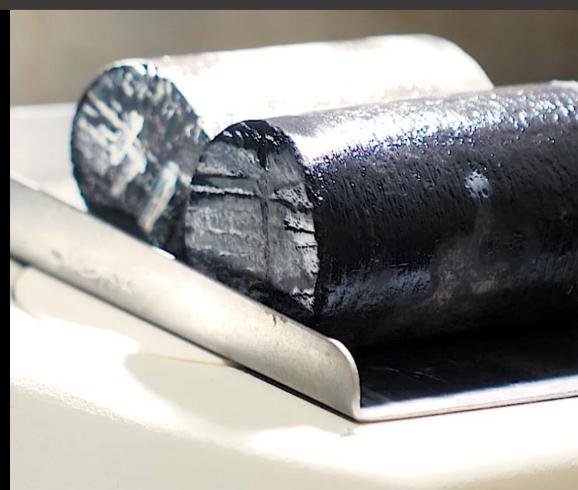


ASX:EEG

Shale Gas LNG – Australia's Next Major Energy Export







Corporate Presentation, April 2021

Empire's Board of Directors







Chairman & Non-**Executive Director**

- Founding principal of Pacific Road Capital. a resources investing manager of private equity funds
- Former Chairman of Oxiana Ltd durina the development of the Sepon copper/gold project in Laos
- Former Chairman of Cobar Mines Pty Limited after a management buyout
- Former Head of Bank of America operations in Australia, New Zealand and PNG



Alex Underwood

Managing Director

- Associate Director **Energy Markets Division** of Macauarie Bank Limited (Sydney and Singapore)
- Director Natural Resources Division of Commonwealth Bank of Australia (Singapore)
- Financial Analyst BHP Billiton Petroleum (Perth)
- Experience investing debt and equity in the upstream oil and aas sector and identification of value creation opportunities for upstream oil and gas development / production assets



Peter Cleary

Non-Executive Director

- Distinguished 29-year career representing Santos, the North West Shelf Venturers and BP in Asia. His executive career was in LNG, pipeline gas and chemicals operations
- Member of the **Executive Committee of** the Australia Japan **Business Co-operation** Committee and the Australia Korea Business Council

Louis Rozman

Non-Executive Director

- Former Managing Director of CH4 Gas which meraed with Arrow Energy and later acquired by PetroChina and Shell
- Founding principal of Pacific Road Capital, a resources investina manager of private equity funds
- Former Chief Operating Officer of AurionGold Limited
- Chairman of the **VALMIN Code** Committee for the Institute of Geoscientists

- AusIMM and Australian

Prof. John Warburton

Non-Executive Director

- Highly regarded petroleum geoscientist experienced in bia fields
- 30 years technical & leadership experience in leading E&P companies including BP, LASMO-Eni and Oil Search
- Previously Chief of Geoscience & Exploration Excellence for Oil Search
- · Non-Executive Director of Senex Energy

Proposed Pangaea Representatives





Paul Fudge

Non-Executive Director

- Controlling shareholder of Pangaea
- Significant investment experience in onshore Australian oil & gas, including being an early mover in the Queensland Coal Seam Gas industry and in the Beetaloo Sub-Basin
- Paul brings significant business and investment experience to the Board of Empire

Jacqui Clarke

Alternate Director

- Currently Non-Executive Director and Co-Founder of Maxima Private.
- 30 years professional services experience, with over 15 years as a Partner at Deloitte.
- Jacqui is a Chartered Accountant and Fellow of the Institute of Chartered Accountants, Graduate of AICD (Australian Institute of Company Directors), Chartered Tax Advisor and Justice of the Peace.

Industry leading Management and Operating Team



INGAUÐE

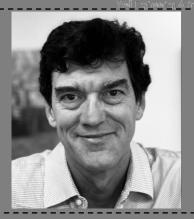




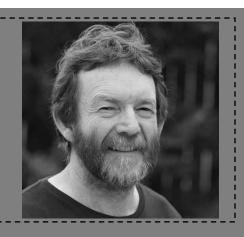












Kylie Arizabaleta

Financial Controller

- Longest serving Empire management team member
- Prior to joining the Company, Kylie worked in the Audit division of Chartered Accounting firms as a senior and lead external auditor where she gained broad experience in Audit and other Assurance Services

Dr Alex Bruce

Chief Geoscientist

- PhD from the University of New South Wales (2001) in machine learning applications to geology
- 20 years experience across onshore and offshore projects from exploration to development and conventional and unconventional oil & gas
- Has held similar positions with other ASX oil & gas mid-caps including Drillsearch (acquired by Beach), AWE (now Mitsui), Roc Oil (now FOSUN) and Bridgeport Energy (part of New Hope Corporation)

Ben Johnston

Vice President Business Development

- Director, Natural Resources & Energy, Commonwealth Bank of Australia
- Vice President, RBC Capital Markets energy investment banking team
- Chartered Accountant and MBA (Australian Graduate School of Management)
- Energy sector specialist across M&A, ECM and debt / project finance transactions

Charles Dack

Environmental and Compliance Reporting Officer

- Environmental manager with qualifications in environmental engineering and environmental law.
- Extensive experience as the environmental regulator of the petroleum industry for the NT Government
- +6 years at the Northern Territory Government, employed as the lead Environmental Engineer for the NT Government to regulate the upstream petroleum industry.

Dr Simon Hann

Principal Engineer

- Founding partner of inGauge and a well engineering professional with over twenty years' operational experience including conventional oil and gas, geothermal, HPHT, and coal seam gas drilling and completions.
- Fourteen years' management experience with Santos, Woodside and Shell including roles as Operations Manager, Drilling Team Leader, Drilling and Completions Manager and Production Manager;

Qualifications

- PhD Materials Science University of Queensland, 1998
- Masters of Engineering Science, Qualifier University of Queensland, 1993
- Bachelor of Engineering, Manufacturing and Materials, University of Queensland, 1992
- Shell International Exploration & Production (SIEP) Round I and Round II Well Engineering Competency Certification SIEP

Kelvin Wuttke

Principal Engineer

- Over 24 years of industry experience ranging from conventional onshore oil & gas to CSG and international offshore operations at Santos and Chevron.
- Technical expertise includes drilling & completions design, workovers, well testing, artificial lift, pipelines and surface facilities, across conventional and CSG environments.
- Experience includes managing combined drilling, completion and stimulation projects, remediation workovers, snubbing, fracture stimulation, underbalanced operations, and a wide variety of artificial lift projects.

Qualifications

- Registered Professional Engineer of Queensland, Mechanical & Petroleum
- Chartered Professional Engineer (MIE Aust CP Eng), Mechanical
- MBA, Queensland University of Technology, 2003
- Bachelor of Engineering, Mechanical, University of South Australia, 1992

Jordan Bunning

Principal Engineer

- Founding member of inGauge. Over 17 years' operational experience at Santos, Oil Search, Roc Oil and Origin in complex well execution and project management, this includes projects in conventional oil and gas, HPHT, coal seam gas and deep water bores.
- Jordan has experience in roles such as Drilling Manager, Drilling Team Leader, Senior Drilling Engineer and Drilling & Completion Engineer.
- Has been the lead in some of inGauge Energy's most successful projects including as in situ Drilling Manager for Westside Corporation, Comet Ridge and most recently Empire Energy's Northern Territory Carpentaria 1 well.

