



Empire Energy Limited (EEG)

10 May 2021

Sometimes more is more – 2C volumes at critical mass

Our View

Progress sometimes comes in small steps and sometimes in giant leaps. EEG acquiring the Pangaea JV* assets is a big deal, increasing the company's 2C bookings over 480% to 199Bcf and 3.5Mb, whilst adding exposure to the potentially liquids rich Kyalla Shale unit.

Already significant Prospective Resources estimates have nearly tripled making EEG the most leveraged exposure to the emerging gas plays of the Beetaloo/McArthur basins.

In practical terms the company is moving into a 'pre-development' mode with testing of the recent Carpentaria-1 well expected to commence in 2Q21. The next 12 months of regional activity could define and underpin a development model and with significant 2C volumes EEG could be on an accelerated path to first gas.

Empire Energy represents one of few pure, independent and highly leveraged exposures to the transformational potential of the Beetaloo/McArthur basins. As more data comes to hand and gas markets continue to tighten, we expect the economic confidence level to grow and highlight that EEG is sitting on an extensive and pervasive gas resource.

Key Points

Is it ever a bad thing to have too much cake? The acquisition of the Pangaea (NT) assets is a good deal, strategically ticking a number of boxes, the most important being the quantum increase in 2C volumes to 199Bcf (with 3.5Mb). Contingent Resources are the precursor of commerciality which now becomes somewhat 'measurable'.

The basket is bigger. We estimate the acquisition price to be around \$66.5mn based on the terms...\$6.1mn in cash, 179.7mn EEG shares with 9.7mn options exercisable at 70cps out for three years. The Prospective Resources basket has become materially bigger and EEG will have significantly higher exposure to the liquids rich Kyalla gas play...and gas liquids enhance development economics.

A capital raising secures funding. The company has successfully raised \$30mn via a two-tranche placement with a SPP to be launched to raise up to an additional \$3mn. The company is well financed for the flow testing at Carpentaria-1 and next phase campaigns including future horizontal appraisal drilling.

Regional activity can support the company's early commercialisation strategy. We highlight the Santos (STO.AX) campaign to evaluate two horizontal wells at Tanumbirini providing a direct look-through into the EEG operations.

The plays are not riskless and we highlight growing environmental opposition. Recent news releases point to a growing anti-frack/anti-gas push in the NT with the potential to delay commercial progress. It's an issue that can overhang the investment case.

We upgrade our Target Price and valuation on more acreage, significantly larger 2C volumes and share expansion. We now value the company in a range of \$508-978mn (\$0.84-\$1.61/share – previously \$0.27-1.39/share).

We amend our rating to **Speculative BUY** with a **Target Price of \$0.81/share**, at our low-point valuation (ex-net cash) but subject to successful outcomes unwinding risk. Confidence levels should climb as positive testing data comes to hand.

* Pangaea JV consists of Pangaea (NT) Pty Ltd (82.5%) and Energy Minerals Group ('EMG' – 17.5%)

Recommendation: Spec BUY

Summary (AUD)

Market Capitalisation (pre close) **\$112M**
Share price **\$0.345**
52 week low (15-May-20) **\$0.205**
52 week high (12-Oct-20) **\$0.47**

Share price graph (AUD)



Source: Yahoo Finance

Key Financials (US\$000s)

US\$	2020	2021E	2022E
Production (kboe)	273	282	290
Revenue	6,464	6,375	6,561
EBITDAX	2,882	2,550	2,576
EBIT	(7,013)	(3,868)	(1,121)
Underlying NPAT	(7,684)	(5,100)	(4,784)
EPS (Acps)	(2.7)	(0.9)	(0.8)
Growth (%)		na	na
PER (x)		nm	nm
EV/EBITDAX (x)		nm	nm
CFPS (Acps)	(0.6)	0.1	0.1
PCF (x)		nm	nm
ROE (%)		na	na
ROA (%)		na	na

