

ASX:EEG

Beetaloo Operations Update

26th August 2021



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Beetaloo Operations Update

- **Carpentaria-1 vertical hydraulic fracture stimulation and flow test data confirms the flow of liquids rich gas to surface and its composition with contributions from all four stimulated zones of the middle Velkerri shales, with strong contributions from the B shale and C shale**
- **Empire intends to recommence flow testing operations on the Carpentaria-1 vertical well in late September**
- **Northern Territory work program approvals for the next phase of work in EP187 are nearing completion**
- **Planning for the next phases of Empire’s EP187 appraisal programs including seismic acquisition and horizontal appraisal drilling is well advanced**
- **Senate Inquiry into the Beetaloo Cooperative Drilling Program has resulted in a supportive resolution and the continuation of the program**

Empire Energy Group Limited (“Empire” or “the Company”) is pleased to provide shareholders with an update regarding the operations in Empire’s 100% owned and operated EP187 tenement, located onshore Northern Territory in the Beetaloo Sub-basin.

Carpentaria-1 Flow Testing Update

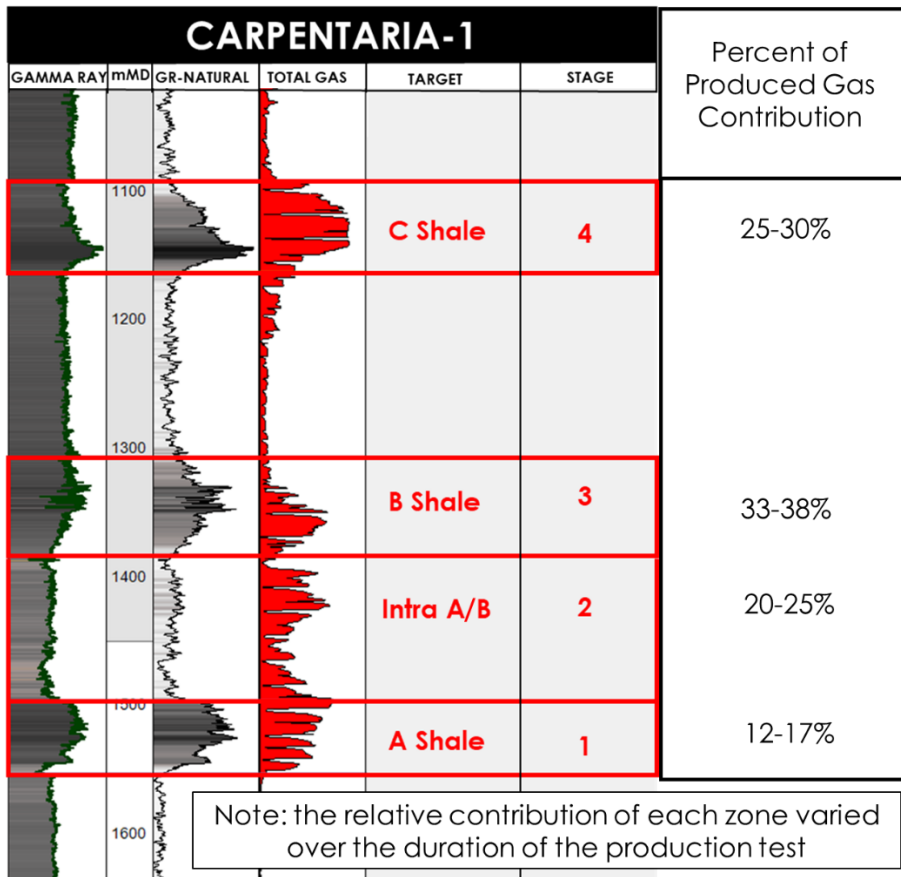
As previously advised to shareholders, the Carpentaria-1 vertical well was fracture stimulated across the Middle Velkerri A, Intra A/B, B and C shales. Following initial well clean up, the well flowed at a peak rate of >1.6 mmcf / day and an average flow rate of 0.25 mmcf / day over a 17-day test period including a final rate of 0.25 mmcf / day. The well was shut-in on 16th July 2021 to comply with COVID-19 operating restrictions.

Empire intends to recommence flow testing operations (subject to any further COVID-19 related issues) in late September. This will provide further valuable data to inform technical decisions regarding future appraisal work including the drilling of horizontal appraisal wells targeting the most prospective zones.

Carpentaria-1 Zonal Contribution Analysis

Initial zonal contribution and produced gas analysis has been completed on the gas samples taken from the Carpentaria-1 well production test.

During production testing, gas samples were regularly taken for analysis to determine the relative production contribution of each of the 4 zones. The percentage contribution of each of the target shale horizons is illustrated in the well log below:



Carpentaria-1 log with relative production contribution of each hydraulic stimulation stage

Carpentaria-1 Gas Composition Analysis

Gas composition data has been obtained from gas sampled during the initial phase of production testing of the Carpentaria-1 vertical well. All four of the open zones were co-mingled during the extended production test and sampling was undertaken on surface at a separator. Therefore, the gas composition data is representative of a combination of all four zones. Multiple gas samples were taken during the flow testing period. Consistent with the mudlog readings during drilling, which indicated drier gas in deeper zones and more liquids-rich gas in shallower zones, the existence of liquids-rich gas and very low CO₂ was identified.

Component		Mole %	
C ₁	Methane	76.21	Hydrocarbons
C ₂	Ethane	16.31	
C ₃	Propane	3.28	
C ₄	Butane	0.91	
C ₅₊	Pentane and Higher	0.40	
He	Helium	0.16	Inerts
H ₂	Hydrogen	0.01	
CO ₂	Carbon Dioxide	0.74	
	Other Inerts	1.98	
Total Gas Composition		100.00	

Compositional analysis of Carpentaria-1 gas produced during initial production testing

Once flow testing operations recommence, Empire's technical team will collect additional gas samples and undertake further analysis of zonal contribution and produced gas data to plan for future appraisal activities including the drilling of the proposed Carpentaria-2 horizontal well. That well is likely to be in the northern part of the resource area where the target shales are mapped to be more than 200m deeper than at the Carpentaria-1 location.

Northern Territory work program approvals for the next phase of work in EP187 are nearing completion.

Beetaloo Cooperative Drilling Program Update

The Federal Government's *Beetaloo Cooperative Drilling Program* ("the Program") provides incentives to companies across the Beetaloo Sub-basin to accelerate activities through the provision of grants to offset up to 25% of the cost of drilling and associated works. The result of this Program will be the accelerated development through to production of gas and potentially liquids from the Beetaloo, providing energy security to Australia's East Coast and economic development for the Northern Territory and its regions.

Empire is now progressing its plans consistent with this Program including the drilling and completion of fracture stimulated horizontal appraisal wells and seismic acquisition with the goal of expediting its rapid commercialisation strategy through pipelines adjacent to its development areas.

As announced on 8th July 2021, Empire has received approval for grant funding of up to \$21 million to support the drilling and flow testing of up to 3 horizontal fracture stimulated wells.

Empire recently made submissions to a Senate Inquiry into the Program. Empire's evidence to the inquiry made clear that Empire followed due and proper process at all times in relation to its grant applications.

Yesterday, the Senate resolved not to disallow the Program which can now proceed as planned.

This ASX release has been authorised by the Managing Director.

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