



Corporate Presentation December 2023



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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", "planned", "plan", "guidance", "may", "could", "will", "potential", "intend", "should", "suggest", "support", "potential", "predict" (or the negative thereof) or other statements that are not statements of fact. In particular, forward-looking statements in this Presentation include, but are not limited to, Shenandoah South 1H ("SS1H") logging of the Amungee Member B-shale formation indicates potentially higher porosity and gas saturation relative to offset wells; initial evaluation confirms reservoir continuity of the Amungee Member B-shale over 150 kilometres between Amungee NW-2H and Beetaloo W-1 wells; diagnostic fracture injection test ("DFIT") results demonstrated an over-pressured regime at the Shenandoah South location, with a pore pressure gradient of at least 0.54 psi /ft, in line with results demonstrated at the Tanumbirini well (0.51 – 0.56 psi/ft), providing confidence on the ability to replicate or exceed the commercial flow rates achieved at the Tanumbirini location; current expectations are to release SS1H 30-day initial production (IP30) flow rates in Q1 2024, subject to weather conditions and the timing to flow back stimulation fluid to achieve gas breakthrough; results from the SS1H well are a key deliverable that will hopefully support the sanctioning of the joint venture's proposed 40 million cubic feet per day (MMcf/d) pilot project at Shenandoah South; Amungee NW-2H ("A2H") achieved gas breakthrough, however, modelling and independent third-party analysis from a US laboratory identified a potential skin inhibiting the flow of gas from the stimulated shale, results from the A2H stimulation will enable learnings to be applied to future completion operations; flow tests over the last 12 months have demonstrated commerciality of the Beetaloo Sub-basin and indicate greater well productivity at depth in the Beetaloo Sub-basin, indicative of higher formation pressure; the Beetaloo expected to capitalise on Australia being the world's largest exporter of LNG and significant capacity across Australia's existing LNG terminals; JV well positioned with a variety of commercialisation options readily available; variety of commercialisation options from an integrated LNG model as well as new energies strategies to assist with the energy transition thematic; favourable characterisation comparisons to the Marcellus and Barnett US basins; stacked play potential; Amungee NW-1H 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 with results on a par with other shale gas basins in North America and provide line of sight to commercialization; Velkerri 76 S2-1 preliminary evaluation is very encouraging with the presence of four prospective intervals, continuation of the regionally pervasive Amungee Member within the Velkerri Formation towards the eastern flank of the Beetaloo Sub-basin, likely within the wet gas maturity window; information relating to normalised gas flow rates for Amungee NW-1H; 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; net cash flows. 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 results of flow testing from SS1H; JKM pricing; assumptions on potentially higher porosity and gas saturation levels at SS1H relative to offset wells and DFIT results; assumptions on releasing IP30 flow rates in Q1 2024; assumptions on favourable characterisation comparisons to the Marcellus and Barnett US basins assumptions on venture's proposed 40 million cubic feet per day (MMcf/d) pilot project at Shenandoah South; assumptions on LNG capacity and commercialization options available; treatment under governmental regulatory regimes and tax laws; flow tests over the last 12 months demonstrating commerciality; fluctuations in market prices for shale gas; risks associated with raising funds to participate in future drilling; 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

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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, 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 Amunsee 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 27, 2023, which is available on SEDAR at www.sedarplus.com

Share Capital & Cash

Common shares in issue	1,044,347,425
Share options outstanding	57,250,000
Fully diluted share capital	1,101,597,425
Cash at 30 September 2023	US\$14.1 m
Market Capitalisation (circa)	US\$100 million

Major Shareholders

Lamesa Holding S.A.	15.04%
Sheffield Holdings, LP	9.24%
Burlingame Asset Management	4.67%
Nicolas Mathys	3.83%

Key Asset

Falcon Oil & Gas Australia Limited, Falcon's 98.1% subsidiary, with 22.5% interest in EP76,98 & 117

Beetaloo gross acres 4.6 million, net 1 million to Falcon

Contingent gas resource to date of 6.6TCF over ~11% of gross area

Tamboran B2⁽²⁾ is Falcon's operating joint venture partner in the Beetaloo

Board of Directors ⁽¹⁾

Joe Nally	Chairman
Philip O'Quigley	CEO & Executive Director
Anne Flynn	CFO & Executive Director
Greg Smith	Non-Executive Director
Tom Layman	Non-Executive Director

⁽¹⁾ Board of director bios are included on slide 4

⁽²⁾ Joint venture between Daly Waters Energy LP and Tamboran Resources Limited

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.



Anne Flynn
CFO & Executive Director

Ms. Flynn was appointed Chief Financial Officer in 2016, having joined in 2014 as Group Financial Controller with responsibility for the Group's Dublin, Hungarian, Australian and South African finance and commercial functions. Ms Flynn joined Falcon from Adobe Systems Inc and qualified as a Chartered Accountant during her time at PwC, where she spent six years in PwC's Dublin and New York offices.



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.



Tom Layman
Non-Executive Director

Mr. Layman is a certified petroleum geologist with over 40 years' experience in the oil and gas industry having worked on over 4,000 shale and unconventional wells across multiple US onshore basins on exploration and development projects. He acts as a geoscience consultant, previous positions held include Senior VP of Geoscience at Parsley Energy, VP of Exploration Southern Division at Chesapeake Energy, Geoscience Manager at Burlington Resources and a Geologist at Exxon. He is a member of the American Association of Petroleum Geologists (AAPG) for 38 years and currently serves on the Geology Foundation Advisory Council at the University of Texas at Austin.