Empire Energy Limited - Summary of Forecasts					Share Price	EEG	\$0.345
ORDINARY SHARES	M	608	Fully Diluted	M	626	BALANCE SHEET SUMMARY (A\$000s)	
OPTIONS	M	18				Year end June	2019 2020 2021E 2022E
MARKET CAP	A\$m	210				Cash	14,106 14,146 26,207 15,100
PROFIT & LOSS SUMMARY (A\$000s)						O&G Properties	37,505 46,442 125,485 135,748
Year end December		2019	2020	2021E	2022E	PPE + ROU Assets	711 1,716 1,198 1,181
<i>Commodity Price Assumptions</i>						TOTAL ASSETS	56,594 66,563 153,768 152,664
Realised oil price	US\$/b	59.76	39.48	59.48	56.84	Borrowings	9,251 7,824 7,826 7,104
Realised gas price	US\$/mcf	2.44	1.96	2.71	2.63	TOTAL LIABILITIES	37,089 36,327 45,113 45,461
Exchange Rate		0.6958	0.6989	0.7644	0.7623	TOTAL EQUITY	19,505 30,236 108,655 107,203
Total Revenue		7,763	6,464	6,375	6,561	<i>Gearing dn/(dn+e)</i>	
Cost of sales		(6,026)	(5,266)	(4,725)	(4,885)	CASH FLOW SUMMARY (A\$000s)	
Gross Profit		1,737	1,198	1,650	1,676	Year end June	2019 2020 2021E 2022E
EBITDAX proxy		2,658	2,882	2,550	2,576	Operational Cash Flow	1,822 (1,970) 569 618
Other revenue						Net Interest	(2,712) (755) (571) (556)
Other income		224	1,039	262	262	Taxes Paid	(194) (200) (50) (100)
Write downs/impairments		(1,677)	0	0	(2,465)	Other	
Finance costs		(916)	(755)	(747)	(730)	Net Operating Cashflow	(1,084) (2,924) (51) (38)
Other expenses		(18,806)	(8,682)	(6,749)	(6,460)	Exploration	0 0 (12,000) (10,000)
EBIT proxy		(13,783)	(7,013)	(3,868)	(1,121)	PP&E	0 0 0 0
Profit before tax		(17,069)	(7,485)	(5,100)	(4,784)	Petroleum Assets	(2,658) (12,841) (6,061) 0
Taxes		(194)	(200)	0	0	Net Asset Sales/other	27,698 0 0 0
NPAT Reported		(17,263)	(7,684)	(5,100)	(4,784)	Net Investing Cashflow	25,040 (12,841) (18,388) (10,000)
Underlying Adjustments		(5,971)	0	0	0	Dividends Paid	
NPAT Underlying		(23,234)	(7,684)	(5,100)	(4,784)	Net Debt Drawdown	(26,943) (1,845) (1,170) (1,222)
<i>Margins on Sales Revenue</i>						Equity Issues/(Buyback)	11,562 17,640 32,420 153
EBITDAX		13.4%	44.6%	40.0%	39.3%	Other	
EBIT		nm	nm	nm	nm	Net Financing Cashflow	(15,381) 15,795 30,500 (1,069)
NPAT Und		nm	nm	nm	nm	Net Change in Cash	8,575 29 12,061 (11,107)
<i>Change on pcp</i>						PRODUCTION	
Total Revenue						Year end June	2019 2020 2021E 2022E
EBITDA		nm	nm	nm	nm	Crude Oil	89 2 2 2
EBIT		nm	nm	nm	nm	Nat Gas	1778 1630 1679 1729
NPAT Adj.		nm	nm	nm	nm	TOTAL	385 273 282 290
PER SHARE DATA						RESERVES & RESOURCES	
Year end June		2019	2020	2021E	2022E		
Shares Outstanding	M	263	324	608	609	as of 14/04/2021	
EPS Und	A cps	(9.3)	(2.7)	(0.8)	(0.8)	Northern Territory	1C 2C 3C 1U 2U 3U
Growth (pcp)		na	na	na	na	Gas (Bcf)	58.1 198.5 501.9 11,979 42,124 138,006
Dividend	cps					Liquids (Mb)	1.0 3.5 14.2 169 792 3,608
Franking	%						0 0 0 0
OCF per Share	A cps	0.7	(0.6)	0.1	0.1	TOTAL (Mboe)	10.6 36.6 97.8 2,165 7,813 26,609
NTA per share	A cps	7.5	13.4	23.4	17.6	US	1P 2P 3P
KEY RATIOS						Gas	24 34 38
Year end June		2019	2020	2021E	2022E	EQUITY VALUATION	
D_N(D_N + E)	%					Risked Range	
ROE	%	0.0%	0.0%	na	na	NT	Low Mid High Low Mid High
ROA	%	0.0%	0.0%	na	na	Contingent	\$178 \$222 \$255 \$0.29 \$0.37 \$0.42
(Trailing) Debt/Cash	x			na	na	Prospective	\$299 \$548 \$680 \$0.49 \$0.90 \$1.12
VALUATION MULTIPLES						US Onshore	
Year end June		2019	2020	2021E	2022E	Appalachian	\$17 \$23 \$29 \$0.03 \$0.04 \$0.05
PER	x			na	na		\$494 \$793 \$964 \$0.81 \$1.30 \$1.59
Dividend Yield	%			na	na	Net Cash (Debt)	\$19 \$19 \$19
FCF Yield	%			na	na	Corporate Costs	(\$5) (\$5) (\$5)
EV/EBITDA	x			nm	nm	TOTAL	\$508 \$808 \$978 \$0.84 \$1.33 \$1.61

