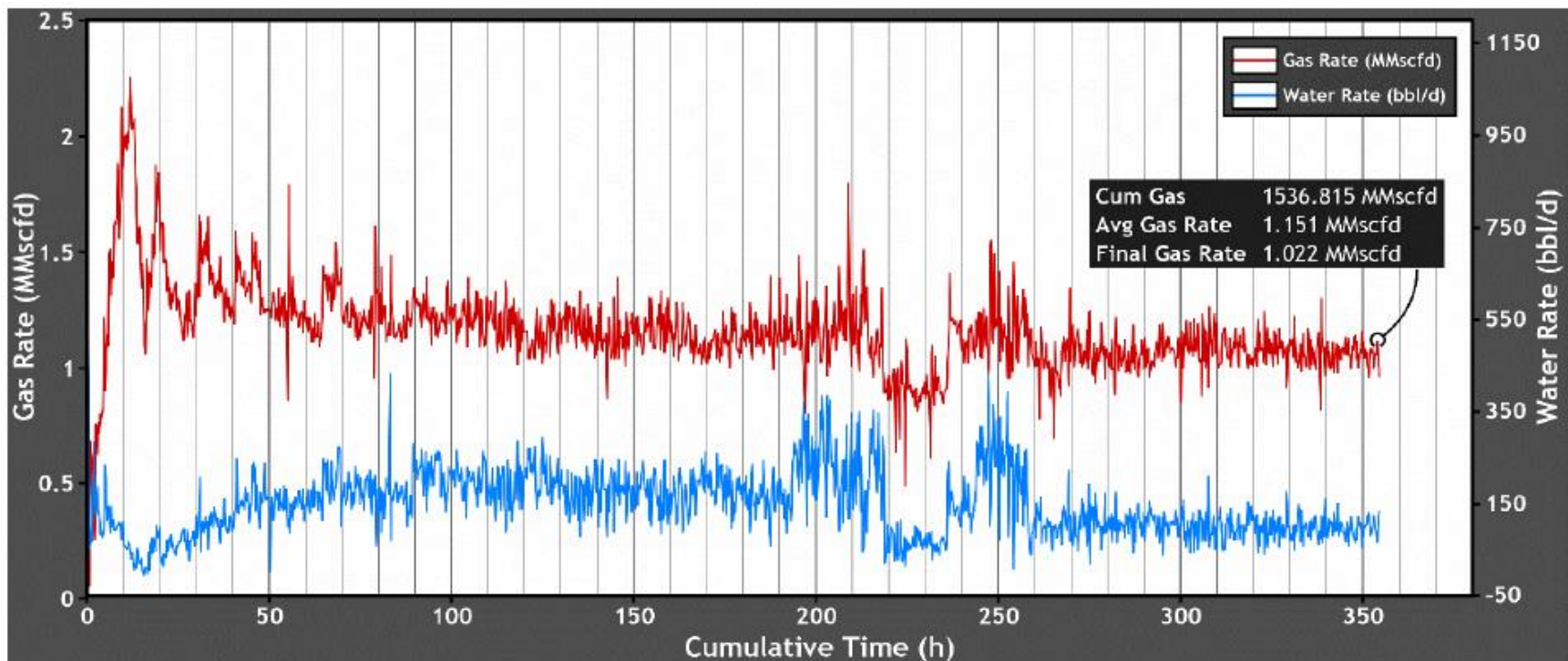




# Stage 1 - Amungee NW-1 Horizontal Test Results



- 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 B Middle Velkerri Characterisation - Comparison with US basins



	Marcellus Shale <sup>1</sup>	Barnett Shale <sup>1</sup>	Middle Velkerri Shale
Estimated Basin Area (km <sup>2</sup> )	246,050	12,950	17,070 <sup>4</sup>
Typical Depth (m)	1,220-2,590	1,980-2,590	1,000-2,500
Gross Thickness (m)	60	60-305	45- >420
Net Thickness (m)	15-105 (45)	30-215 (90)	60-86 (73) <sup>2</sup>
Reported Gas Contents (scf/ton)	60-150	300-350	100 <sup>2</sup>
Porosity (%)	4-12 (6.2)	4-6 (5)	2-8
Gas-filled Porosity (%)	4	5	2.5 <sup>2</sup>
Water Saturation (%)	43	38	58 <sup>2</sup>
Permeability Range (average) (nD)	0-70 (20)	0-100 (50)	10-100 (50)
Reported Silica Content (%)	37	45	49 (1-77)
% Ro (average range)	1.5 (0.9-5)	1.6(0.85-2.1)	1.5->2.5 <sup>3</sup>
TOC present-day (average in wt%)	4.01 (2-13)	3.74 (3-12)	3.74 (1-10)

Source: Close et al. 2016 AGES, "Unconventional gas potential in Proterozoic source rocks: Exploring the Beetaloo Sub-basin"

<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>Origin Energy Ltd estimated average values from C, B, and A shale in Kalala S-1 and Amungee NW-1

<sup>3</sup>Value represent Equiv. %Ro estimated from alginite reflectance

<sup>4</sup>Based on Beetaloo JV permit area