

Empire Energy – Sights on Early Production in the Beetaloo

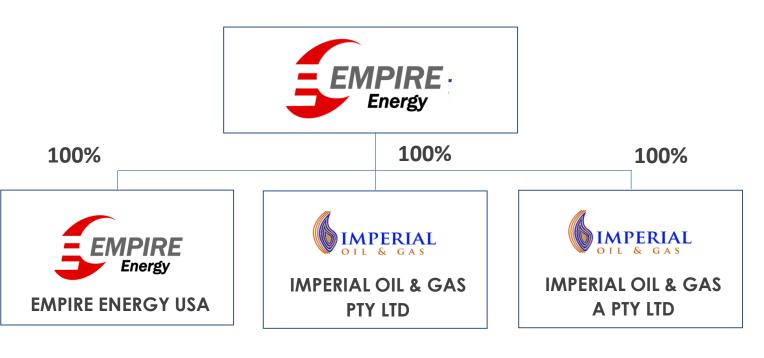


SEAAOC Presentation October 2021

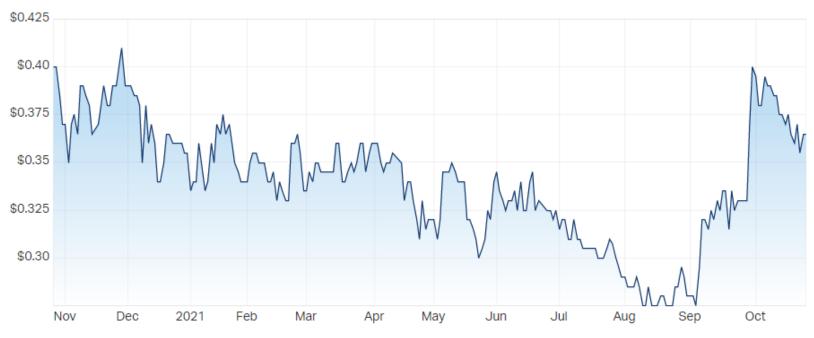
ASX:EEG

Corporate Snapshot

Capital Structure	
Shares on issue ¹	599.5m
Share price	\$0.365
Market cap	\$218.8m
Net (debt ²) / cash	~\$21.8m
Enterprise value	~\$197.0m
Cash at bank	~\$30.0m







Pro-forma Top Shareholders Pangaea Resource **Elphinstone Holdin** Global Energy and Energy and Miner Macquarie Bank L Board of Directors

1. Empire has 28.1m unlisted options on issue with an average exercise price of ~A\$0.48 per share. In addition, there are 13.0m 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\$6.125 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. Net debt excludes a US\$343,602 loan which has been approved and received under the US Paycheck Protection Program which is expected to be forgiven.

3. Pangaea shares total 140m, which will be issued subject to Pangaea not holding an interest of more than 20% in Empire's ordinary shares at any point in time. Currently there are 119,894,868 issued shares held by Pangaea, with 20,105,132 being unissued 4. Board shareholding includes Mr Paul Fudge (Pangaea Resources) and excludes options and MD Rights



es (NT) Pty Limited ³	20.0%
ngs Pty Limited	8.9%
d Resources	5.4%
als Group	5.0%
imited	4.4%
54	22.0%

Empire's Board of Directors



Paul Espie AO

Chairman & Non-Executive Director

- Founding principal of Pacific Road Capital, a resources investing manager of private equity funds
- Former Chairman of Oxiana Ltd during 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 Macquarie 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 gas 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 merged with Arrow Energy and later acquired by PetroChina and Shell
- Founding principal of Pacific Road Capital, a resources investing manager of private equity funds
- Former Chief Operating Officer of AurionGold Limited
- Chairman of the VALMIN Code Committee for the AusIMM and Australian Institute of Geoscientists

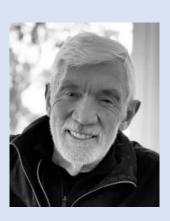


Prof. John Warburton

Non-Executive Director

- Highly regarded
 petroleum geoscientist
 experienced in big 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





