

Empire Energy Group Limited ("Empire") shareholders are reminded that Empire Managing Director Alex Underwood will host an investor and analyst briefing call at 11am (AEST) today to discuss the recent Carpentaria-1 flow test results and the next steps in Empire's Beetaloo Sub-basin work programs.

The presentation for the briefing is attached.

Details of the meeting can be found here:

https://us06web.zoom.us/j/83109811041

Telephone: +61 2 8015 6011 Meeting ID: 831 0981 1041

This ASX release has been authorised by the Managing Director.

For queries about this release, please contact:

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Empire Energy Group Investor & Analyst Briefing 30 June 2021

## Safety, Environment and Stakeholder Relationships



- The highest environmental and safety standards and respectful engagement with local communities and traditional owners are core to Empire's business strategy
- Empire has an outstanding environmental and safety track record in the NT and a long and successful history of respectful engagement with traditional owners dating back to 2011
- We have the full and informed consent of traditional owners for our activities. We continue to consult with traditional owners on current and forward work programs
- We are demonstrating through our work program activities and direct community engagement that we are a responsible operator

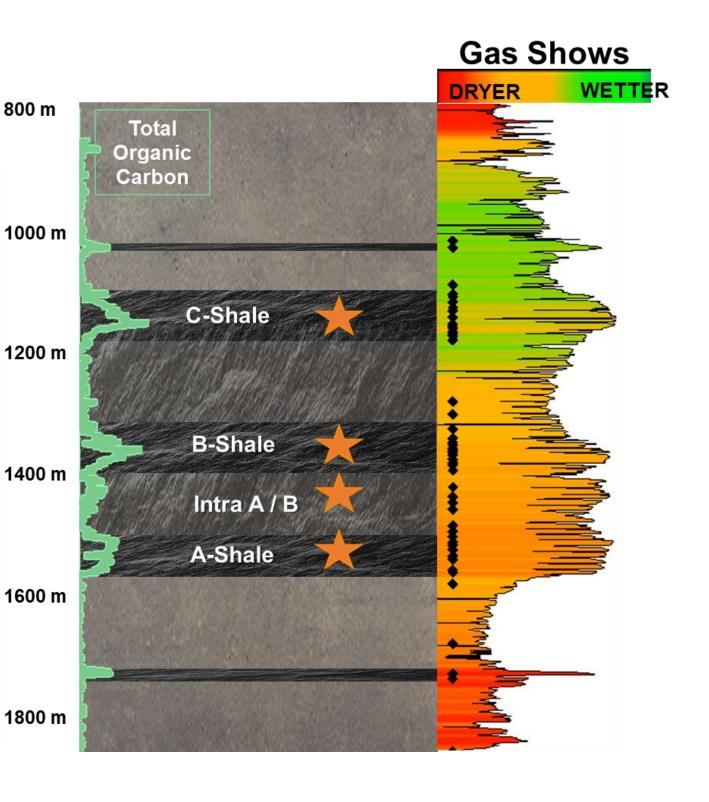




# Empire's Carpentaria-1 Vertical Flow Testing Program

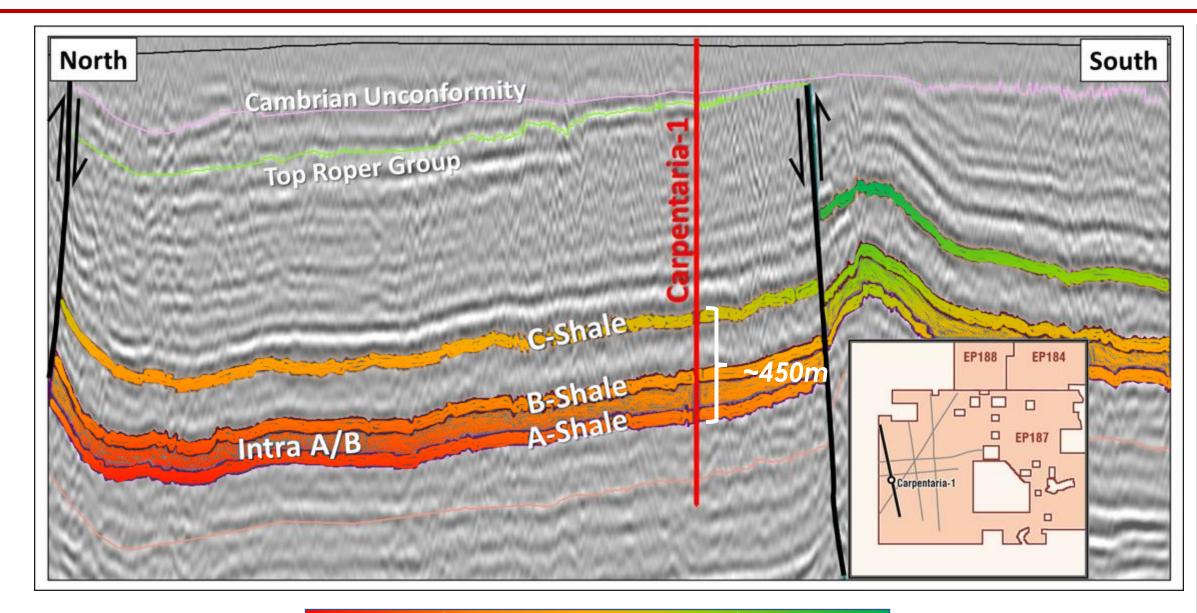


- Empire has executed a four-stage fracture stimulation of the Middle Velkerri A, Intra A/B, B and C shales
- ~1.4 million pounds of proppant was successfully placed into these zones
- There have been zero safety or environmental incidents
- Over an initial 72-hour test period, there was a peak flow rate of > 500,000 cubic feet per day, with an average flow rate of 365,000 cubic feet per day
- A peak rate of > 1.6 million cubic feet per day was achieved following a short shut-in
- CO2 contribution was too low to measure, less than 1%
- Gas sample testing will now be carried out to determine gas composition (i.e. methane vs heavier end hydrocarbons and inerts) and zonal contribution (i.e. which zones are contributing to the flow rates)
- This data will assist in Empire's determination of which zone to land a horizontal appraisal well in



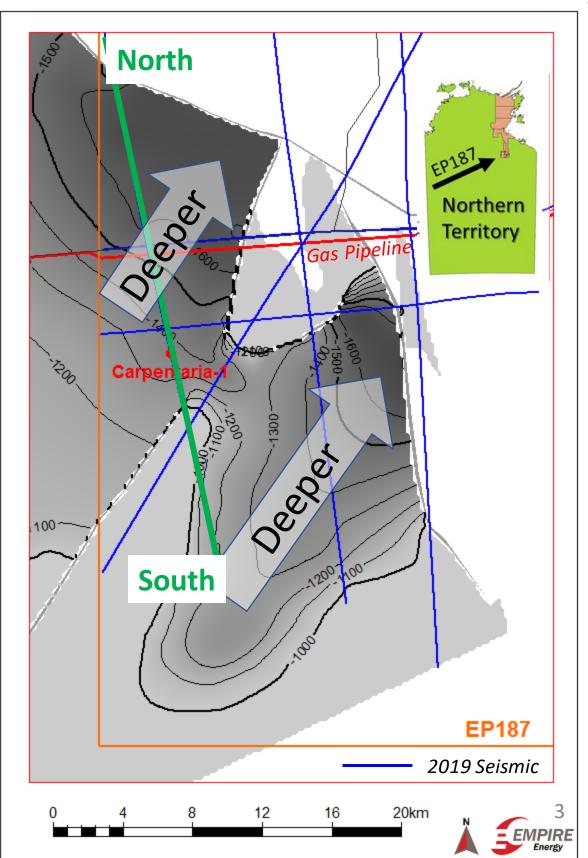
## Carpentaria Project Area depth and thermal maturity





## DRYER ( Hydrocarbons LIQUIDS

- Velkerri stacked shale play presenting production opportunities
- Numerous liquids rich gas targets
- Empire expects liquids rich gas will be present right across the Velkerri formation target shales in EP187



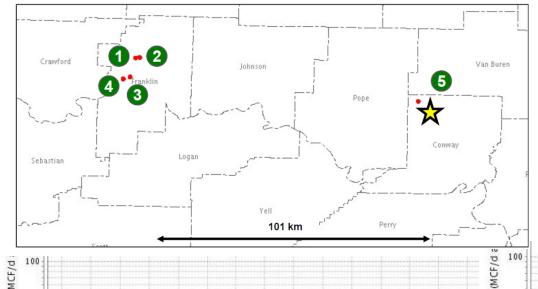
# Our Vertical Flow Rates in Context – Fayetteville Shale