Company Overview

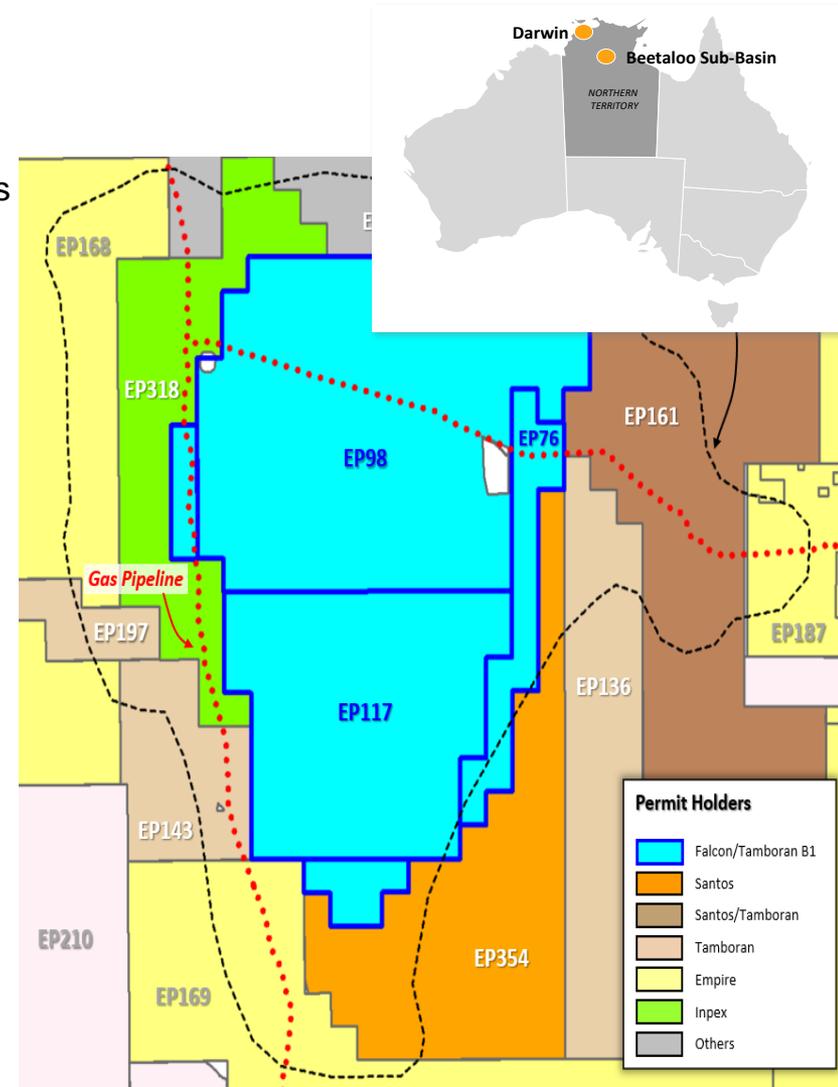


- **Focused** on the exploration and appraisal of unconventional oil and gas assets in the **Beetaloo Sub-Basin**, Northern Territory, **Australia**.
- **Board expertise** in over **4,000 unconventional wells** across multiple US onshore basins in exploration and development projects
- **22.50% : 77.50% Joint Venture** in the Beetaloo asset with a subsidiary of **Tamboran B2 Pty Limited**, itself a 50:50 joint venture between Daly Waters Energy LP and Tamboran Resources Limited
- **4.6 million gross acres (1 million net to Falcon)** in the Beetaloo Sub-Basin across EP76, EP98 & EP117⁽¹⁾
- **A\$438⁽²⁾ million invested to date** by Falcon's JV partners in the exploration permits
- **6.6 TCF 2C** gross contingent gas resource discovered over 486,000 acres ⁽³⁾ (~11% of gross area around the Amungee NW1-H pad)
- Success of current Beetaloo work programme nearing completion looking to support a **multi-well pilot programme in 2024/25**

1: Falcon Oil & Gas Australia Limited, Falcon's 98.1% subsidiary, holds the 22.5% interest in EP76,98 & 117

2: Total carried spend by Hess, Origin and Tamboran on the permits

3: https://falconoilandgas.com/pdf/Beetaloo_material_gas_resource.pdf



Source: Company

Falcon's Beetaloo Key Milestones



2011 to 2014

2011 - 2013

- Entered JV with Hess Corporation
- Hess acquired 3,490 km of 2D seismic data, spending A\$74million on the permits
- Hess exited the Beetaloo and subsequently Australia
- Falcon retained 100% of Permits and all seismic data

2014

- Executed ~A\$200 million multi-year, multi-well Farm-Out Agreement with Origin Energy Limited for 70% of the working interest in EP76, EP98 and EP117

2015 -2017

2015

- Drilled Kalala S-1 (V) and Amungee NW-1H

2016

- Drilled Beetaloo W-1 (V)
- Fracked Amungee NW-1H with a Notification of Discovery lodged.
- Moratorium on Fracking introduced

2017

- 6.6 TCF 2C gross contingent gas resource declared over ~11% of total licence area by Origin

2018-2021

2018

- Moratorium on hydraulic fracturing lifted

2019 - 2021

- Drilled and fracked Kyalla 117 N2-1H
- Farmed down 7.5% to Origin, and increased Falcon's carry by A\$150 million
- Drilled Velkerri-76 (V)
- Re-tested Amungee NW-1H, results suggested a **normalised gas flow rate of 5.2-5.8 MMscf/d per 1,000m**

2022-2023

2022

- Bryan Sheffield became a key (9%) shareholder
- Origin divested their 77.5% interest to Tamboran B2
- Falcon earned an additional carry of A\$30 million on Origin's exit

2023

- Drilled Amungee NW-2H
- Fracked Amungee NW- 2H
- Potential skin damage inhibiting flow of gas
- Drilled Shenandoah SS-1H
- Drilled Amungee NW-3H
- Fracture stimulation of SS1H completed on 7 Dec
- Awaiting IP30 flow rates

Falcon's carried spend 2011-2023

~A\$74m

~A\$364m



2023 Activities

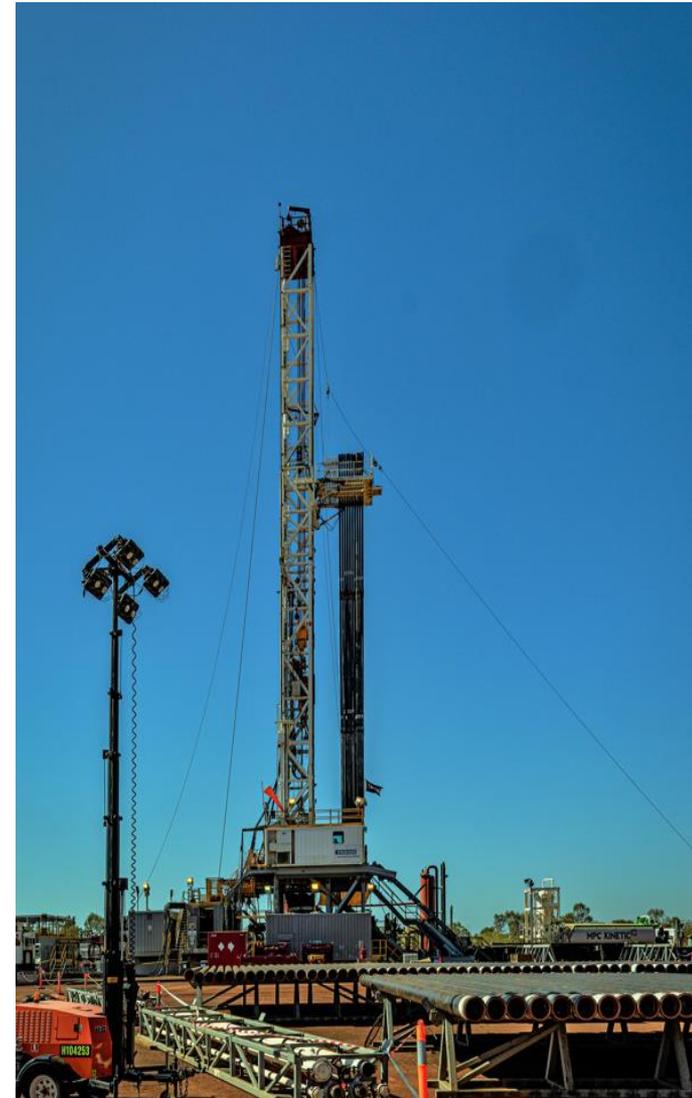
Shenandoah South 1H (“SS1H”) in EP117 Details