Qualifications

 Bachelor of Engineering, Petroleum Engineer (Hons), University of New South Wales, 2003

Jon Bennett

Project & Construction Manager

- Jon has 25 years operational experience, including twelve years management experience at Santos in roles such as Pre-Development Manager, Construction Manager, Civil Construction Manager and several management roles in large scale Agriculture.
- Jon is an experienced professional with a strong focus on business outcomes. Offering experience in planning, design, and construction of gathering, power, well-pad, civil and other CSG facilities. Proven strengths in business and project management and driving efficiencies through innovation and simplification over a range of industries.
- In his management roles Jon has proudly achieved and maintained industry leading EHS performance across operations.

Corporate Snapshot



Capital	l Stru	cture
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Shares on issue ¹	363.3m
Share price	A\$0.33

Market cap A\$119.9m

Net (debt) / $cash^{2,3}$ ~A\$13.4m

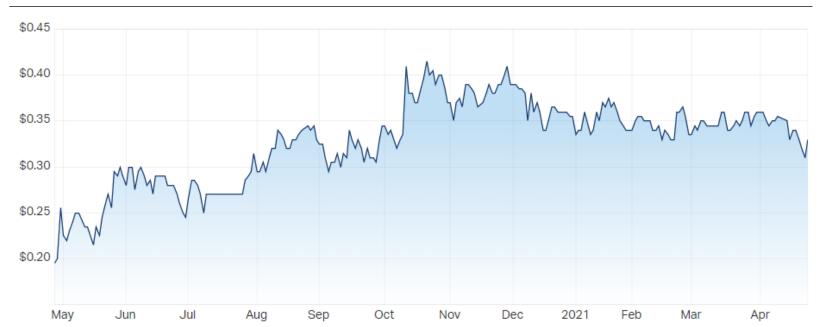
Enterprise value ~A\$106.5m

Cash at bank ~A\$22.4m

Corporate Structure



ASX Share Price



Top Shareholders

Elphinstone Holdings Pty Limited	9.1%
Global Energy and Resources	8.2%
Macquarie Bank Limited	7.3%
Board of Directors ⁴	2.2%

^{*} as at April 2021

^{1.} Empire has 18.4m unlisted options on issue with an average exercise price of <A\$0.32 per share. In addition, there are 11.1m Share Rights on issue to members of the management team and Board. Most of the Share Rights have performance hurdles tied to total shareholder return.

^{2.} Empire has a US\$7.5 million debt facility (drawn to US\$6.538 million) with Macquarie Bank maturing in September 2024 which is secured against the Company's USA gas production assets. Under new management, total debt has been reduced by over 80% since 2018.

^{3.} Net debt excludes a US\$343,602 loan which has been approved and received under the US Paycheck Protection Program

^{4.} Board shareholding excludes options and MD Rights. Empire Directors have committed to invest a further A\$1.2 million subject to shareholder approval.

Australian LNG projects already supplying Japan



Darwin, Northern Territory

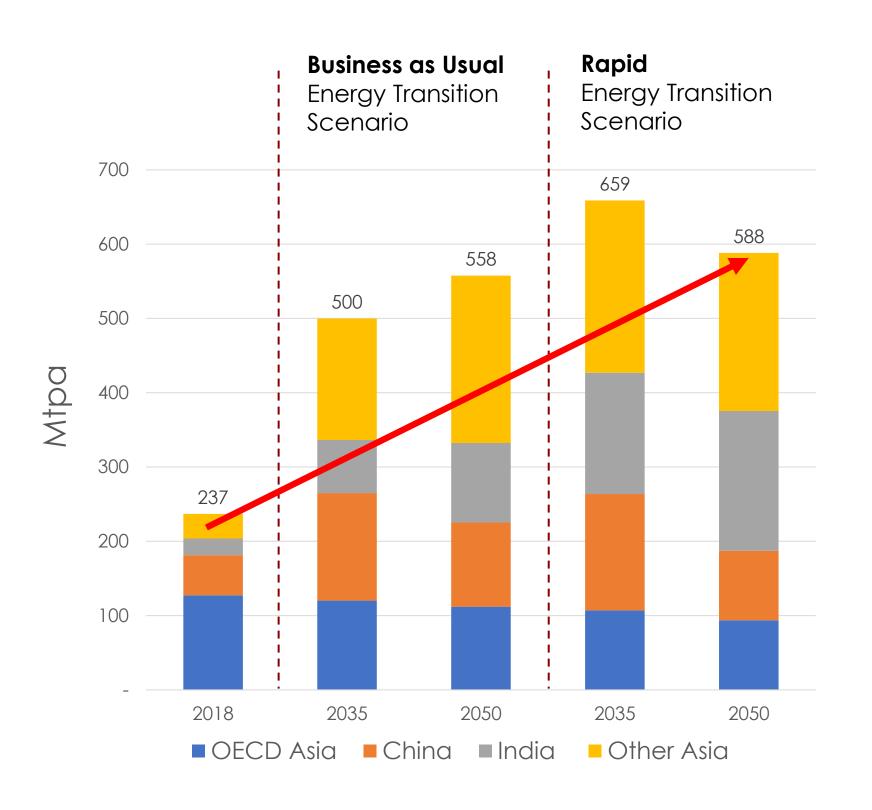
Gladstone, Queensland

	DARWIN	ICHTHYS	APLNG	QCLNG	GLNG
CAPACITY (MTPA)	3.7	8.9	9.0	8.4	7.8
DISTANCE FROM EMPIRE (KM)	~600	~600	~2,500	~2,500	~2,500
JOINT VENTURERS		Daigas Group CPC Corporation, Taiwan TOTAL TOKYO GAS T	Origin ConocoPhillips	TOKYO GAS	Santos PETRONAS TOTAL KOGRS
OFFTAKERS	Jera Energy for a New Era TOKYO GAS	会	φα) μις υ Ο Φ E C Kansai Electric Power power with heart	TOKYO GAS	PETRONAS KOGAS