Source: Company data; Analyst estimates. Issued capital estimates incorporates an expected full take-up of the SPP entitlement.

Acquiring Pangaea – it's a big deal

EEG has signed a binding purchase agreement to acquire the NT assets of the Pangaea JV* consisting of, 100% interests EP's -167, -168, 169, 198 and -305 for the consideration –

- \$6.1mn cash;
- 179.7mn shares in EEG; and
- 9.7mn options exercisable at \$0.70 and expiring three years from issue

We estimate the transaction cost to be in the order of ~\$66.5mn based on a reference EEG share price of \$0.35/share.

Pangaea and EMG will escrow ~150mn shares – 66.7mn shares for 12 months and 88.3mn for 24 months from the date of issue.

This is simply a big deal for EEG which effectively makes the company the biggest player in the Beetaloo/McArthur basins in absolute terms across acreage, Prospective Resources ('U' volumes) and most importantly Contingent Resources ('C' volumes), which are a natural precursor to commerciality.

The deal is subject to shareholder and requisite government approvals with a targeted closing date of 30-June.

Pangaea and EMG will hold a c.30% and 5% equity interest in EEG respectively at the completion of the transaction and the controlling shareholder of Pangaea Pty Ltd (Paul Fudge) will take a seat on the Board.

* 'Pangaea JV consists of Pangaea (NT) Pty Ltd (82.5%) and Energy Minerals Group ('EMG' – 17.5%)

A bigger pie delivers greater value and we upgrade our Target Price to \$0.81

We assume the 'Pangaea' acquisition will close successfully and an increase in issued capital from the placement, SPP and as part of the acquisition terms, in our NAV reset.

Material additions to the asset base result in a materially positive upgrade to our valuation more than offsetting the impact of share dilution, particularly from the increase in Contingent Resources.

The most critical aspect of the upgrade is the value ascribed to the lower risk 2C volumes notwithstanding the remaining work required to declare commerciality.

We have upgraded our Target Price to \$0.81 (previously \$0.58) at the low end of the value range (ex-net cash) to reflect the current risk of the assets and the potential for direct and indirect unwinding of risk upside across the whole (and expanded) portfolio from EEG activity and both the STO and ORG field campaigns.

Figure 1: Material increases in the asset and resource base...early commercialisation options are more realistic

		Risked Range			
		Low	Mid	High	
Northern Territory	Various				
Contingent Resources		\$178	\$222	\$255	We benchmark our value against a netback price of \$6.34/gj at various unit NPV estimates
Scenario Weighting		4%	2%	1%	
Prospective Resources		\$299	\$548	\$680	We assign higher risk weightings but against a materially larger prospective volume
US Onshore		\$17	\$23	\$29	
		\$494	\$793	\$964	
Net Cash/(debt)			\$19		Estimated net cash as at end-2021
Corporate costs			(\$5)		
TOTAL		\$508	\$808	\$978	
		\$0.84	\$1.33	\$1.61	A low case 225% premium to the reference price (34.5cps close of trading 7-May)
Shares on issue (mn)	608				
Previous (15-March)		\$0.27	\$0.58	\$1.39	

Source: TC estimates

Our revised NAV range represents >300% increase in cps at the 'low' end, dominantly driven by the increase in 2C which attracts a more favourable look-through unit value.

To assign values to resources we apply conversion factors to determine a probability weighted 2P equivalent ($2P_{eq}$) on which we apply a unit gas/liquids multiplier. The commodity price assumption is the critical aspect of this methodology and the key sensitivity.