- SS1H was drilled 4,300 metres TD, including a horizontal section over 1,074m intersecting ~90 metres of the Amungee Member B-shale, representing the thickest section seen in the Beetaloo Sub-basin depocenter to date.
- Logging of the Amungee Member B-shale formation indicates potentially higher porosity and gas saturation relative to offset wells.
- Initial evaluation confirms reservoir continuity of the Amungee Member B-shale over 150 kilometres between Amungee NW-2H and Beetaloo W-1 wells.
- Diagnostic fracture injection test (“DFIT”) results demonstrated an over-pressured regime at the Shenandoah South location, with a pore pressure gradient of at least 0.54 psi /ft. This is in line with results demonstrated at the Tanumbirini well (0.51 – 0.56 psi/ft), providing confidence on the ability to replicate or exceed the commercial flow rates achieved at the Tanumbirini location.
- **Stimulation activities which** included 10 stimulation stages within the Amungee Member B-shale over a 500-metre horizontal section was completed on 7 December 2023.
- The stimulation program incorporated lessons learned from the A2H well in EP98 and the Tanumbirini wells in Santos operated EP161, including an increase in hydraulic horsepower and higher well design pressures to increase effectiveness of stimulation treatments and fluid conditioning methodologies to decrease the risk of skin damage.
- Current expectations are to release 30-day initial production (IP30) flow rates in Q1 2024, subject to weather conditions and the timing to flow back stimulation fluid to achieve gas breakthrough.
- Results from the SS1H well are a key deliverable that will hopefully support the sanctioning of the joint venture’s proposed 40 million cubic feet per day (MMcf/d) pilot project at Shenandoah South.

Amungee NW 3H (“A3H”) well in EP98 Details

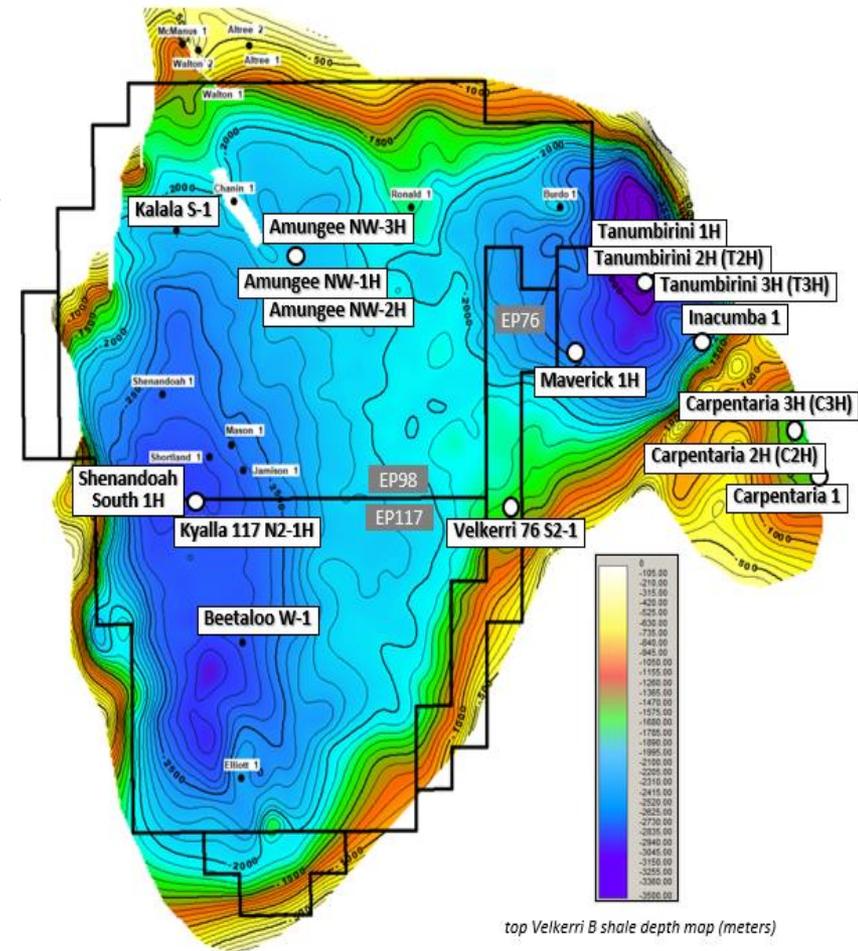
- The A3H well was drilled, cased and cemented to a TD of 3,837 metres, including a horizontal section of 1,100 metres in the Amungee Member B-shale.
- The well intersected the Amungee Member B-shale at a total vertical depth (“TVD”) of 2,272 metres and encountered significant gas shows, in line with pre-drill expectations.
- Drilling took 17.9 days, at an average rate of 214 metres per day, and at 20 days faster than the Amungee 2H (“A2H”) well, the Helmerich & Payne, Inc. (H&P), (NYSE: HP), super-spec FlexRig® Flex 3 Rig delivered the anticipated drilling efficiencies.
- Total costs for the drilling and cementing of the A3H well was A\$12.6 million. Cost reductions of A\$1.8 million compared to A2H, demonstrates the application of learnings from previously drilled wells and the improvement in drilling technology with the H&P super-spec FlexRig® Flex 3 Rig.