Asian LNG demand increasing dramatically



Forecast Asian LNG Imports by BP

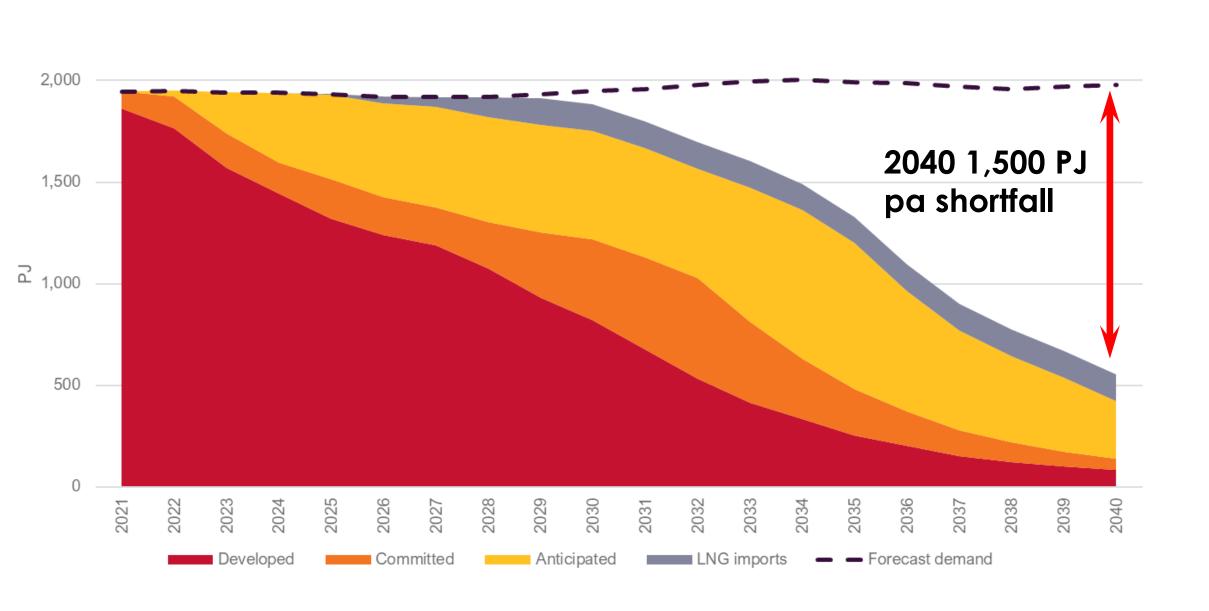




- Growing LNG demand in 'hard to abate sectors' such as heavy industry, shipping, road logistics
- Asian LNG demand doubles even in a 'worst case' scenario led by China, India, Bangladesh, Pakistan and ASEAN nations
- This equates to ~32Tcfe per annum LNG demand
- "Global LNG demand is expected to outpace total demand for energy and the QCLNG venture is crucial in helping Shell meet the world's growing energy needs" Global Infrastructure Partners

The Looming gas shortage – Beetaloo gas can fill the gap



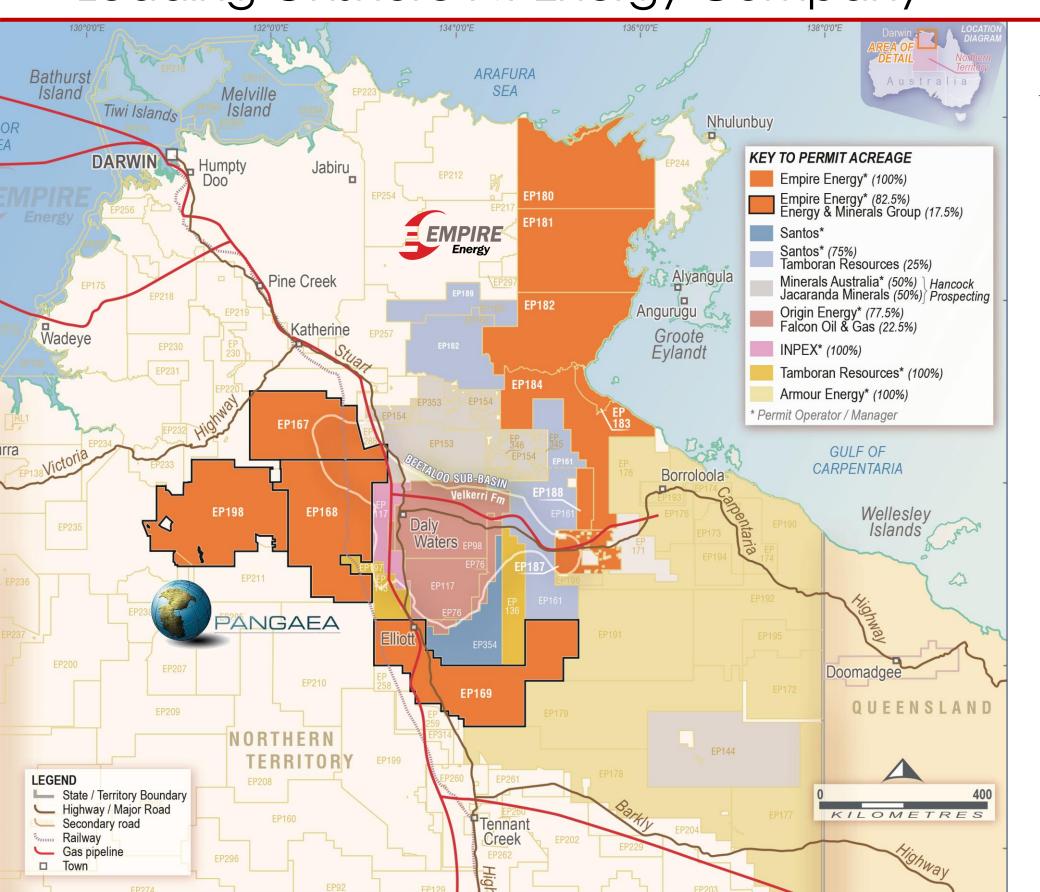


Australian Energy Market Operator 2021 Gas Statement of Opportunities

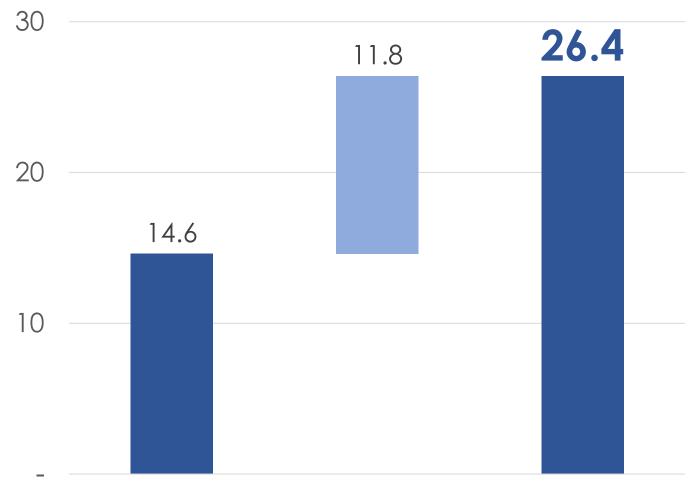
- Beetaloo is well positioned to meet this challenge with the scale of resource and existing infrastructure
- Empire's Beetaloo gas has low CO₂ (~1%) and high calorific content
- Australian Federal
 Government
 demonstrating strong
 support through its
 Beetaloo Strategic Basin
 Plan committing \$220
 million (including \$50
 million to support
 exploration and appraisal
 drilling by Beetaloo
 operators)

Empire's April Acquisition of Pangaea acreage Makes Empire the Leading Onshore NT Energy Company





Net Acres millions post acquisition





Pangaea Resources acquisition highlights



Transformational Deal

- Best Estimate Prospective Gas Resource increased by 157% to 37 Tcf
- Best Estimate Prospective Liquids Resource increased by 2,334% to 657 MMbbls
- 2C Contingent Gas Resource increased by 317% to 171 Bcf
- Maiden 2C Contingent Liquids Resource booking of 2.9 MMbbls
- Empire's NT net acreage position increased by 81% to ~26 million