#### Carpentaria-1 vertical flow rates compare favourably to Fayetteville Shale vertical results



	Well	Date	Initial Production				
1	Jimmy Hales 1-24	May 2004	IP30: 9 mcfd				
2	Cline #4	May 2004	IP30: 17 mcfd				
3	Carethers #2-14	June 2004	IP30: 16 mcfd				
4	Crockett #5-21	August 2004	IP30: 155 mcfd				
•	Thomas 1-9	September 2004	IP30: 269 mcfd				

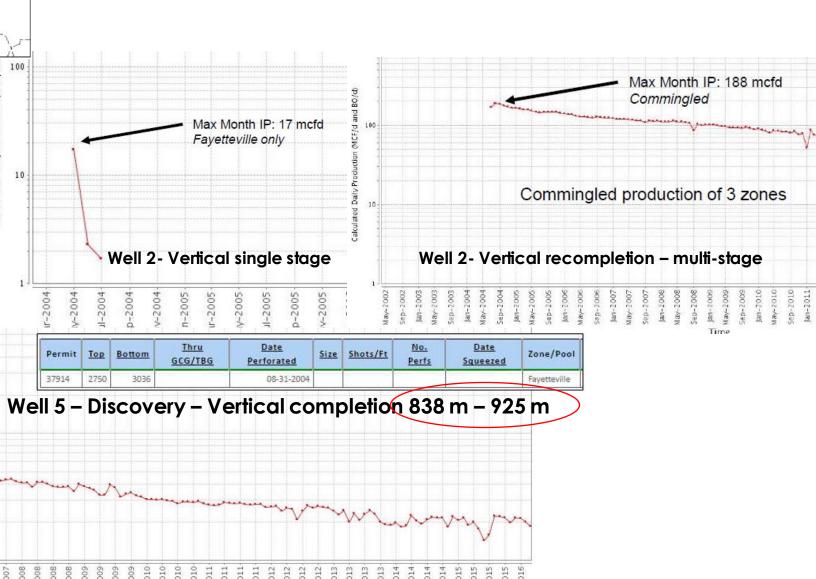


Max Month IP: 9 mcfd

Well 1 - Vertical single stage

#### Play Discovered in 2004

- First five vertical wells had IP30 9 269 mscf / day
- Shallower play with production ranging from 700 m ~1900 m
- Core area at 800 1400m

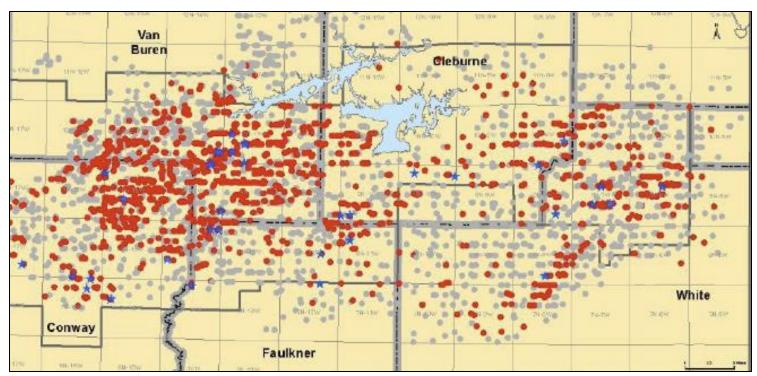


## Fayetteville horizontal wells show true reservoir potential



#### Fayetteville horizontal wells produce at initial production rates of 3 million – 14 million cubic feet per day





- Fayetteville was one of the first shale plays developed in the US
- Core areas mostly drilled out by 2010 did not have the production uplift benefits of learnings and technology of past 10 years seen across other plays in the US and now in the Beetaloo
- Despite this the Fayetteville showed favourable results
- Empire is utilising world leading expertise to develop the Beetaloo using modern drilling and completion techniques