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

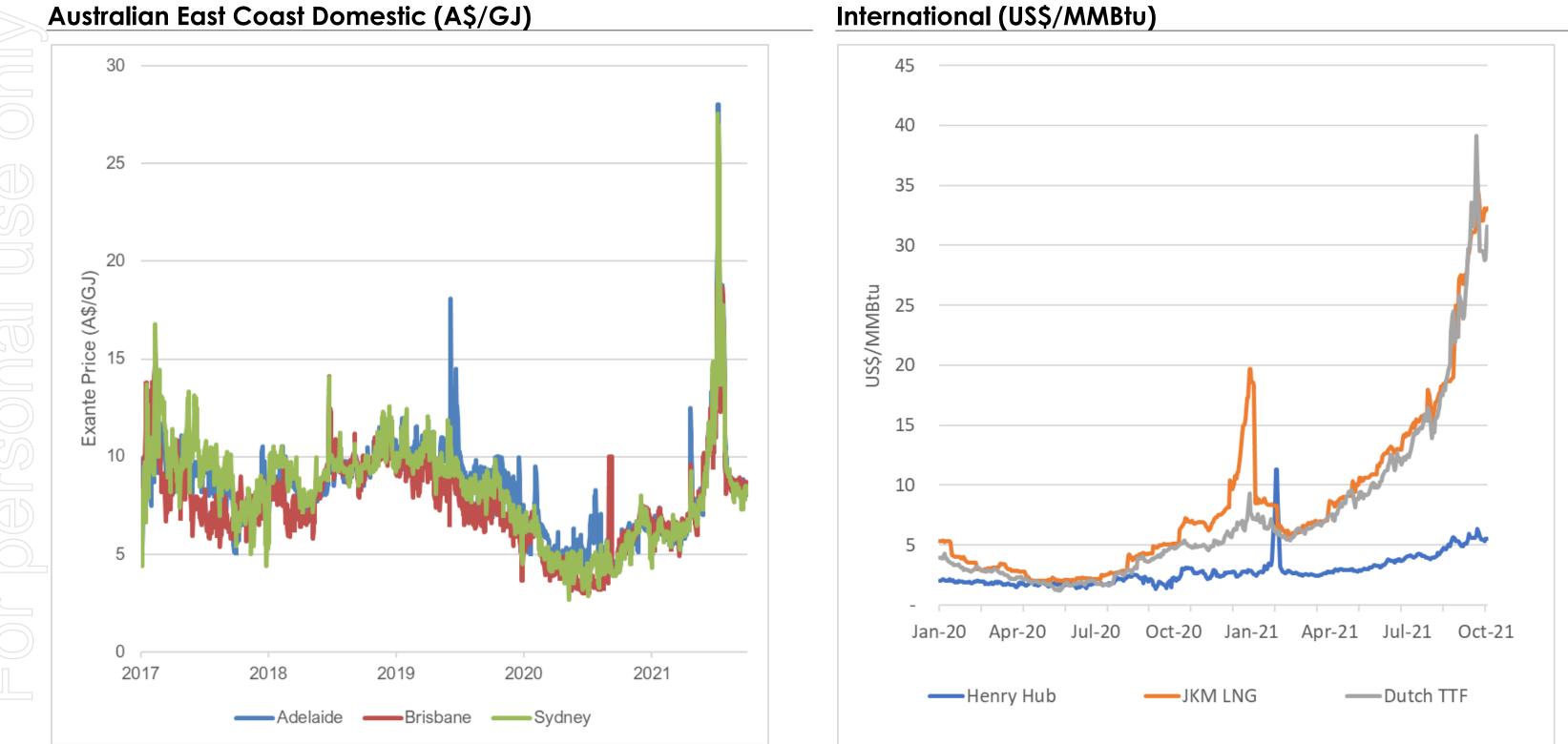
- 30 years professional services experience, with over 15 years as a Partner at Deloitte.
- Jacqui is a Chartered Accountant and Fellow of the Institute of Chartered Accountants, Graduate of AICD (Australian Institute of Company Directors), Chartered Tax Advisor and Justice of the Peace