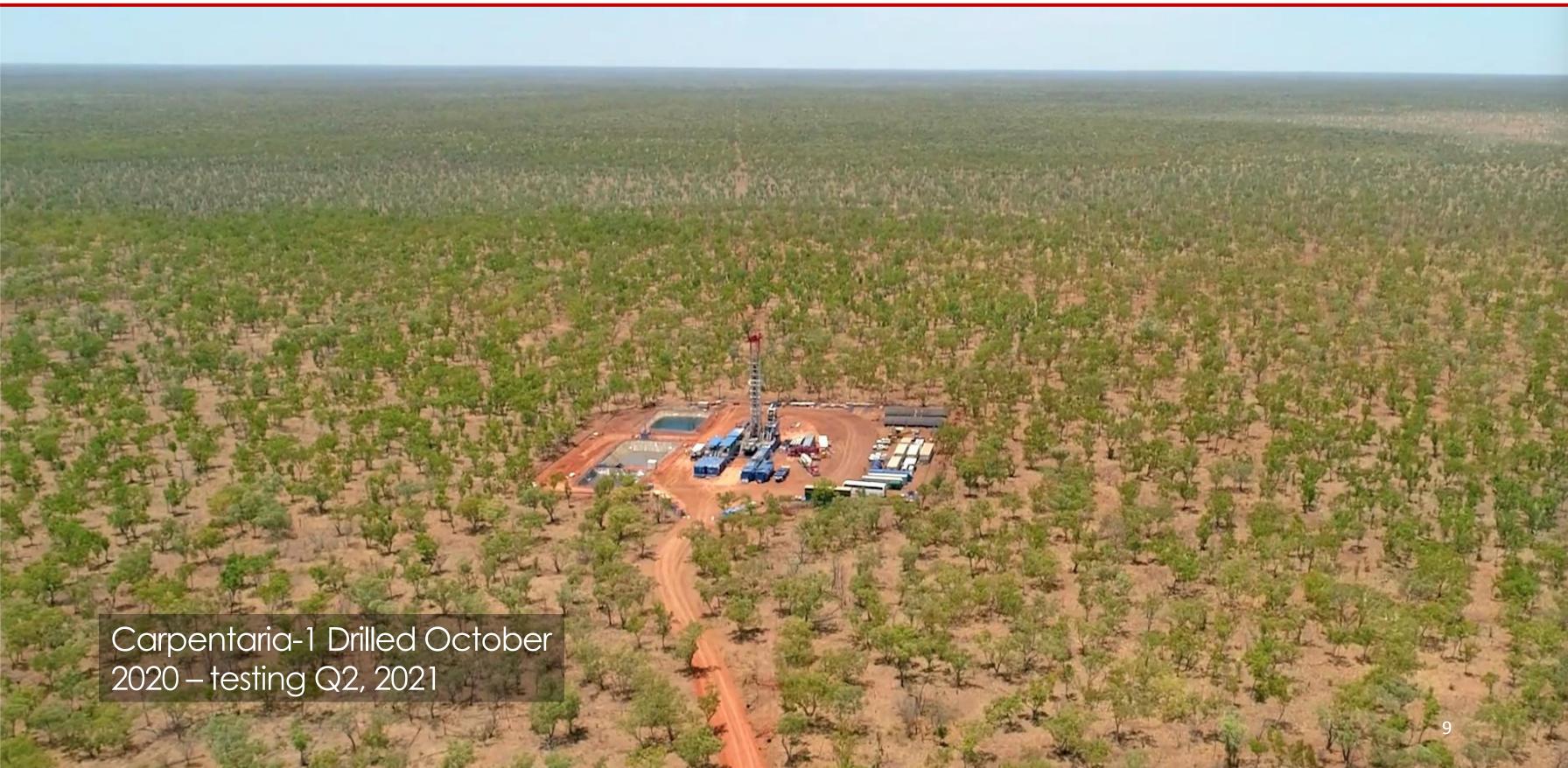


Consideration Payable

- A\$5m cash payable to Pangaea
- Pangaea to own a circa 30% interest in the combined business (pre capital raising)
- 8 million options with an exercise price of A\$0.70 per share

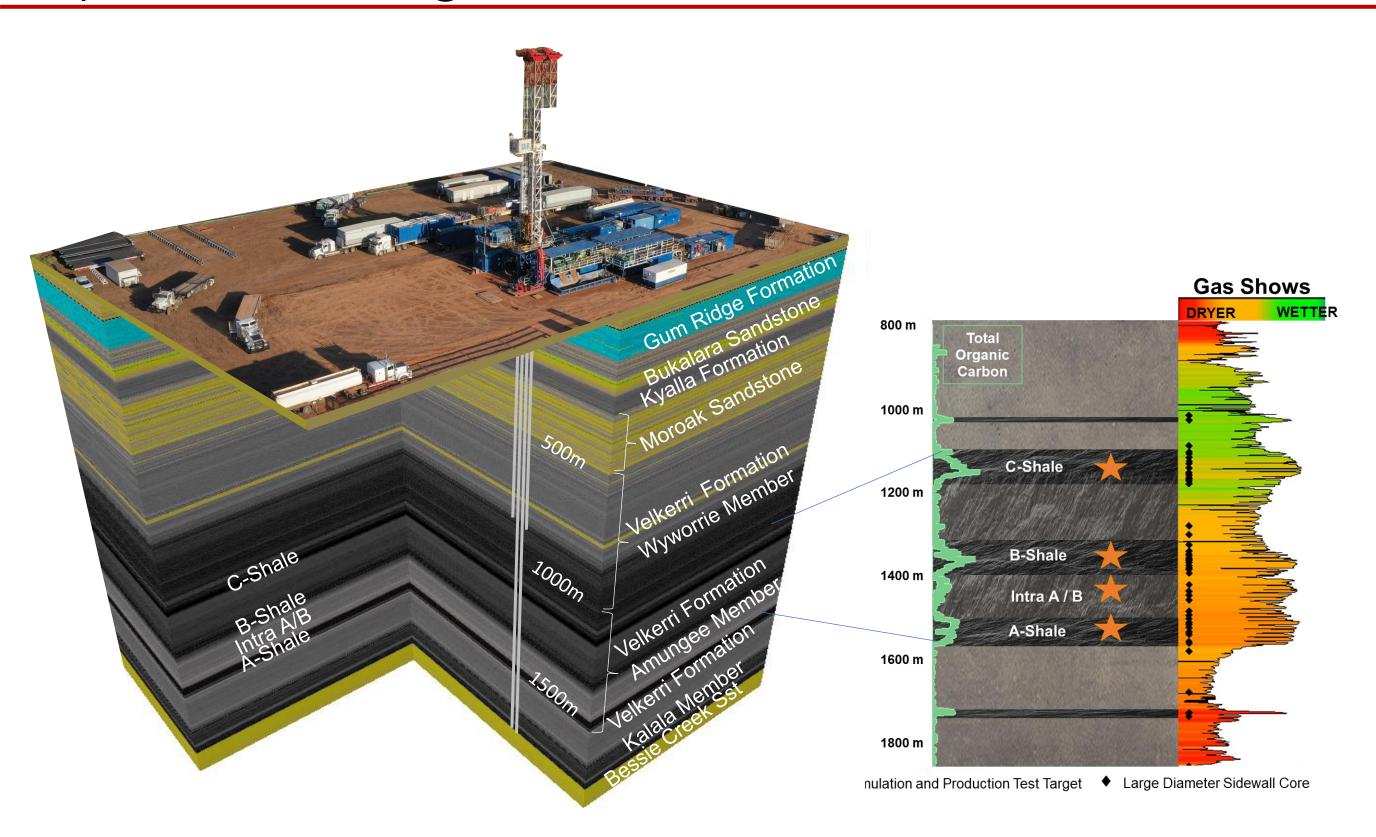
New P(50) Prospective Resource - 37 Tcf gas and 657 mmbbls liquids