Whilst the calculation of values against 2C volumes is somewhat straightforward, assigning values to exploration plays is a highly subjective exercise with a significant level of intrinsic error (risk), commencing with the Prospective Resources assessment, which by nature is based on a very limited set of data points (few wells). Implied values derived from this starting point are likely to be subject to significant change as more quantitative data is acquired, both directly and indirectly. The nominal valuation range as estimated should be used in an indicative sense only, to reflect the potential of the assets and stage of evaluation – earlier stages mean higher risk.

Quantifying qualitative assets is a conjectural process, but all exploration, particularly associated with the analysis of regional prospectivity in this case, does hold an intrinsic value that is sometimes higher in the early phases of evaluation.

We would highlight our 'high end' valuation estimate which only represents a 7% increase per share is subject to the valuation paradox. There is a critical limit to prospective volumes when -

$$2U \neq 2 * NAV$$

...doubling the prospective resource estimate does not necessarily double the value.

In this regard not all gas is 'equal' in economic terms, this would require all the assumptions made to the initial volumes with respect to potential evaluation and development scenarios to equally apply irrespective of the number of tenements and areal extent of licences held.

The economic reality is that specific areas will be high-graded over the course of the exploration phase and gas outside of these high-graded zones is likely to be longer-dated and should be treated as 'extension rather than expansion' gas (ie it will have a lower intrinsic value by virtue of a stronger discount factor).

In this case we have ascribed a higher risk weighting to the prospectivity in total.

There are still significant risks – technical and operational.

The northern basins are still early-stage exploration and whilst initial results have been strongly encouraging, data points are concentrated in otherwise, widely spaced areas. The consistent geology allows for regional extrapolations with a reasonable degree of confidence but licences have massive areal extent and overall Contingent Resource estimates are low compared to the potential opportunity set.

Evaluation campaigns over 2021-2022 can deliver important economically significant results on frack designs and flow rates, however there remains a big leap to commercial output at scale. Infrastructure bottlenecks need to be addressed and development hubs need to emerge, which will require capital and time...and there will be the occasional poor results to constrain the development opportunities.

Whilst EEG can be considered as a potential corporate target, paradoxically it's likely to take more commercial definition before we see M&A activity in the plays, particularly as EEG has secured the most obviously available option (Pangaea).

We'd note the number of static gas opportunities still sitting in central Queensland basins, located within an extensive infrastructure network and undervalued in equity market terms considering the favourable gas price environment.

Whilst Queensland is commercially defined and relatively low risk, it lacks 'individual scale' and should be considered as an aggregation play with a limited 'first mover window', we suggest.

NT opportunities have scale but higher commercial risk, longer development timelines and there are fewer available targets, which are also open to partnering...it may take some time before any major M&A activity emerges.

Never say never, when it comes to energy sector M&A, but the investment story at EEG is primarily about delivering first gas.

It's also worth mentioning that whilst the gas macro is supportive and pointing to the need for more gas, this needs to be assessed within a framework of changing energy supply and an increasing push towards renewables. The policy dynamic is perhaps the most uncertain aspect of the future operating environment as there are somewhat competing government initiatives.

The move to renewables is here and the magnitude of the role of gas within the future energy mix is uncertain, however, within a reasonable investment time-frame there is a gas supply squeeze imminent and new gas sources are required.

Future operating scenarios are dynamic and gas has an important part to play in the transition to (perhaps) a dominantly renewables, base-load energy supply. Within that context and investment window, we see the risk to new gas projects as likely low (but subject to change). Gas supply at scale may become more difficult over time.

Been some increasing noises made around environ concerns wrt to the Beetaloo gas opportunities and the potential to materially defer, delay or halt commercial progress.

We also highlight two recent ABC news articles and note that any significant follow through of environmental agitation does have the potential to impact our investment case.

[Discovery of tiny shrimp in Beetaloo Basin could stall fracking plans, scientists warn - ABC News](#)
[NT government quietly terminates \\$1.3 million contract for Beetaloo Basin fracking study - ABC News](#)

However, without being instantly dismissive of the noise it's obvious that the easiest time to make a materially negative impact on anything in the natural gas space is early...and activity in the NT basins is still at a very early stage, with only a small level of work completed since the lifting of the fracking moratorium at the end of 2019.

We would add that the interpretation of the articles could be considered questionable particularly with respect to the Beetaloo fracking study.

As an integral part of the recommendations of the Beetaloo Fracking Review (completed during the NT moratorium), licencees have to submit a very detailed Environmental Management Plan for any and all field work – inclusive of geophysical, geological, drilling and testing which includes extensive strategies for safe and effective fracking and aquifer management and preservation.