Source: Company

Amungee NW-2H (“A2H”) Details

- A2H was drilled to a total depth (TD) of 3,883 metres, including a 1,275-metre horizontal section within the Amungee Member B Shale in December 2022.
- 25 stages were successfully stimulated across a 1,020-metre horizontal section with approximately 2,125 pound per foot of proppant placed along the completed horizontal section.
- Proppant was placed using 5-½-inch casing and was based on modern US shale design
- The A2H well achieved gas breakthrough, however, modelling and independent third-party analysis from a US laboratory identified a potential skin inhibiting the flow of gas from the stimulated shale.
- The hydrocarbon phases recovered were dry gas with 90.4% methane and 2.9% ethane.
- Results from the stimulation will enable learnings to be applied to future completion operations.

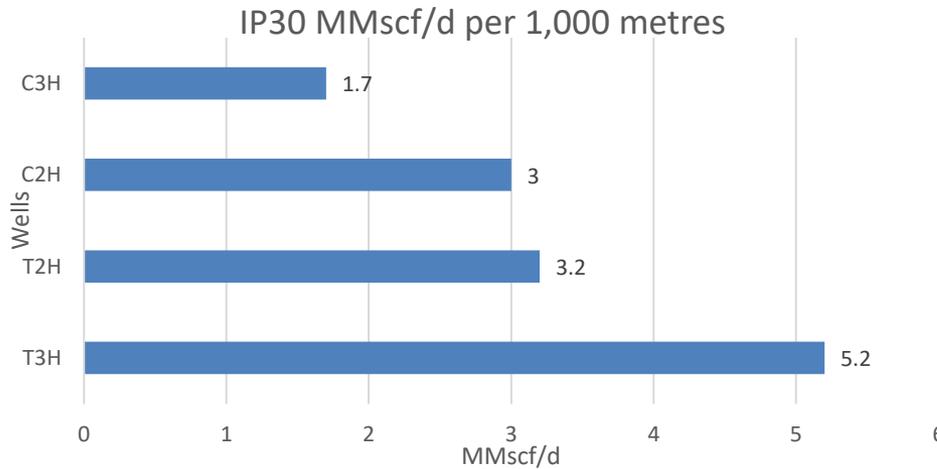


Source: Company

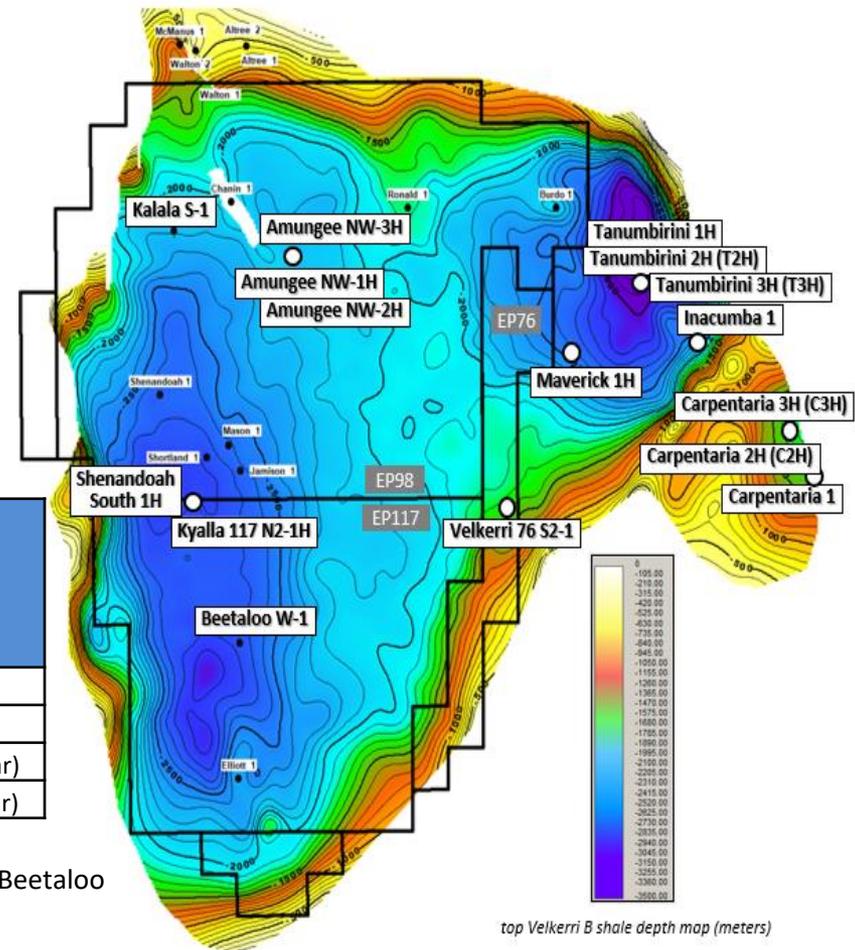


**Beetaloo Sub-Basin
&
Key Results**

Key Beetaloo Flow Test Results Demonstrating Commerciality



Operator	Well	Depth	Stim length	Stages	IP30 flow over 1,000 metres	EUR
Empire Energy	C3H ¹	1,750	1,989	40	1.7	TBC
Empire Energy	C2H ¹	1,600	927	21	3	TBC
Santos	T2H ¹	3,400	660	11	3.2	~16.8 BCF (20-year)
Santos	T3H ¹	3,400	600	10	5.2	~18.5 BCF (20 year)