Pangaea Representatives



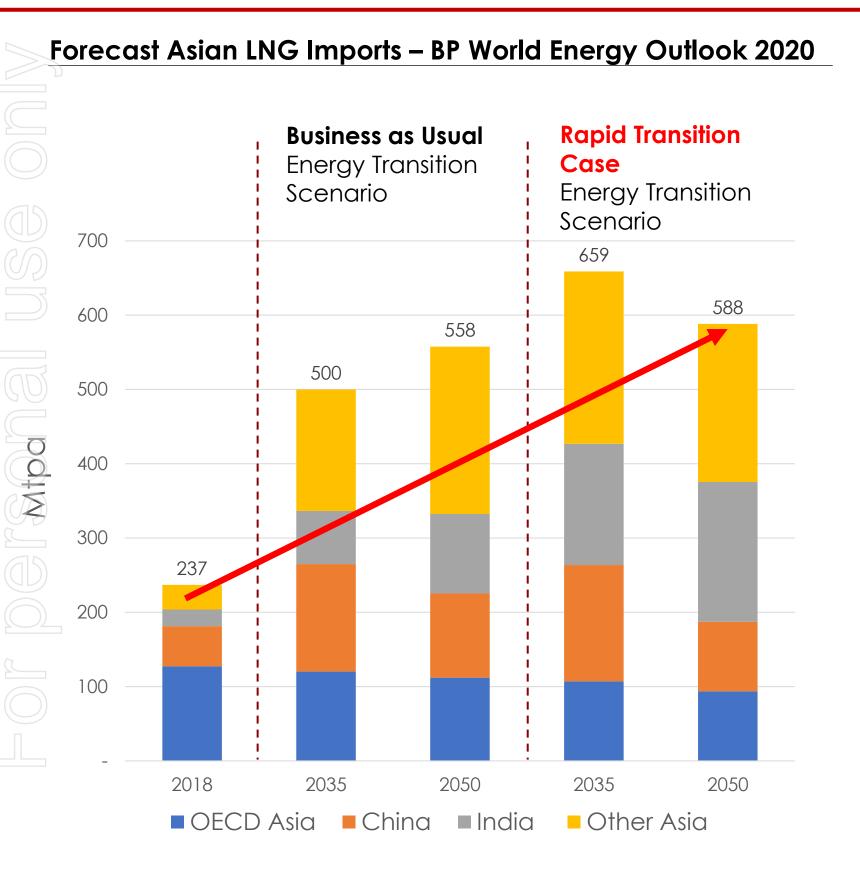


Global gas prices rising strongly





Gas running strong - Asian LNG demand increasing dramatically







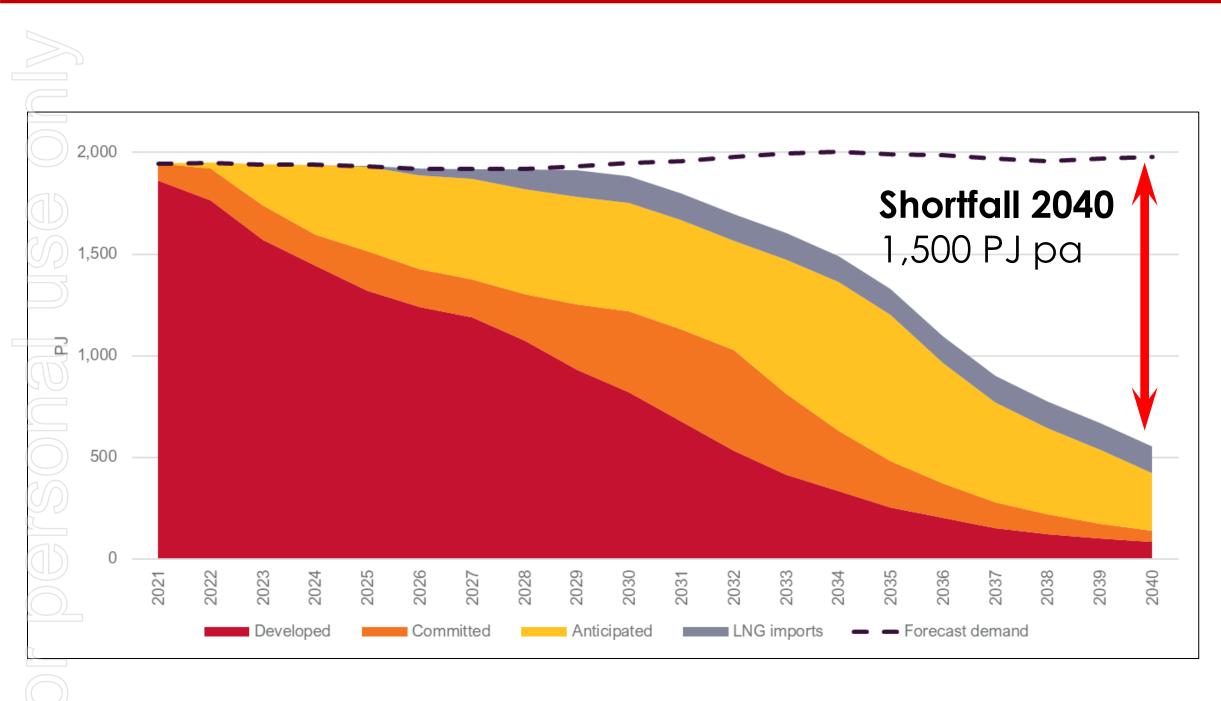
Growing LNG demand in 'hard to abate sectors' such as heavy industry, shipping, road logistics

 Asian LNG demand doubles even in a 'Rapid Transition 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