Both Santos and EEG have received approvals for their respective drilling and evaluation campaigns on the Tanumbirini and Carpentaria licences and that work will proceed with EEG in particular, due to commence its testing around end-May.

We append a link to a newswire item from the AGES Conference in Darwin (20-April) -

[Minister calls on traditional owners to support resource industry - Alice Springs News](#)

The NT Government has reiterated its support for the industry stating “...the government is committed to permanent funding of \$9.5m every year to expand, by \$3m a year, the “hugely successful” Territory Resourcing Initiative instead of closing down, as planned, exploration stimulus programs this year.”

The minister was also quoted as indicating -

“...the gas-rich Beetaloo Basin as the ‘the next big play nationally and internationally’ where Origin and Empire Energy, drilling two wells, both discovering liquid rich gas, as a ‘critical step forward of assessing the viability of large-scale production in the basin’”.

As always there's a point somewhere between the two extremes in terms of the risks -

Environmental noises are always shrill and loud and on the 'squeaky wheel' analogy will get airtime in the appropriate media forums. That's not to say there are not real concerns about climate change and carbon emissions. Industry has already acknowledged the need to conduct itself under 'social licences to operate' and to aim to be net C zero.

However, there is an economic and commercial imperative to at least evaluate the production potential of new gas provinces. On a technical basis if the Beetaloo plays may not work (the risk is low but not zero) and it may only take **one** poorly executed well/frack/test to slow or halt activity, but this is a play with strong government support, that on balance will continue through the next couple of phases of field campaigns - testing and horizontal drilling - to better define the economic operating parameters and answer the commerciality question.

Acreage straddling the 'sweet spots' and on infrastructure makes for a strong position

The Pangaea assets give EEG a materially bigger footprint across all the important metrics, making the company the best leveraged exposure to the emerging northern basins plays. In relative and absolute terms, the opportunity/play set has more than doubled.

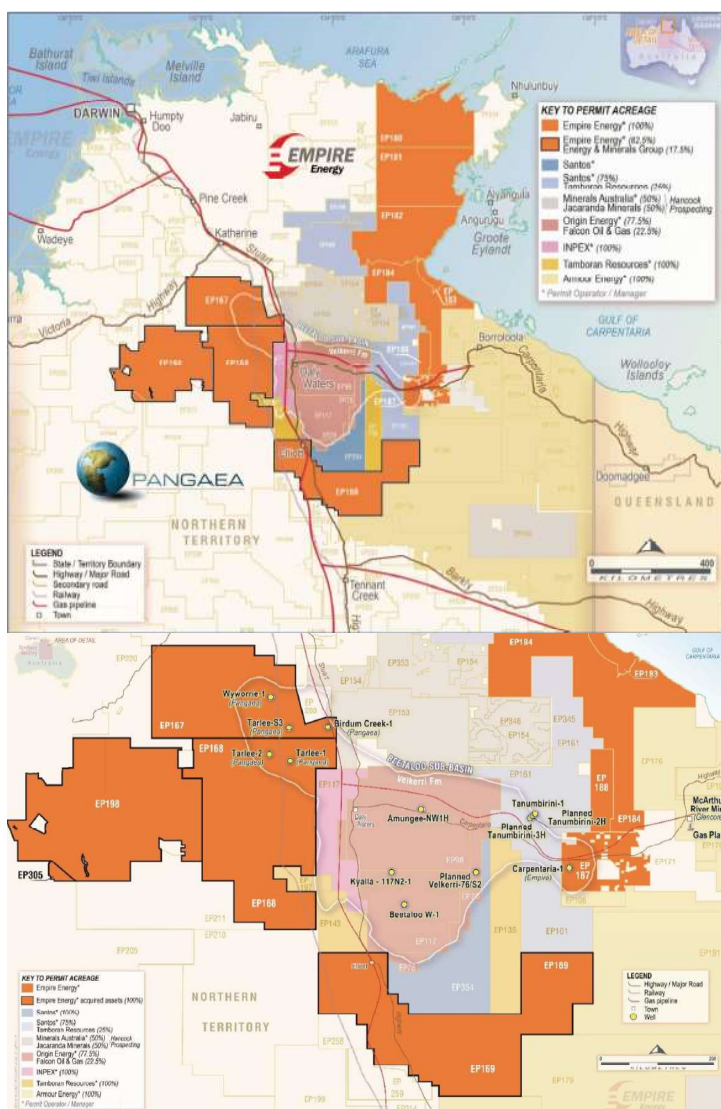
Critically, EEG has captured opportunities for the local and large-scale supply on both the eastern and western edges of the basins, with ready access to pipelines with ullage...gas can flow east-west and north-south.