Source: Company

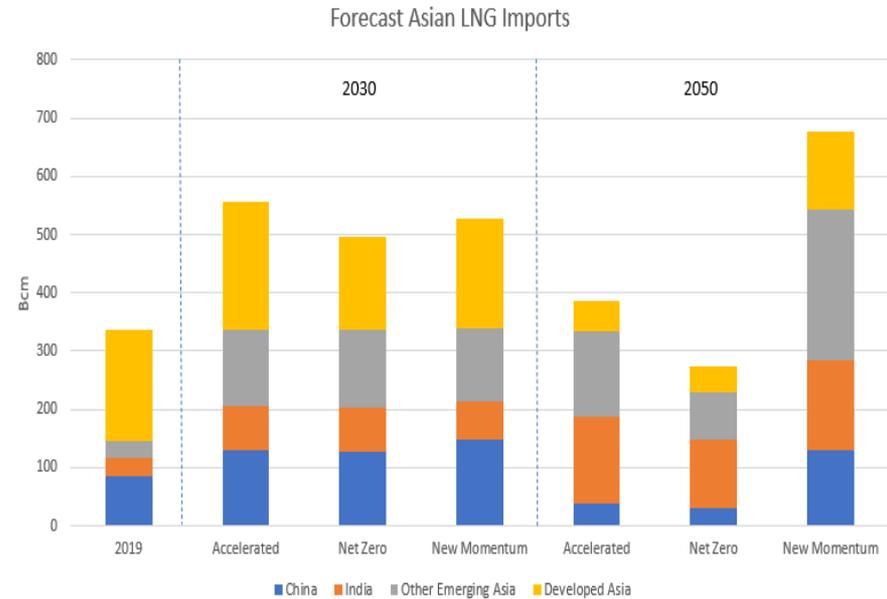
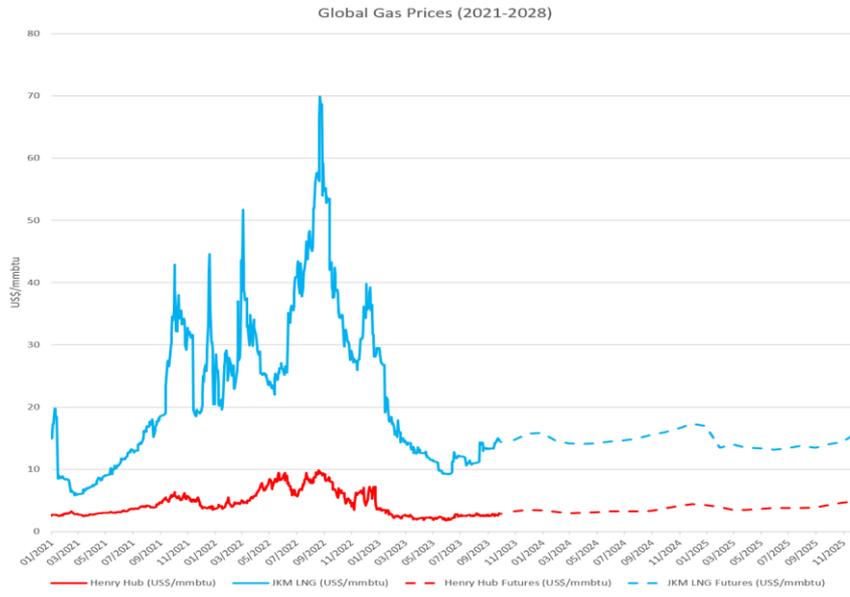
- Flow tests over the last 12 months have demonstrated commerciality of the Beetaloo Sub-basin
- Flow test results indicate greater well productivity at depth in the Beetaloo Sub-basin, indicative of higher formation pressure
- Amungee Member B Shale at SS1H was intersected at 2,980 metres measured depth ~20 per cent deeper than A2H.



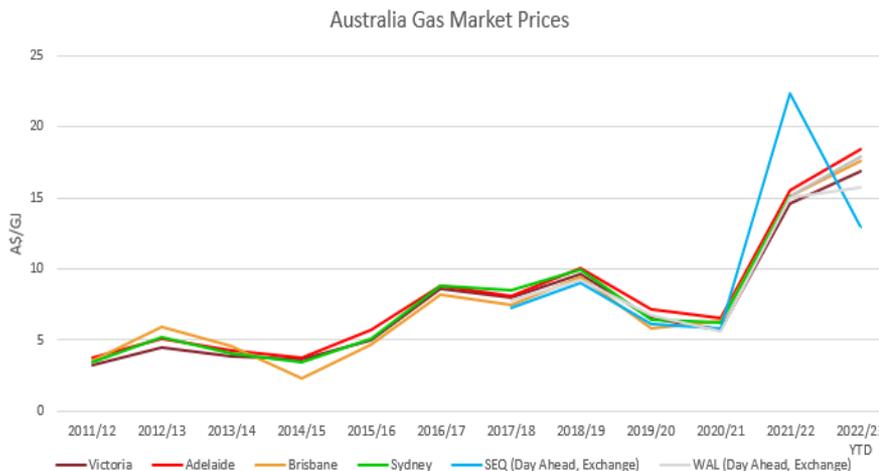


Market Overview and Gas Prices

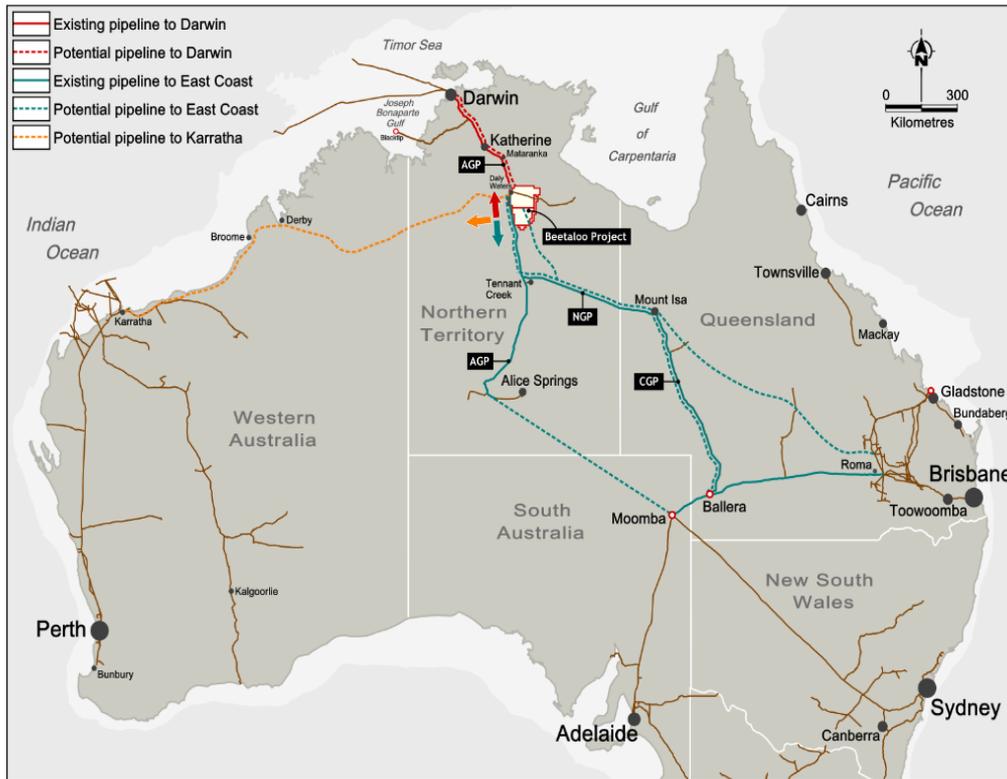
Gas Prices and Asian LNG Import Forecasts



- The Beetaloo expected to capitalise on Australia being the worlds largest exporter of LNG and significant capacity across Australia’s existing LNG terminals
- Strong Australian Federal government support through the Beetaloo Strategic Basin Plan with commitments of A\$220m
- Recent record gas prices, with Asia LNG prices (JKM) trading over US\$15 per mmBtu
- JV well positioned with a variety of commercialisation options readily available