Carpentaria-1 intersected 998m of wet gas and three productive targets

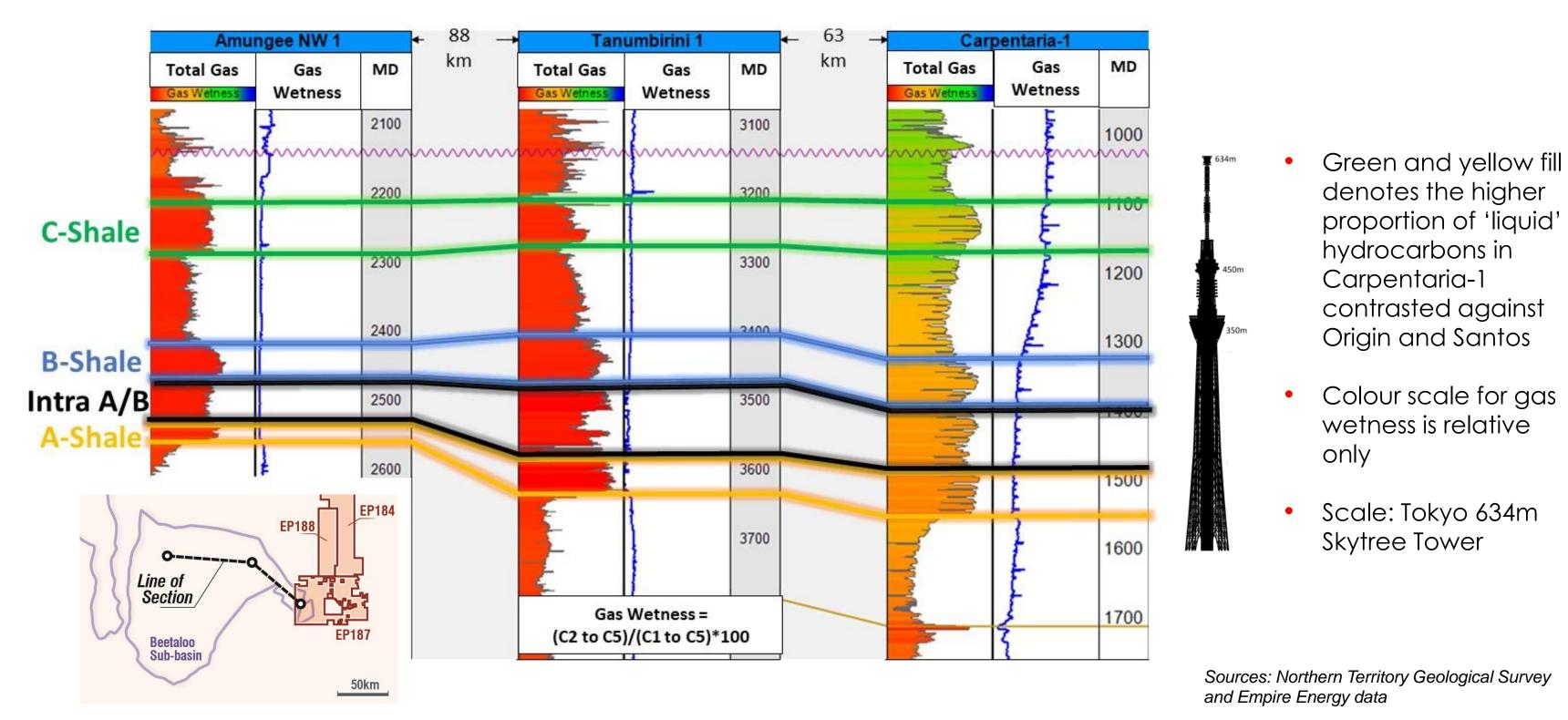




- Empire is preparing for vertical fracture stimulation and production test of Carpentaria-1 in Q2 2021
- Carpentaria-1 frack and flow test fully funded
- Commercialisation planning underway

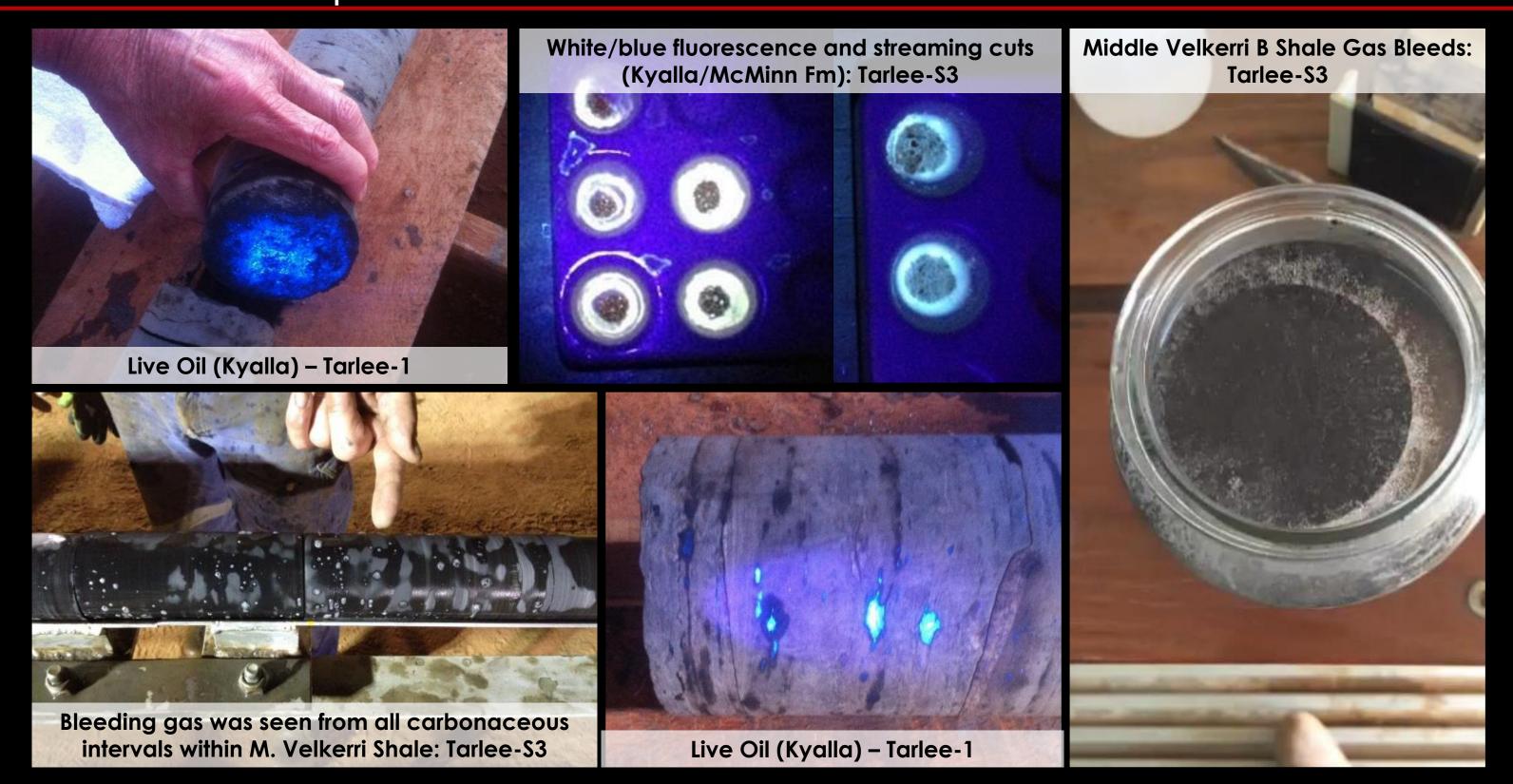
Drilling defines a liquids rich sector of the Beetaloo