Figure 2: Material increases in the asset and resource base...early commercialisation options are more realistic

	EEG	Pangaea and EMG	New EEG	Δ	
Contingent Resources					<p>In terms of significance, the material increase in 2C volumes is what 'pops'. The probability factor on these volumes is significantly higher, so the intrinsic 'value' is higher.</p> <p>2C volumes are an important pre-cursor to commerciality and these volumes represent critical mass and support the company's stated aim of early commercialisation.</p> <p>The nature of the 2C volumes is still to be proven and finalised...testing and flow rates are required. The remaining field activity in 2021 has the potential to provide additional upside, particularly EEG's own frack and evaluation campaign.</p> <p>Certainly within the next 12 months or so, initial well development parameters could be established underpinning the next phase of feasibility with respect to capex.</p>
2C Gas	41Bcf	157.5Bcf	198.5Bcf	484%	
2C liquids		3.5 Mb	3.5 Mb		Liquids volumes provide an important commercial differentiator.
Prospective Resources					<p>Prospective Resources estimates should be viewed within the right frame of reference and the estimate taken within the context of high risk. However, where the NT basins have, we think a comparatively lower risk versus other opportunities, is that the data from drilling on a regional outlook supports a model of relative geological consistency. Thick sequences can be mapped on a circa 'tram-track' basis, so the extrapolations on prospectivity can perhaps be made at a higher confidence level per se than areas like the Cooper and Surat basins on unconventional equivalents.</p> <p>Significant appraisal work remains to be carried out across the expanded tenement holdings.</p>
2U ('Best') Gas	14.5Tcf	27.6Tcf	42.1Tcf	291%	By broad comparison, equivalent offshore LNG projects are defined usually by gas reserves in the 10 – 15Tcf range.
2U ('best') Liquids	27 Mb	765 Mb	792 Mb	>>>	These estimates imply a CGR* of ~2 – 18b/mmcf
Net acres	14.6	14.3	28.9	198%	<p>Acreage metrics should be considered in the context of capital and activity management and the company's capacity to work (high grade) the assets in a cost effective and timely fashion. Exploration licences also come with relinquishment requirements.</p> <p>However, large acreage exposures at high working interests are often attractive to large corporates as potential partners, providing financing options and development opportunities at scale.</p> <p>It's always advantageous to start large.</p>

Source: Company data; analyst estimates. * CGR = condensate gas ratio measured in barrels per mmcf

Figure 3: Tenements 'horseshoeing' around the Beetaloo Basin – liquids rich plays are now more significant in the portfolio



Source: Company data. * 'Volumetric resource assessment of the lower Kyalla and middle Velkerri formations of the McArthur Basin' – Revie, D. Mar-2017

Liquids are the key to early commercialisation and high operating margins

We see the important aspect of the 'Pangaea' acquisition as providing EEG with increased leverage to the nominated liquids rich sequences of the Beetaloo Basin, particularly directly extrapolating from the Origin/Falcon O&G results in EP's -98 and -117.

Published assessments of the prospectivity of the Beetaloo in particular point to a massive and transformational liquids rich gas opportunity in this province particularly in the Kyalla and mid-Velkerri Formations, which have been the primary focus of previous drilling. The analyses (published in 2017) should be considered as current given the only recent return to field activity post the lift of the NT fracking moratorium'

A detailed discussion can be found in the published report available on the NT Geological Survey website -

Source: NTGS Record 2017-002 – Unconventional petroleum resources of the Roper Group, McArthur Basin.

The Beetaloo Sub-basin is "...prospective for unconventional hydrocarbon plays, particularly within the Kyalla and middle Velkerri formations".

The Kyalla could potentially be considered as a stand-alone, liquids play.

EEG will hold a strategic tenement position, particularly straddling the major pipeline infrastructure.

The 'Pangaea' assets contain five wells, ~1,800km of 2D seismic, extensive airborne surveys and a database of >3,500m of analysed core samples at a sunk cost of ~\$110mn.

EEG has noted that:

"...horizontal drilling locations and production systems are development ready".