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 can be sent to the LNG hub in Darwin for processing and liquefaction

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

East Coast Domestic Gas and LNG at Gladstone

- 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



Appendices

Appendix A - Beetaloo Sub-Basin Overview



- The onshore Beetaloo Sub-basin is approximately **600km south-east of Darwin** in the Northern Territory (“NT”)
- The sub-basin **covers 6.9 million acres** and sits within the 44.5 million acre McArthur Basin which covers the majority of the north-east of the NT
- The Beetaloo is an undeveloped gas resource and as noted by a Federal Government Minister in January 2021 “has the **potential to be a world-class gas province**” with the “**potential to rival the world's biggest and best gas resources.**”⁽¹⁾
- Drilling to date is **demonstrating commercial potential**
- A **low CO₂ gas resource**
- Territory and Federal government support includes:
 - The NT government committing to awarding **production licenses in 2023**
 - A pledge of **A\$1.5bn** for the port at Darwin Middle Arm including **A\$300m** for low-emissions LNG and clean hydrogen production
 - An investment of **A\$217m** in infrastructure and upgrades to roads in the NT and **A\$50m** in drilling grants to accelerate exploration activity
- There are **favourable characterisation comparisons** to the Marcellus and Barnett US basins

1– Australian Government, Unlocking the Beetaloo, The Beetaloo Strategic Basin Plan

Appendix B - Shale Characterisation – Comparison with US basins



	Marcellus Shale ¹	Barnett Shale ¹	B Shale, Amungee Member, Velkerri Fm. Estimates
Estimated Basin Area (km ²)	246,050	12,950	17,000 ²
Typical Depth (m)	1,220-2,590	1,980-2,590	1,000-3,500
Gross Thickness (m)	60	60-305	54-71 ³
Reported Gas Contents (scf/ton)	60-150	300-350	148 ²
Porosity (%)	4-12	4-6	5-8.1 ³
Gas-filled Porosity (%)	4	5	2.9-4.7 ³
Average Water Saturation (%)	43	38	43 ²
Permeability Range (average) (nD)	0-70	0-100	10-100 ²
Average Silica Content (%)	37	45	54 ²
Maturity (% Ro, alginite reflectance)	0.9-5	0.85-2.1	1.5-2.5 ²
Average TOC present-day	4.01 (2-13)	3.74 (3-12)	3.98 (3.5-4.4) ⁴

1 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

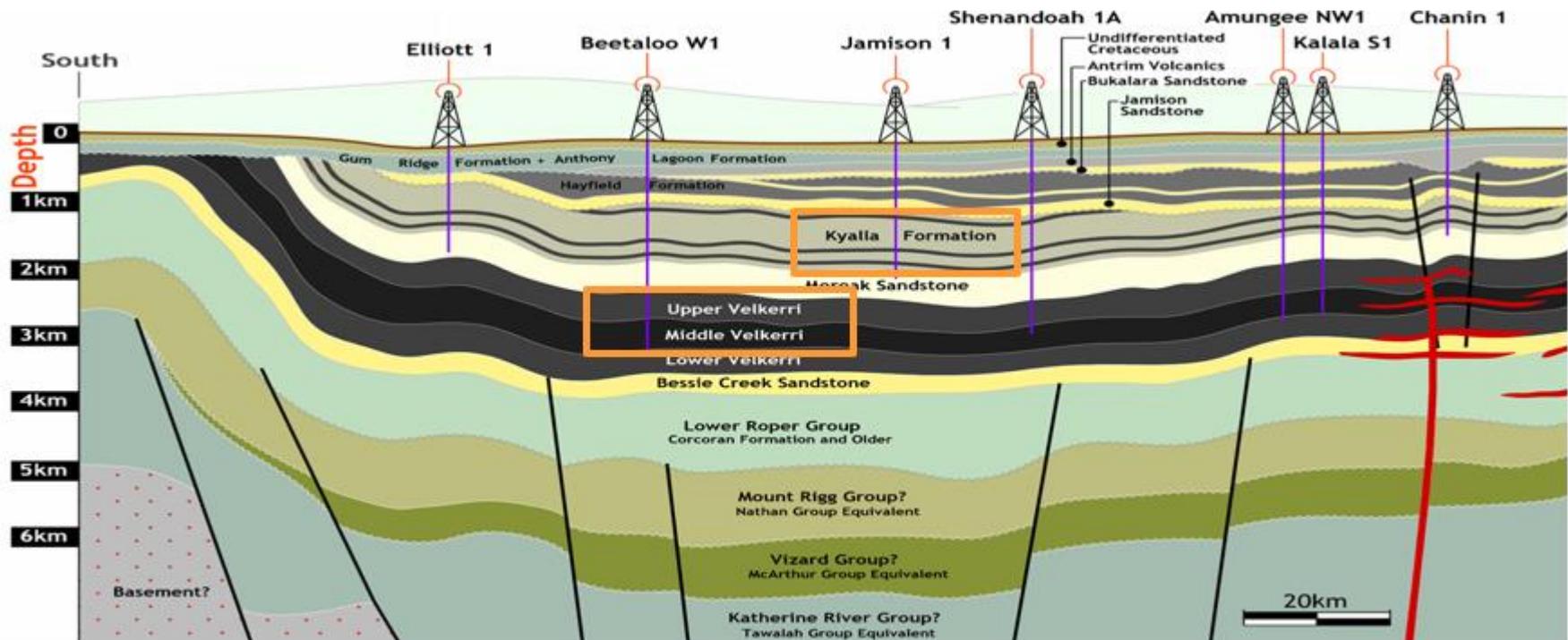
2 Confirmed as per Close et al 2016

3 Based on Amungee NW 1, Beetaloo W 1, Kalala S1, Tanumbirin 1, McManus-1 and Velkerri 76 S2 1 wells

4 Based on Amungee NW 1, Beetaloo W 1, Kalala S1, Tanumbirin 1, and Velkerri 76 S2 1 wells

Appendix C - Beetaloo Sub-basin – Stacked Play Potential

- Identified plays in the Beetaloo Sub-basin include:
 - Amungee Member (formerly known as the Velkerri) shale dry gas play with 2 -3 potential targets
 - 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"