Australia's looming gas shortage – Beetaloo poised to fill the gap



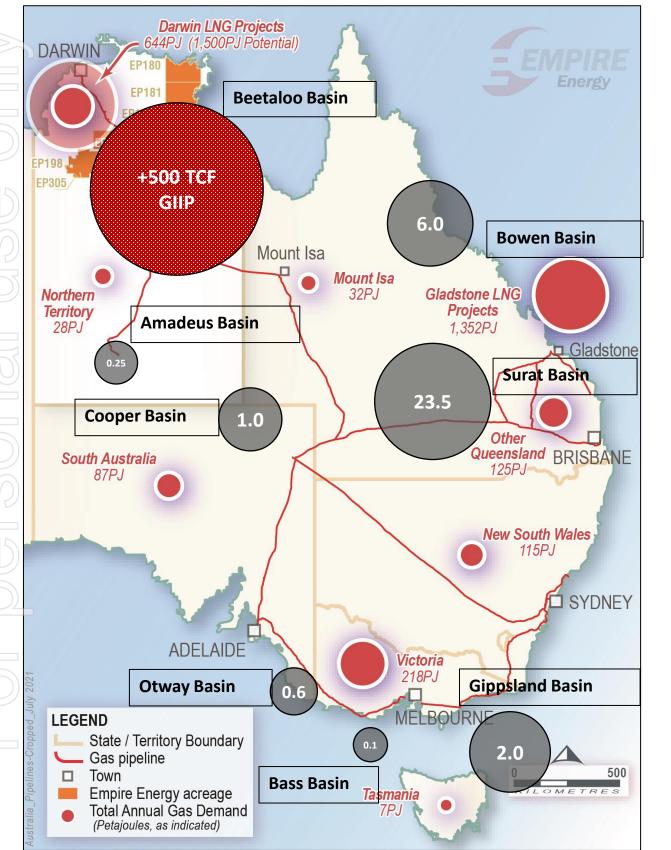
Australian Energy Market Operator 2021, Gas Statement of Opportunities



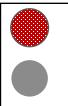
- The Beetaloo Sub-basin is well positioned to meet this challenge with the scale of resource and existing infrastructure
- Empire's Beetaloo gas has notably low CO₂ (0.5% to 1%) and high calorific content
- Australian Federal Government demonstrating strong support through its Beetaloo Strategic Basin Plan committing \$220 million (including \$50 million to incentivise drilling by Beetaloo operators)



The Beetaloo is 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 recovery factors of between 10% and 20%)
- the Velkerri A, Intra A-B and C, the Kyalla plus economics
- The Australian Federal Government, 14 January 2021: "The Beetaloo Sub-basin has the potential to rival the the Beetaloo."



Beetaloo Velkerri B GIIP Estimate (SEAAOC 15 November 2018)

2P Reserves (Tcf) (ACCC data as at 30 June 2020)



Government estimates of **500 Tcf** gas-in-place (assuming

Add to this the upside from other productive shale units contained liquids, which can greatly enhance project

world's biggest and best gas resources... 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

MOU Executed With APA Group

APA Group (ASX: APA) and Empire have today executed an MOU to explore opportunities for the development of Beetaloo midstream infrastructure including gas and liquids gathering, processing and pipelines

APA is a leading Australian energy infrastructure business connecting sources of gas supply and markets across mainland Australia delivering approximately half of Australia's natural gas usage

APA will support Empire to get our production to market, promptly, leveraging its existing network of gas transmission infrastructure

APA and Empire are supportive of a common infrastructure approach amongst Beetaloo upstream producers to deliver lower per unit costs

'Northern Strategy' will support the development of a gas-fed manufacturing industry and LNG export expansion at Darwin

'Eastern Strategy' including a new Beetaloo Pipeline to Mount Isa will allow Beetaloo gas to be transported to all Australian east coast domestic markets (Wallumbilla, Brisbane, Sydney and Melbourne) and LNG export through Gladstone