Empire's Beetaloo Basin acreage also holds an est. 657 mmbbls of liquids

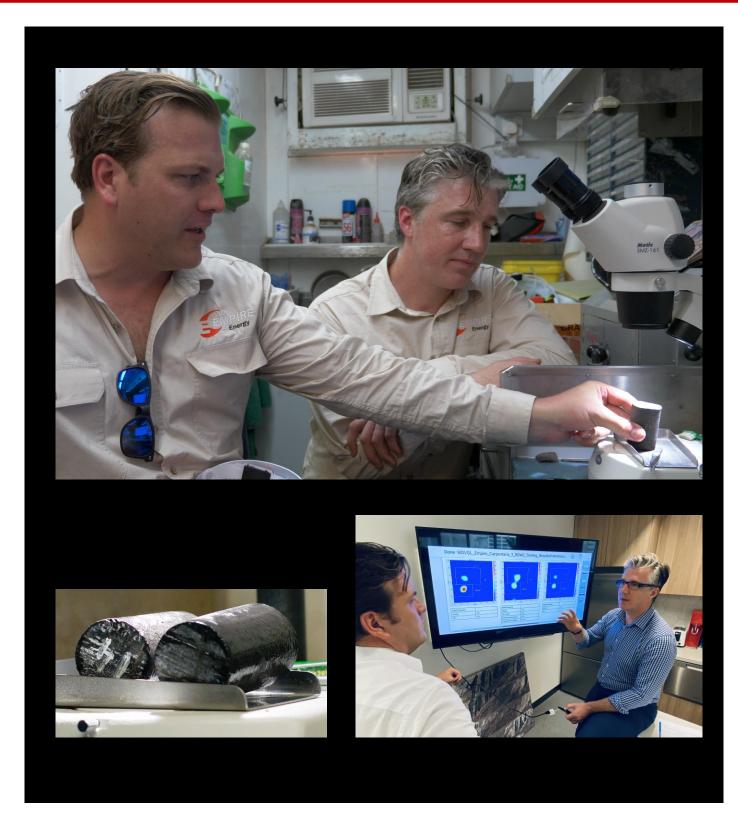




Successful 2020 campaign & Carpentaria-1 well



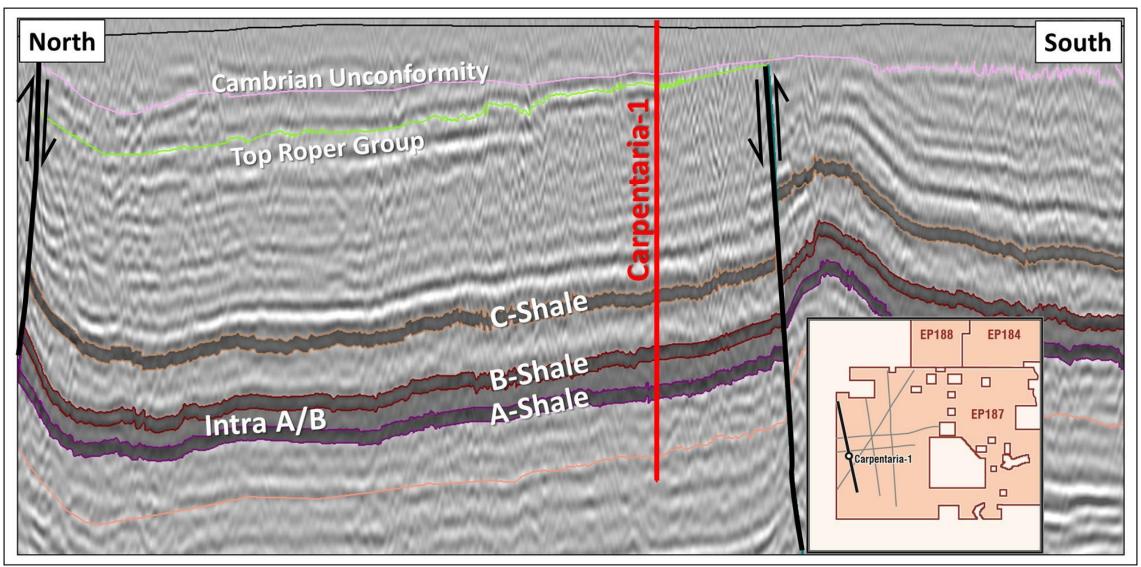
- Empire Carpentaria 1 successfully drilled to TD 1,915m with fast penetration rates. The well encountered an extensive column of liquids rich gas in the Velkerri nearly 1,000m thick
- Substantial proportions of heavier-end, higher-value liquid hydrocarbons encountered materially enhance the economics of future production scenarios
- The Velkerri Shale is shallower than in analogue Beetaloo Basin wells offering reduced drilling costs in future wells
- Post-well analysis undertaken at W.D. Von Gonten & Co (Houston,TX) in collaboration with Empire's technical team show favourable rock properties
- Carpentaria-1 vertical fracture stimulation and flow testing is approved and expected to commence June 2021
- Progressing approvals for a further 150 kms of 2D seismic and the drilling and hydraulic stimulate 6 new horizontal wells across EP 187



Empire's Carpentaria Project Area likely first producer



- Empire expects liquids rich gas will be present right across the Velkerri formation target shales
- >75,000 acres of prospective Velkerri shales
- Stacked pay zone production opportunities