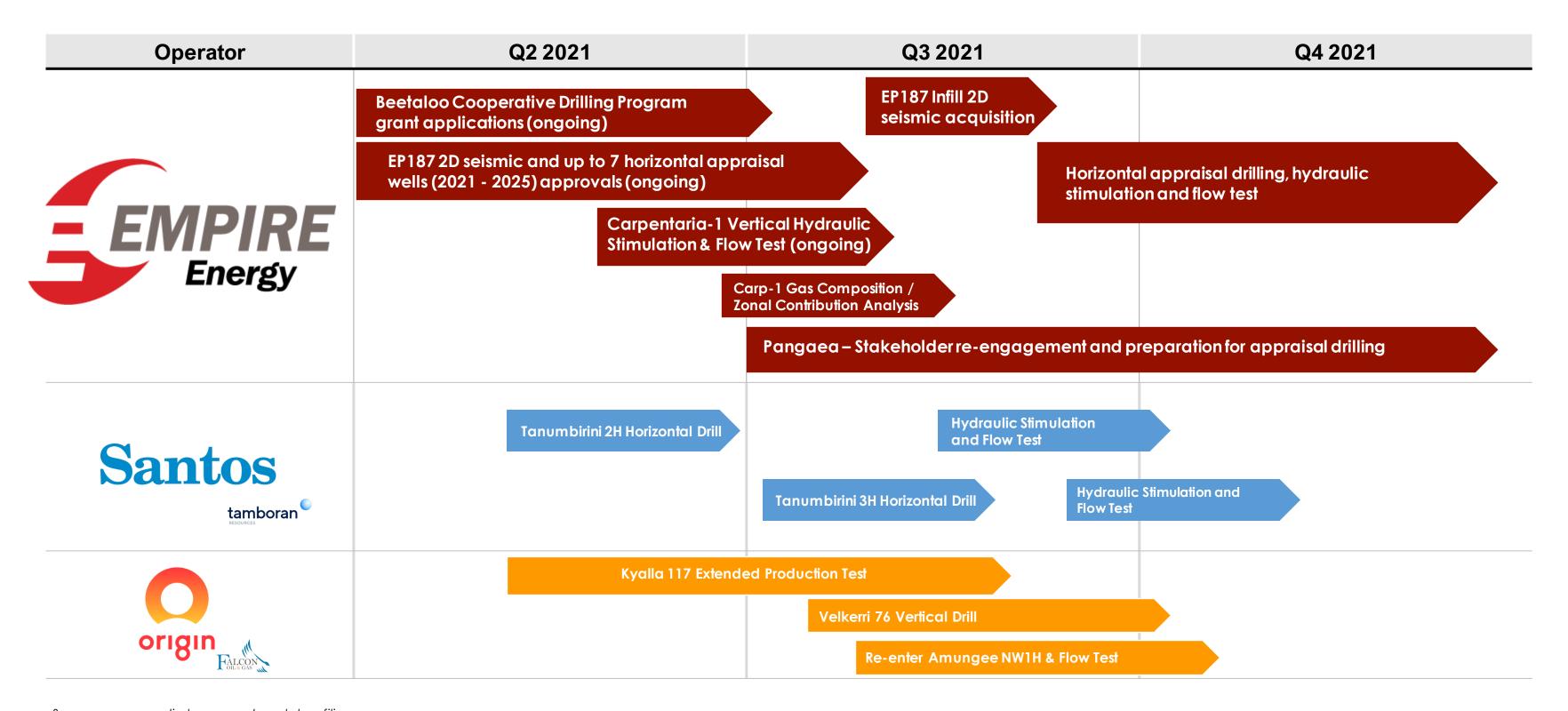
#### 2008 – 2010 Fayetteville Results

																Lateral
Operator	Well Name	Well Number	Sec	Twn	Rng	County	1st Prod	Formation	IP	30	90	180	1 yr	CP	LR	Length (LL)
SEECO, LLC	Collums Family Trust 10-13	2-34H	34	10N	13W	VAN BUREN	11/11/08	Fayetteville	5141	5220	5170	4969	4103	4,117,131	520	3763
SEECO, LLC	Prince, Loui 09-15	4-22H	22	09N	15W	CONWAY	10/14/09	Fayetteville	5546	4973	4677	4359	3909	4,071,916	547	5047
SEECO, LLC	Rowlett, E C, LP 10-13	2-33H28	33	10N	13W	VAN BUREN	12/2/08	Fayetteville	4913	4493	4737	4322	3560	3,966,339	439	4747
SEECO, LLC	Stobaugh 09-16	5-1H7	1	09N	16W	CONWAY	7/20/09	Fayetteville	6301	4911	4625	4142	3525	3,964,341	699	6134
SEECO, LLC	Poole 09-07	2-15H22	15	09N	07W	WHITE	6/4/09	Fayetteville	4522	4722	4527	4444	3768	3,913,844	668	5029
BHP	Deen, Reva 7-8	1-15H9	15	07N	08W	WHITE	9/28/09	Fayetteville	3285	6320	4578	4239	3595	3,871,506	529	6874
SEECO, LLC	Ogle 10-13	2-23H	23	10N	13W	VAN BUREN	2/14/09	Fayetteville	4845	4640	4366	3936	3542	3,855,675	436	3949
SEECO, LLC	Collums Family Trust 10-13	3-34H27	34	10N	13W	VAN BUREN	5/4/10	Fayetteville	5482	5072	5032	4733	4160	3,826,117	442	5330
SEECO, LLC	Turney 10-12	1-2H	2	10N	12W	CLEBURNE	5/1/10	Fayetteville	5427	4651	4695	4385	3892	3,800,439	552	4106
SEECO, LLC	Davidson 09-15	4-34H	34	09N	15W	CONWAY	5/22/09	Fayetteville	5958	5119	4690	4087	3463	3,797,188	475	4136