Activity in the 'Pangaea' permits has been primarily focussed on the extension of the Beetaloo Basin sequences in the NW lobe of the basin through EP's -167 and -168.

The critical wells as noted appear to be direct analogues with Origin drilling. The data set is somewhat limited but sufficient enough for confident regional assumptions to be made.

The lower Kyalla Formation in particular has been assessed as having the potential for 414-1,164Mb*.

It's worthwhile highlighting what 2021 could deliver.

Evaluation activity is set to continue through the remainder of 2021 up to the onset of the wet season, with concurrent field campaigns across the basin.

The most critical aspects will be the drilling of the first horizontal wells by Santos, which will provide a direct analogue for EEGs next drilling phase in 2022 and the extended production testing at Kyalla with look-through implications for holdings in the Pangaea portfolio.

We are looking for definition of the well development model in terms of the cost, flow-rates and potential expected recoveries, particularly with the company pursuing an early commercialisation opportunity. Whilst it will take more than one or two wells to underpin an optimal design, both the STO and EEG wells should provide important constraining information especially in terms of the liquids potential of the plays.

Given the as yet early-stage nature of the basin exploration and evaluation, success in the horizontal drilling and testing programmes can be critical derisking events.

In our Initiation Report (Apr-2020) we highlighted an economic assessment of the NT basins conducted by ACIL Allen ('ACIL') on potential development scenarios that could arise from a shale-gas industry and noted that it was based on -

"...its own (ACIL) type curves, rather than using estimated type curves for gas fields in the Northern Territory. This is because there has been one successful horizontally drilled shale gas well for production testing in the Northern Territory: Origin Energy's Amungee NW-1H. The results of this test were positive, but (could not) be used for our type curve assumption for three reasons:

- *The well involved only 11 frack stages. A typical horizontal well will have at least 20 frack stages and in most cases many more.*
- *The well's production profile was atypical, with a very low initial production rate and an almost perfectly flat production curve.*
- *The well underwent production testing for 57 days. This...(makes) development of a type curve problematic*

ACIL...adopted a "single average type curve" for modelling. In reality, every well will produce a different type curve."

More data will better define the type curve model, particularly for horizontal wells...in this regard 2021 could deliver very significant results.

1Q21 update. A quiet period but a busy year from here

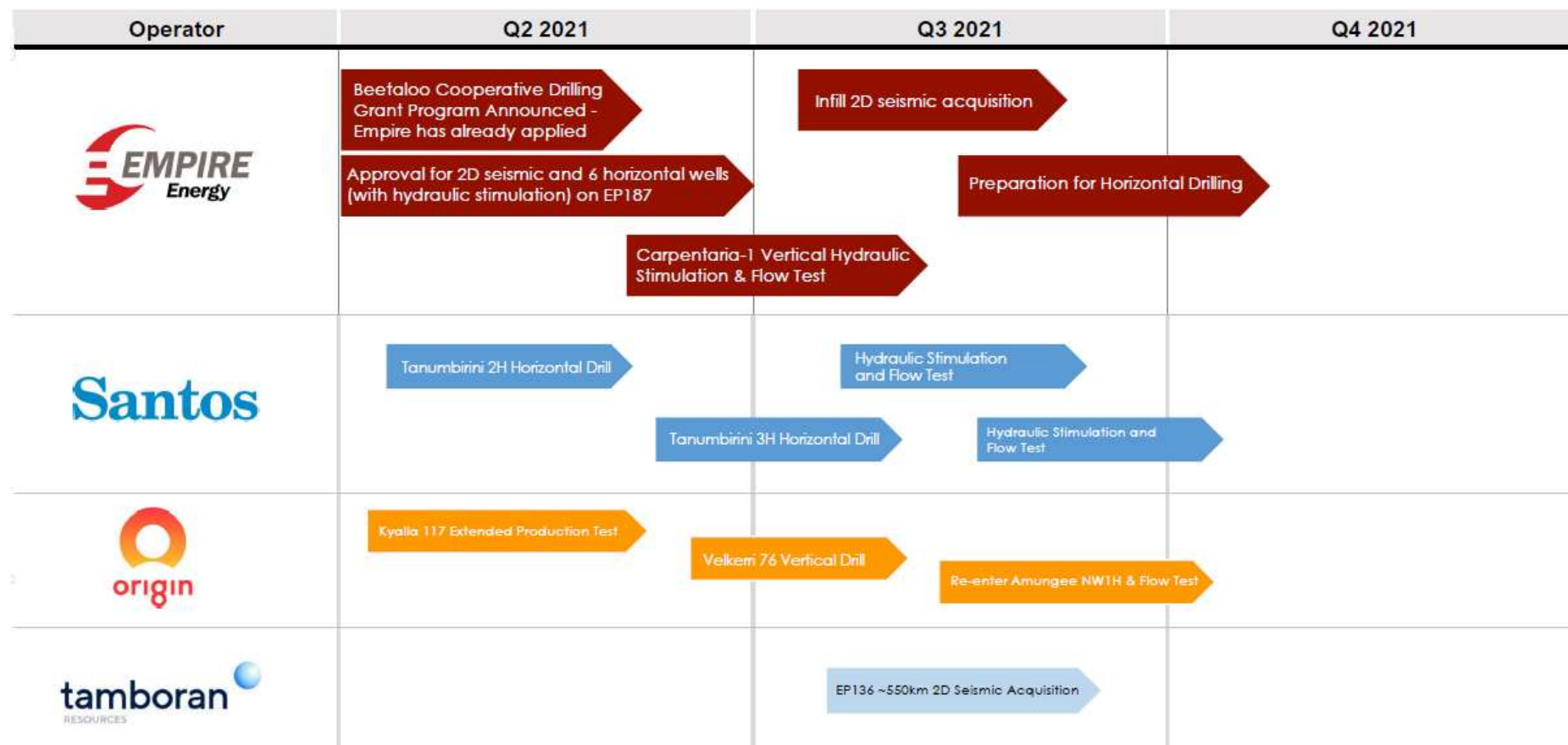
A transformational acquisition delivers material changes to the outlook and valuation; and with a return to the field, more pieces of the development puzzle should drop into place over 2021. With a successfully completed placement (and SPP to come), the company is adequately financed for the current programme, although depending on the scope of next phase drilling, further working capital may be required.