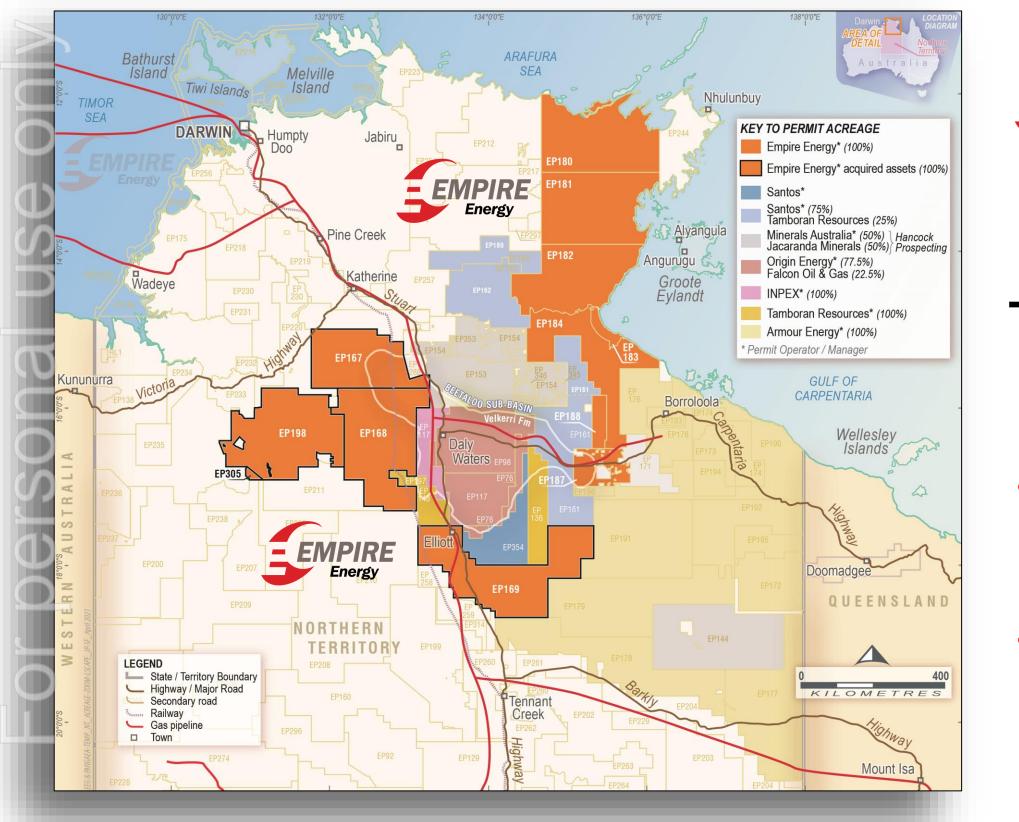




DARWIN

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A Larger Empire through a major acquisition



ИPIR Energy Pangaea **EMG** asse





RE y	28.9	42.1	46,870	
a / ets	14.3	27.7	32,209	
	14.6	14.4	14,661	
E	In area: millions of acres:	P(50) Gas in TCf	P(50) Prospective Resource in PJe	

Pangaea and EMG invested ~\$110 million in exploration and appraisal between 2012 and 2015

 Stuart Highway, Darwin to Adelaide rail corridor and the Amadeus Gas Pipeline (connecting to the East via the Northern Gas Pipeline)

A 191% lift in gas, 2,830% lift in liquids Prospective Resources

				EMPI Ener	rgy	'n	Pangaea / EMG assets (100%)							Emergy Post Acquisition					
		ed Prospo ources (Lic			ed Prospe sources (C			ed Prosp ources (Lic			ed Prospe sources (C			ed Prosp urces (Lic			ed Prospe ources (C		
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	_	-	-	_	_	_	88	378	1,571	184	857	4,891	88	378	1,571	184	857	4,891	
Mid Velkerri	4	27	99	1,990	3,446	7,091	76	386	1,938	8,173	26,768	80,644	80	413	2,037	10,163	30,214	87,735	
Barney Creek	-	-	-	1,633	11,053	45,380	_	-	_	_	_	-	-	-	_	1,633	11,053	45,380	
Total	4	27	99	3,623	14,499	52,471	164	764	3,509	8,357	27,625	85,535	168	791	3,608	11,980	42,124	138,006	

Empire P(50) Prospective Resources of 42 Tcf gas and 791 mmbbls liquids

Note: Refer to EEG announcements dated 18 May 2020, 22 February 2021 and 14 April 2021 for Netherland, Sewell & Associates, Inc. contingent and prospective resources



A 384% increase in 2C gas + 2C liquids Contingent Resources

				EMPI Ener	gy		+	Pangaea / EMG assets (100%)							Emergy Post Acquisition					
	Contingent Resources Contingent (Liquids) Resources (Gas)						Contingent Resources (Liquids)			Contingent Resources (Gas)				Continger urces (Liq		Contingent Resources (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)		
30	mmbbls	mmbbls	mmbbls	bcf	bcf	bcf	mmbbls	mmbbls	mmbbls	bcf	bcf	bcf	mmbbls	mmbbls	mmbbls	bcf	bcf	bcf		
Kyalla	-	_	-	-	-	-	0.8	3.0	11.1	0.8	4.5	27.7	0.8	3.0	11.1	0.8	4.5	27.7		
Mid Velkerri	-	_	-	-	41.0	86.0	0.1	0.5	3.0	57.2	153.0	388.1	0.1	0.5	3.0	57.2	194.0	474.1		
Barney Creek	_	_	-	-	-	-	-	_	-	-	-	-	-	-	-	-	-	-		
Total	-	-	-	-	41.0	86.0	0.9	3.5	14.1	58.0	157.5	415.8	0.9	3.5	14.1	58.0	198.5	501.8		