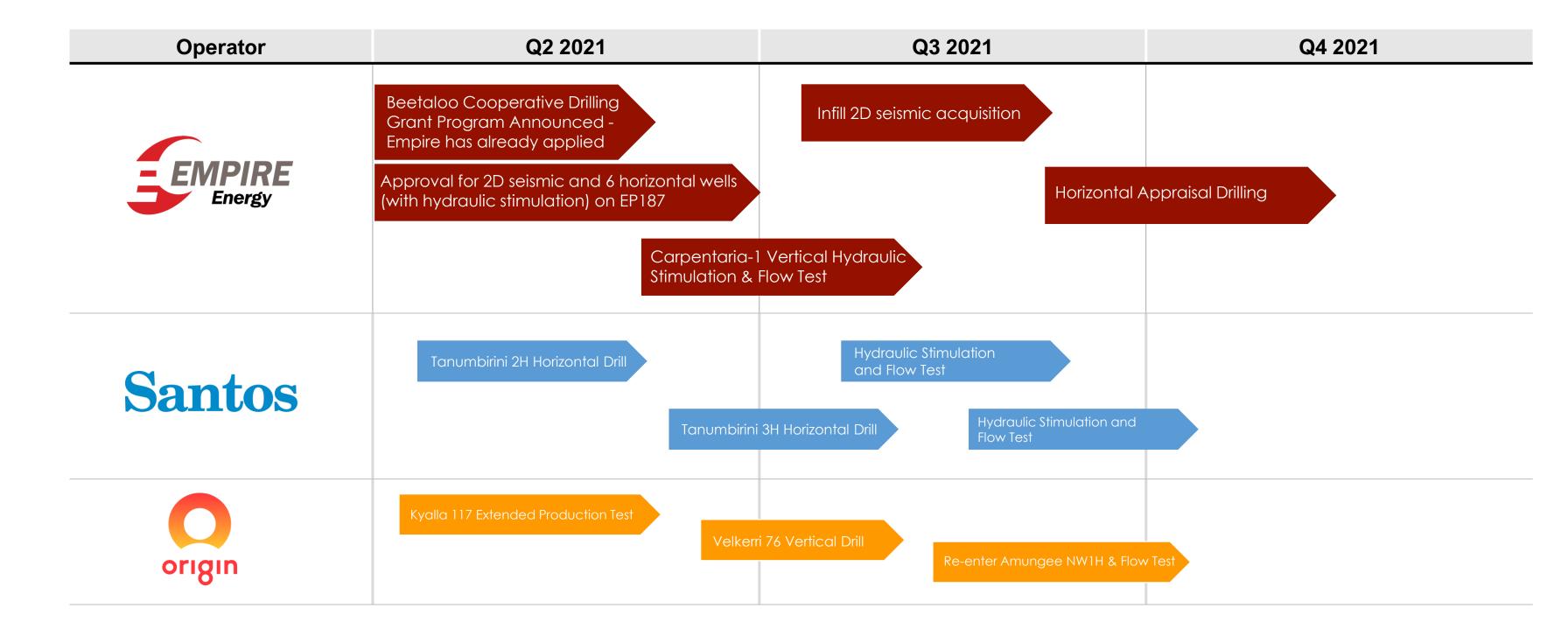




Beetaloo Sub-basin Projected 2021 Operations



15



Source: company disclosures and regulatory filings

Growing gas markets

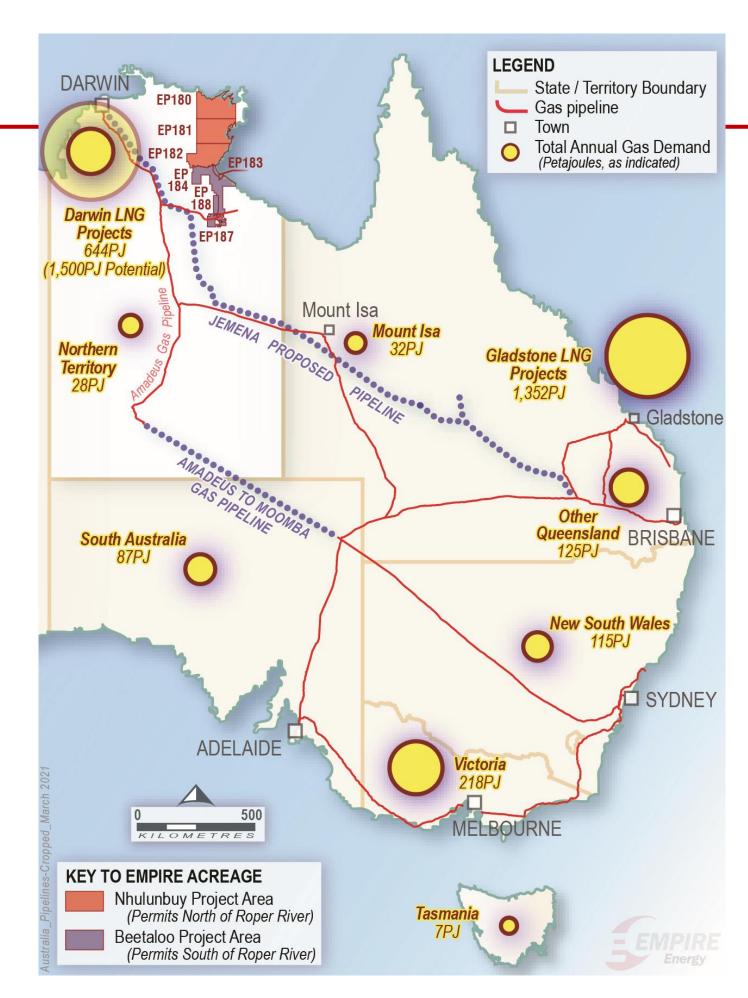
Local NT Markets using existing infrastructure: Local and North Queensland mining operations and power markets

East Coast: Domestic power and industrial markets and Gladstone LNG terminals via existing and anticipated pipelines

Darwin LNG export and liquids for manufacturing: Backfill or expansion gas for LNG and downstream petrochemical manufacturing

Ichthys LNG (INPEX): current 2 trains totaling 8.9mtpa / potential for 4 trains totaling 17.8mtpa

Darwin LNG (Santos): current 3.7mtpa / potential for 10.0mtpa

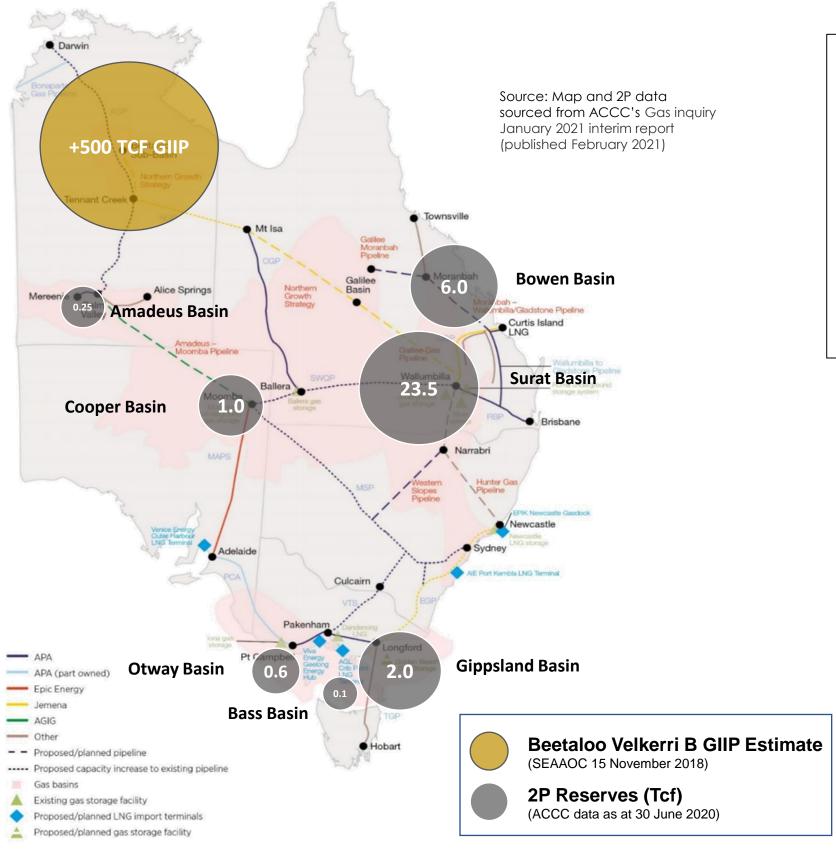




Total Annual Gas Demand Source: Energy Quest and Empire analysis for 2020

The Beetaloo Basin - Australia's largest Undeveloped Gas Resource





- Total potential prospective resources in the Velkerri B shale unit of between 50 Tcf and 100 Tcf based on Government estimates of 500 Tcf gas-in-place (assuming recovery factors of between 10% and 20%)
- This doesn't include upside from other shale units we know to be present (Velkerri A and C, Kyalla) or contained liquids, which can greatly enhance project economics

The Australian Federal Government on 14 January 2021:

"The Beetaloo Sub-basin has the potential to rival the world's biggest and best gas resources. The Beetaloo Strategic Basin Plan outlines how we can realise this potential as soon as possible. The \$224 million Beetaloo Strategic Basin Plan sets out bold, innovative and cooperative actions. These actions will help us seize the opportunities presented by the natural resources in the Beetaloo."