Source: Shelby, 2017 AAPG

## Beetaloo Basin 2021 Activities





Source: company disclosures and regulatory filings

## Next steps in Empire's Beetaloo Appraisal Program



To be funded from Empire's \$41.8 million cash balances

- Continue flow testing at Carpentaria-1 (subject to COVID-19 impacts) and analyse gas composition and zonal contribution data
- This will determine the gas v liquids content of the produced gas streams, and which of the 4 stimulated zones is providing the strongest contribution to flow rates (~8 weeks until analysis complete)
- Seismic acquisition (subject to NT Govt approvals) to de-risk the first horizontal drilling location, likely in the northern part of EP187 where the target shales are ~250m deeper (target commencement of seismic acquisition late Q3 2021)
- Empire plans to drill, fracture stimulate and flow test its first horizontal appraisal well (subject to NT Govt approvals) targeting one of the most productive zones (target commencement of drilling in Q4 2021)
- Empire's prospective and contingent resources will be reassessed based on new data gained from horizontal well, with potential for material increase in contingent resource base (Q1 2022)
- A successful horizontal flow test would facilitate gas sales negotiations and detailed field development planning (2022)



### Path to Commercialisation

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

Access to Amadeus Gas Pipeline and McArthur River Mine Gas Pipeline

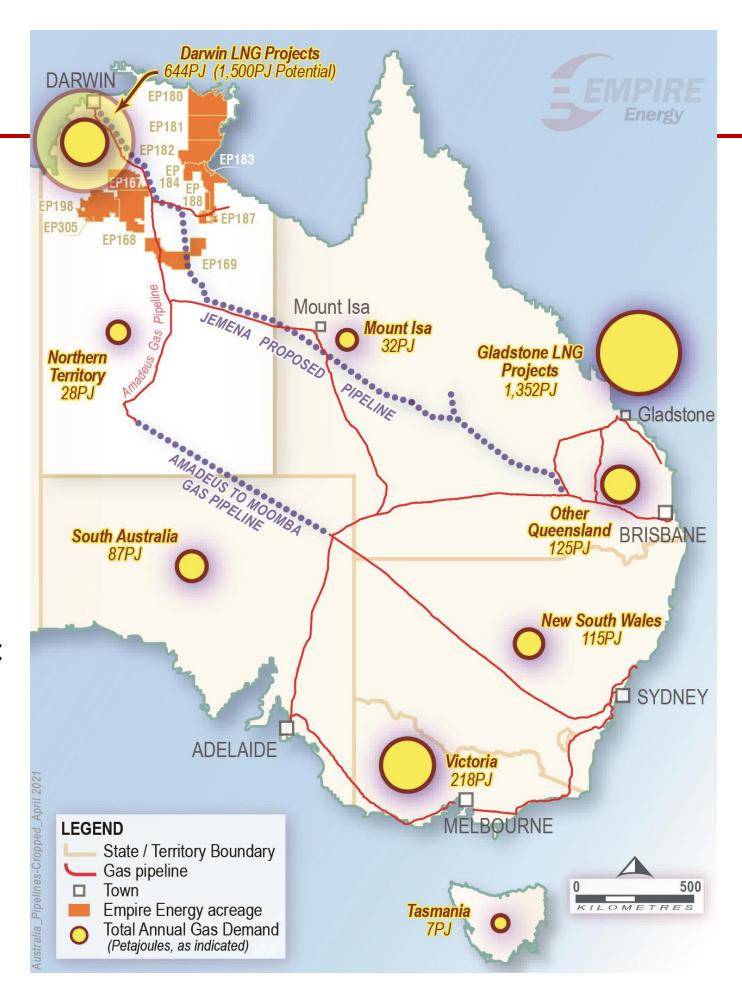
**East Coast:** Domestic power and industrial markets and Gladstone LNG terminals via existing and anticipated pipelines

AEMO forecasts potential gas shortfalls from 2023

**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



# ASX:EEG

# Questions & Answers



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