Empire's 2C Contingent Resource of 198 Bcf gas and 3.5 mmbbls liquids

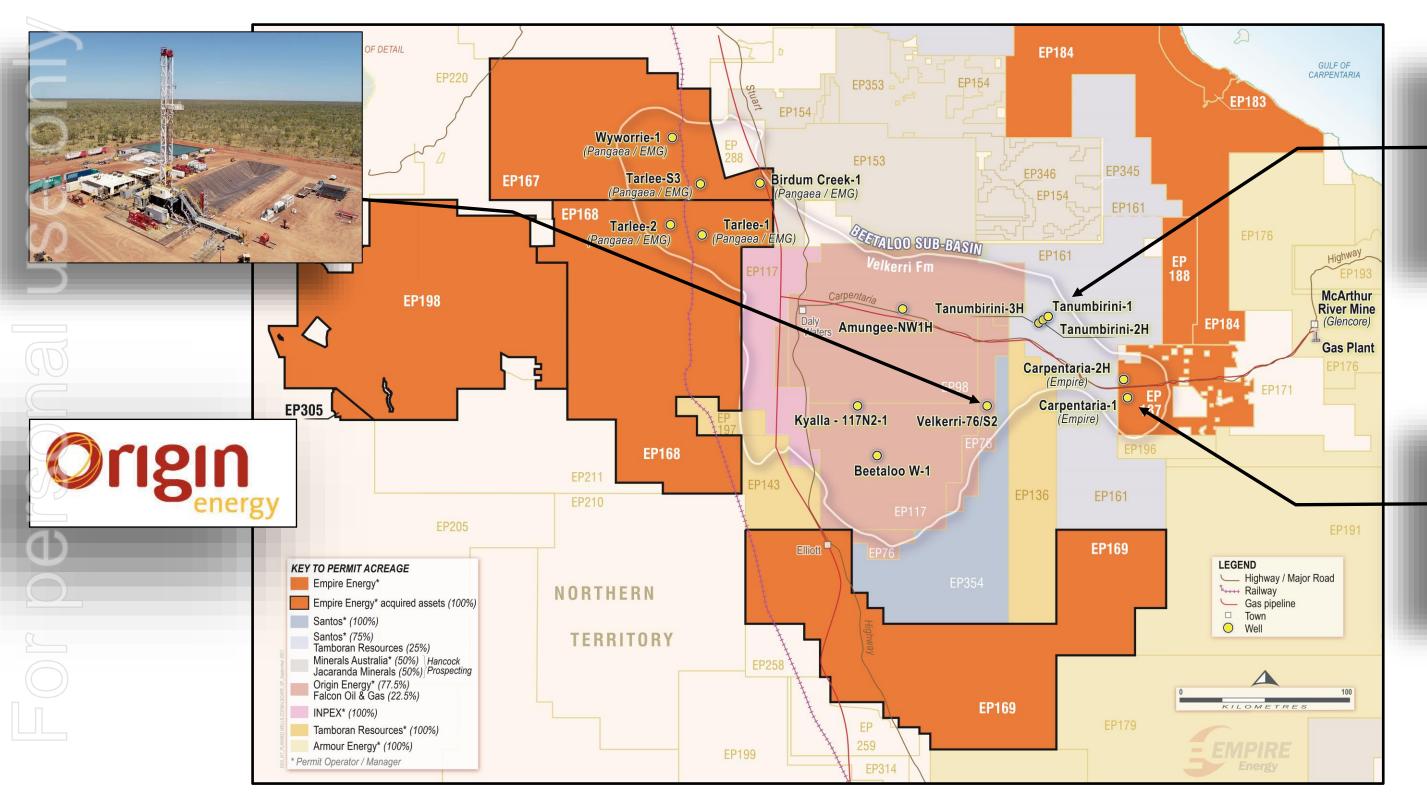
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2021 Appraisal work accelerating across the Basin