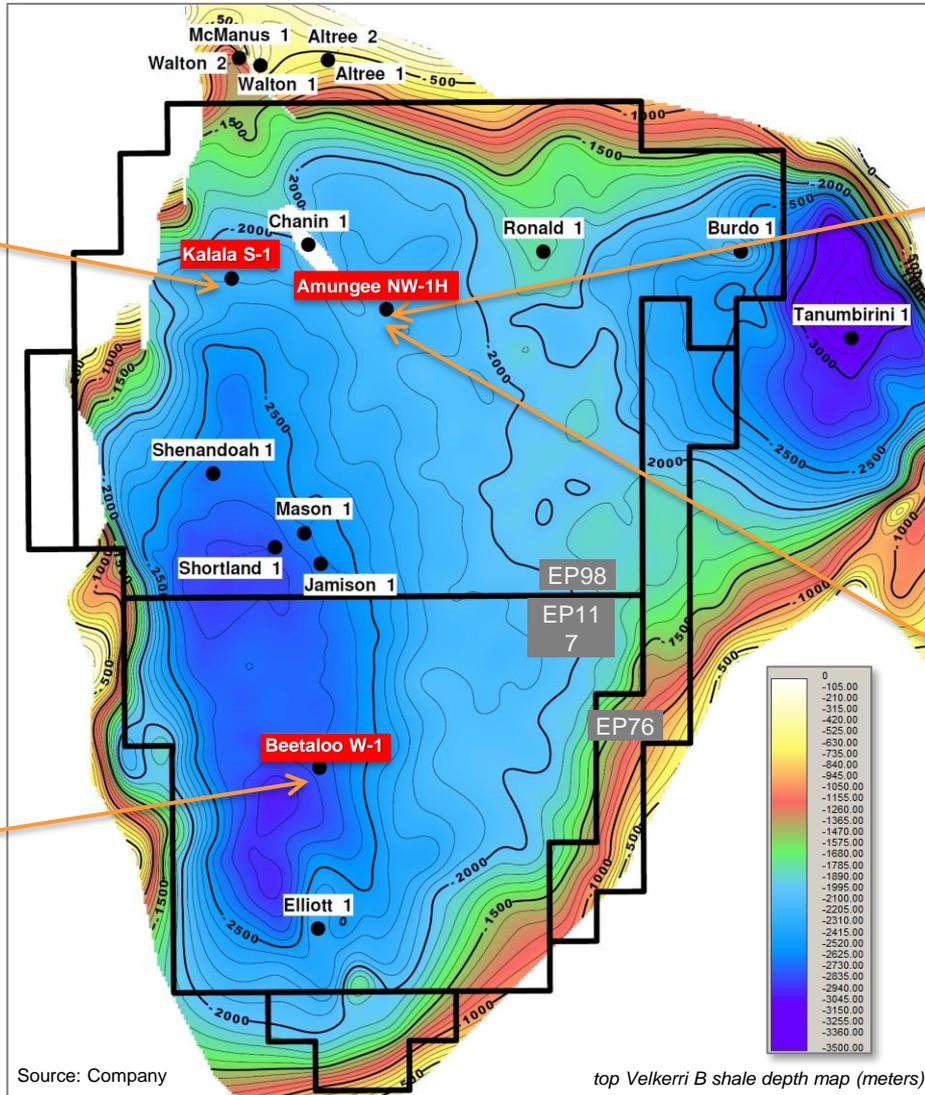
Appendix D Stage 1 Recap – Successful Initial Drilling Program

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

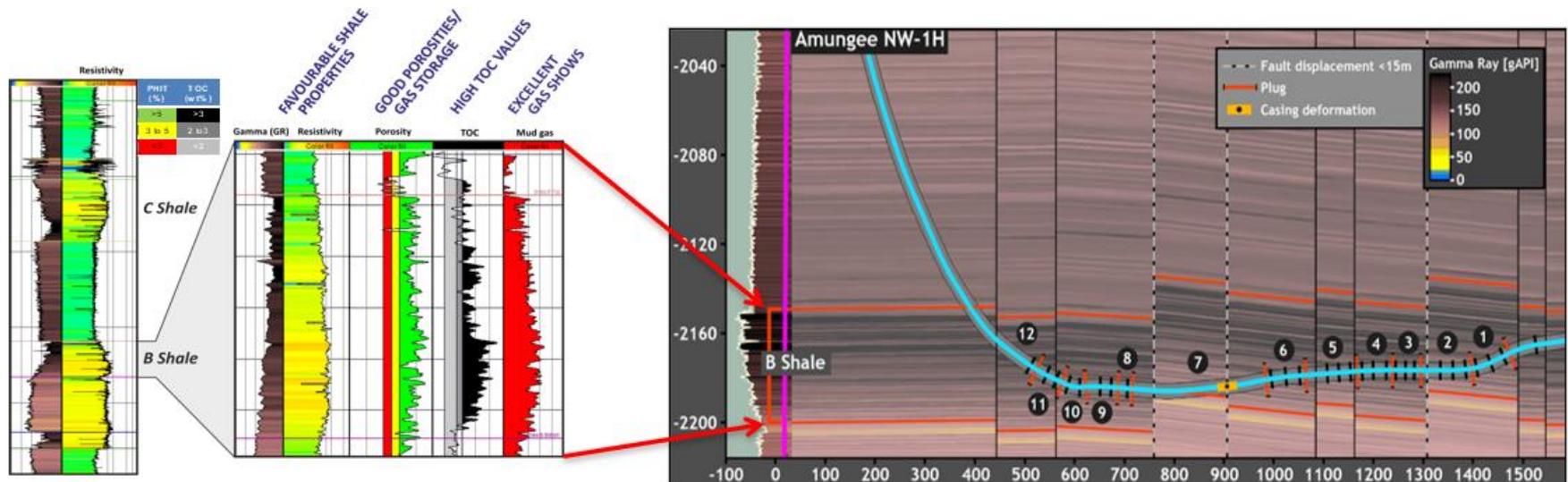
Appendix D

Amungee NW-1H – 6.6TCF 2C Contingent Gas Resource



Amungee operations recap (2015-2017)

- The first horizontal well to be drilled and first well to be fracked
- **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⁽²⁾



Sources: Close et al. 2017

⁽²⁾ Full details are contained in Falcon's Annual Information Form for the year ended 31 December 2021, dated 27 April 2022

Appendix D Amungee Member B Shale (formerly Middle Velkerri B Shale) Gas Volumetrics



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

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

Notes:

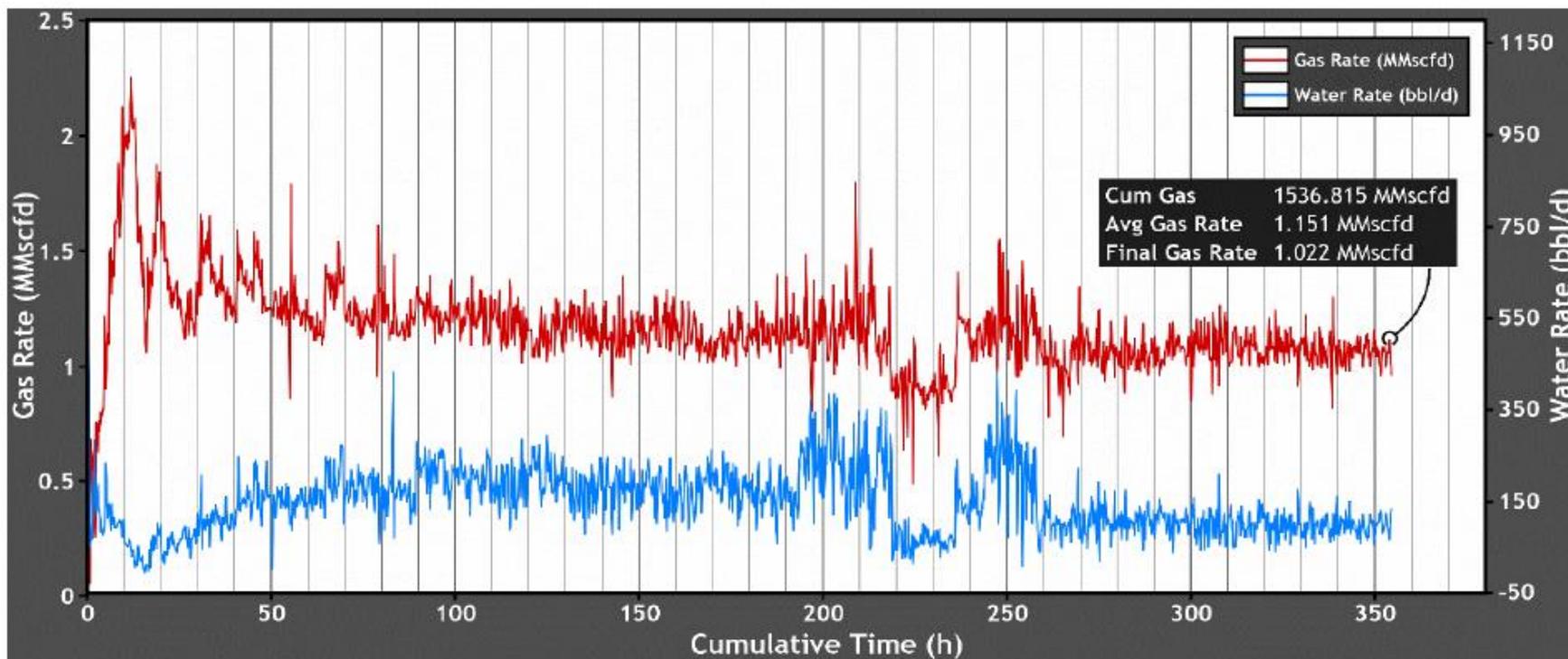
- ¹ The estimates included in the table above were not prepared in accordance with the Canadian Oil and Gas Evaluation Handbook (“COGEH”)
- ² Falcon’s working interest is 22.07% (as of 7 April 2020, previously 29.43%), net attributable numbers do not incorporate royalties over the Beetaloo JV Permits (EP76, EP98, EP117)
- ³ 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)
- ⁴ The factor range was applied stochastically to the OGIP range to calculate the range of technically recoverable resource within the Beetaloo JV Permits
- ⁵ 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
- ⁶ P50 area from the contingent resource area distribution
- ⁷ OGIP presented is the product of the P50 Area by the P50 OGIP per km²
- ⁸ 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/>

Appendix D 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



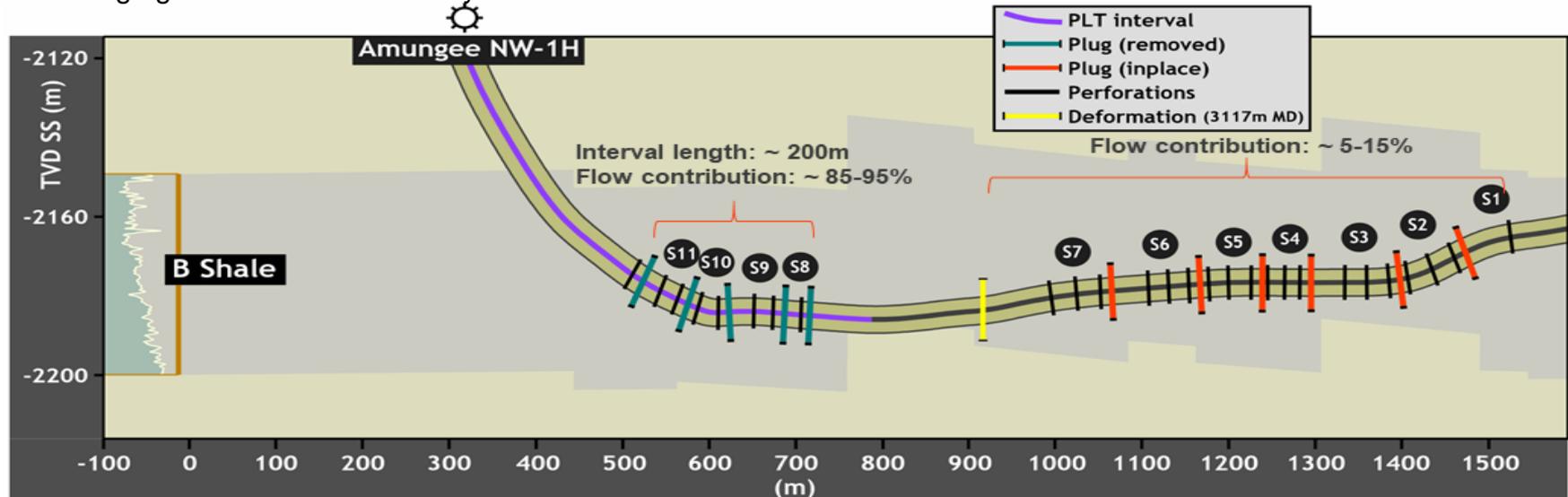
Source: Close et al. 2017 AGES presentation, "Proterozoic shale gas plays in the Beetaloo Basin and the Amungee NW-1H discovery"



**Appendix E Falcon's 2021
Drilling and
Testing Operations**

Appendix E 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 commercialization
- Average gas flow rate over 45 days of 1.02 MMscf/d



Appendix E Velkerri 76 S2-1

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

Appendix E – Velkerri 76 S2-1



- 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.

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

Appendix E 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