ASX:EEG Empire Energy aiming to be the first operator in the Beetaloo Basin shale gas basin to produce **Alex Underwood** EMPIRE Energy **Managing Director** info@empiregp.net +612 9251 1846

NSAI Certified Prospective Resources



2,300% and 157% increase in Empire's best estimate liquids and gas Prospective Resources, respectively.

	EMPIRE Energy							PANGAEA					Energy					
	Pre Acquisition						Net to 82.5% Interest Acquired						Post Completion					
	Unrisked Prospective Resource Unrisked Prospective Resource (Liquids) (Gas)				Unrisked Prospective Resource Unriske (Liquids)			Unrisked F	Unrisked Prospective Resource (Gas)		Unrisked Prospective Resource (Liquids)			Unrisked Prospective Resource (Gas)				
Shale Unit	Low Estimate (1U)	Best Estimate (2U)	High Estimate (3U)	Low Estimate (1U)	Best Estimate (2U)	High Estimate (3U)	Low Estimate (1U)	Best Estimate (2U)	High Estimate (3U)	Low Estimate (1U)	Best Estimate (2U)	High Estimate (3U)	Low Estimate (1U)	Best Estimate (2U)	High Estimate (3U)	Low Estimate (1U)	Best Estimate (2U)	High Estimate (3U)
	mmbbls	mmbbls	mmbbls	bcf	bcf	bcf	mmbbls	mmbbls	mmbbls	bcf	bcf	bcf	mmbbls	mmbbls	mmbbls	bcf	bcf	bcf
Kyalla	-	-	-	-	-	-	73	312	1,296	152	707	4,035	73	312	1,296	152	707	4,035
Mid Velkerri	4	27	99	1,990	3,446	7,091	63	319	1,599	6,742	22,084	66,531	67	346	1,698	8,732	25,530	73,622
Barney Creek	-	-	-	1,633	11,053	45,380	-	-	-	-	-	-	-	-	-	1,633	11,053	45,380
Total	4	27	99	3,623	14,499	52,471	135	630	2,895	6,894	22,791	70,566	139	657	2,994	10,517	37,290	123,037

Empire's P(50) Prospective Resource is 37 Tcf gas and 657 mmbbls liquids

^{*}Note: Refer to EEG announcements dated 18 May 2020 and 22 February 2021 for Netherland, Sewell & Associates, Inc. contingent and prospective resources

NSAI Certified Contingent Resources



317% increase in Empire's 2C gas Contingent Resource and maiden 2C liquids Contingent Resource.

	EMPIRE Energy							PANGAEA						EMPIRE Energy					
	Pre Acquisition						Net to 82.5% Interest Acquired						Post Completion						
Contingent Resource (Liquids)			Contingent Resource (Gas)				Contingent Resource (Liquids)			Contingent Resource (Gas)			Contingent Resource (Liquids)			Contingent Resource (Gas)			
Shale Unit	Low Estimate (1C)	Best Estimate (2C)	High Estimate (3C)	Low Estimate (1C)	Best Estimate (2C)	High Estimate (3C)	Low Estimate (1C)	Best Estimate (2C)	High Estimate (3C)	Low Estimate (1C)	Best Estimate (2C)	High Estimate (3C)	Low Estimate (1C)	Best Estimate (2C)	High Estimate (3C)	Low Estimate (1C)	Best Estimate (2C)	High Estimate (3C)	
	mmbbls	mmbbls	mmbbls	bcf	bcf	bcf	mmbbls	mmbbls	mmbbls	bcf	bcf	bcf	mmbbls	mmbbls	mmbbls	bcf	bcf	bcf	
Kyalla	-	-	-	-	-	-	0.7	2.5	9.2	0.7	3.7	22.9	0.7	2.5	9.2	0.7	3.7	22.9	
Mid Velkerri	-	-	-	-	41.0	86.0	0.1	0.4	2.5	47.2	126.2	320.2	0.1	0.4	2.5	47.2	167.2	406.2	
Barney Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	-	-	-	-	41.0	86.0	0.7	2.9	11.6	47.9	129.9	343.0	0.7	2.9	11.6	47.9	170.9	429.0	

Empire's 2C Contingent Resource is 171 Bcf gas and 2.9 mmbbls liquids

^{*}Note: Refer to EEG announcements dated 18 May 2020 and 22 February 2021 for Netherland, Sewell & Associates, Inc. contingent and prospective resources

Activity in the Beetaloo Basin



















NT Fracking Moratorium (Sep 2016 – Apr 2018)

	The Fracking Moratorium (Sep 2016 – Apr 2018)											
2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
Operational Highlight	<u>s</u>	,	,			,						
	■ Pangaea Resources acquires ~1,100- line km 2D seismic survey	 Santos Tanumbirini-1 drilled to 3,945m TD. Play opening well, with 500m of shale logged in the Mid Velkerri section Pangaea Resources drills Hidden Valley S2 exploration well 	■ Pangaea Resources drills 4 appraisal wells including the Wyworrie-1 gas discovery and acquires ~500-line km 2D seismic survey	Origin Energy announces Amungee NW-1H production test results, 66TJ produced at an average rate of 1.1Mcf/d	Origin books 2C contingent resources of 6.6Tcf in the Beetaloo Basin and indicates existence of a material gas resource	End of Northern Territory fracking moratorium	Empire completes 231-line km 2D seismic survey in EP187	 Santos books maiden 2C resource Origin and Falcon Oil drill and fracture stimulate the horizontal Kyalla 117 well Santos announces initial peak gas flow rate of 10mmscf/d at Tanumbirini-1 vertical well Empire drills the Carpentaria-1 well 	 Origin and Falcon confirm liquid-rich gas discovery at Kyalla 177 with CO2 estimated at less than 1% Empire books a maiden contingent gas resource Santos confirms two horizontal wells with fracture stimulation and production testing Falcon confirms further Velkerri drilling and flow testing 			
<u>Financial Highlights</u>												
Santos farms into EP161 (and other tenements) with Tamboran Resources		Origin Energy and Sasol farm-in to Falcon Oil & Gas' Beetaloo acreage	 Energy & Minerals Group farms into Pangaea Resources Beetaloo acreage INPEX awarded Beetaloo acreage 		Origin increases its interest in its Beetaloo JV to 70% following the acquisition of Sasol's share			 Origin increases its interest in its Beetaloo JV to 77.5%, valuing the project at A\$333 million (gross) Tamboran acquires Sweetpea 	21			

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