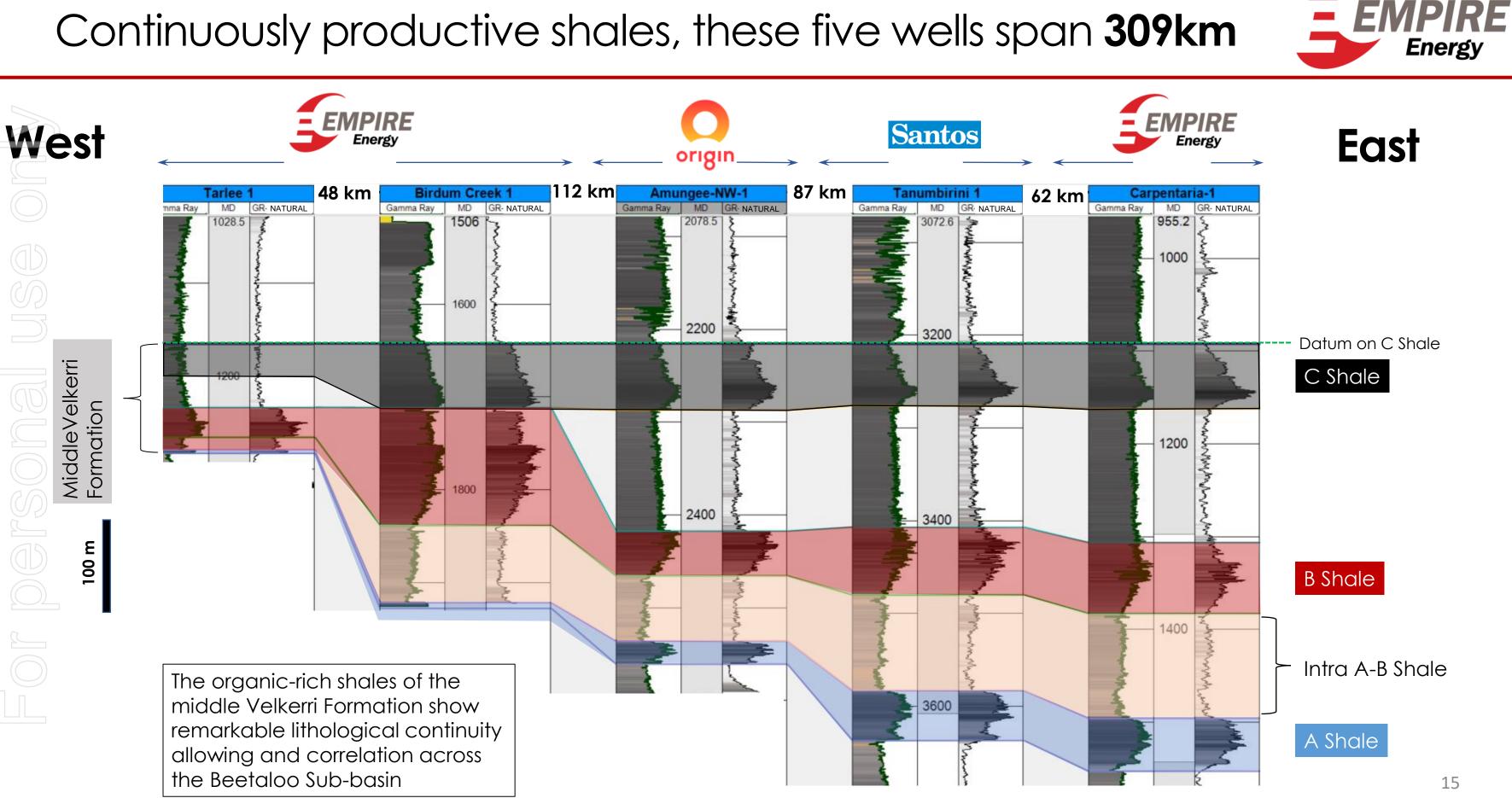




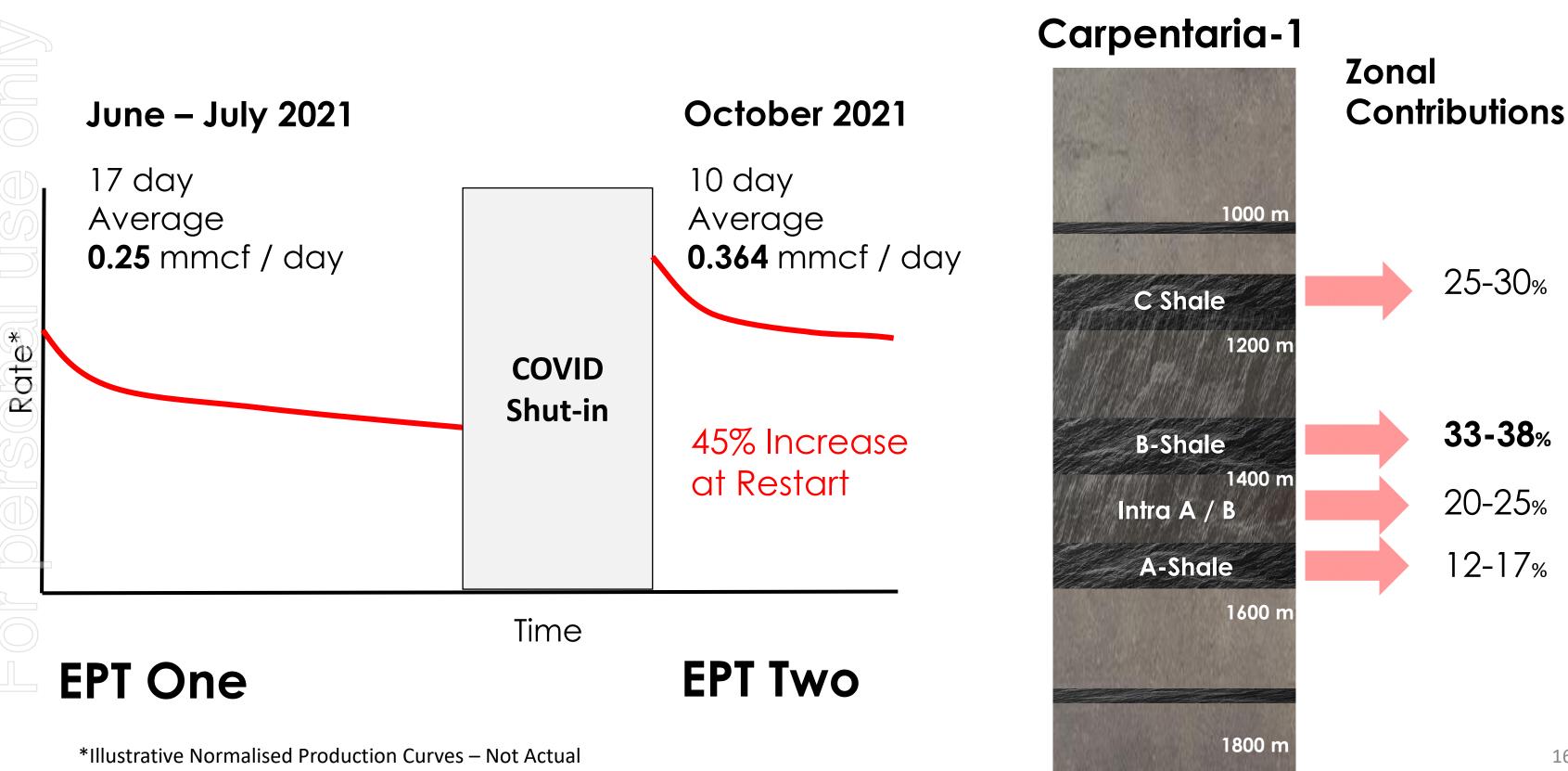
Santos







Second Carpentaria-1 EPT lifts Velkerri flow rate







2020 – 2021 Exploration & Appraisal Campaign Successes

October 2020 Carpentaria-1 drilled to TD 1,915m intersected a column of liquids rich gas in the Velkerri nearly 1 km thick (998m)

Substantial proportions of heavier-end, higher-value liquid hydrocarbons intersected - enhancing the economics of future production scenarios

The Velkerri Shale is shallower than in analogue Beetaloo Basin wells and offers lower drilling costs in future wells

Post-well analysis undertaken at W.D. Von Gonten & Co (Houston, Texas) in collaboration with Empire's technical team recorded favourable rock properties

Carpentaria-1 four stage vertical fracture stimulation and flow testing produced a peak rate >1.6mmcf / day and ~0.25 mmcf / day average in EPT 1 and ~0.364mmcf / day average in EPT 2

October 2021: Drilling and hydraulic stimulation approval of up to 7 horizontal wells across EP187 approved

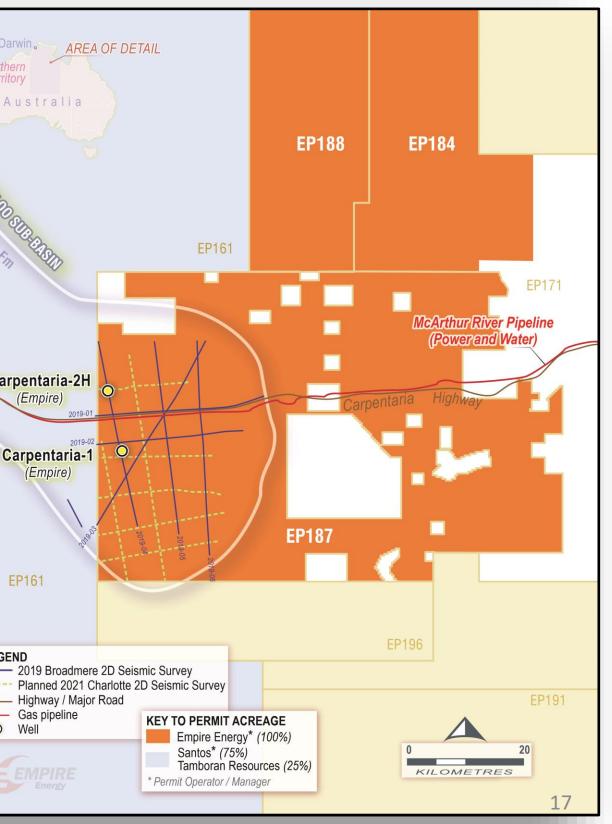
Three grant agreements under the Beetaloo Cooperative Drilling Program for up to **\$19.3m** executed

Carpentaria-2H horizontal appraisal drilling program underway

Carpentaria-2H

LEGEND





ENPIRE Energy

https://empireenergygroup.net/

ASX:EEG

Alex Underwood Managing Director info@empiregp.net +612 9251 1846

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