Figure 2: March quarterly highlights and comments

Production Operations				
US assets (small scale onshore gas production) are continuing to operate around EBITDA breakeven. <i>These assets are not material to the investment outlook but do service the existing debt.</i>		EEG delivered a small but positive EBITDA for 1Q21 of US\$41k (4Q20: US\$43k), largely resulting from 4% increase in realised product prices and 6% increase in sales volumes. Quarterly revenue of US\$1.1mn was up 21% QoQ (US\$0.8mn in 3Q20). The average received product price after hedging, for 4Q20 was in the order of US\$2.77/mcfe (v US\$2.62/mcfe 3Q20). Unit lifting costs for the period were US\$1.31/mcfe (v US\$1.29/mcfe).		
Development, exploration and appraisal				
2021 planned programme.		EEG is well advanced in its preparations to undertake a four stage frack campaign on the Carpentaria-1 well to test and evaluate the potential of the Velkerri A, A/B, B and C shale zones. The programme is set to commence in early-June with Schlumberger contracted to undertake the operations. Management has also submitted additional notices and plans for - <ul style="list-style-type: none">the acquisition of 165km of infill 2D seismic (EP 187) and;securing six pad locations for a follow-up campaign of up to six new horizontal wells including a lateral section in Carpentaria-1. <i>The additional seismic would be acquired as a precursor to any new drilling so would most likely be a late 2021 campaign. The submission of notices and plans is pre-empting the next phase per se, as once granted, approvals will be valid for five years.</i>		
Corporate				
Declaration of first 2C volumes from post-Carpentaria-1 review		Refer published note 'Contingent Resources point the way' [15-Mar] <i>We had commented how important it was that 2C volumes were ascribed, particularly being a precursor to commerciality. This has now been overwhelmed by the recent 'Pangaea' transaction as outlined in this note.</i>		
The cash balance is comfortable As at 31-Mar = A\$11.4mn As at 30-Apr = c. A\$22.4mn after settlement of Tranche-1 placement.		The cash balance as at 31-March was A\$11.4mn. <i>The company is well funded for resumption of activity from 2Q21, with a post quarter equity issue (Placement and SPP) raising up to A\$33mn (refer details in this note).</i> Drawn debt facility at the end of the period stands at A\$9.0mn (US\$6.5mn). <i>The facility matures in Sep-2024, is subject to quarterly repayments of US\$0.14mn through 2021 and is secured against the company's US Appalachian gas assets.</i>		
US operations remain well hedged		The company has hedged its gas operations via a series of Put Options and Swaps at prices ranging from US\$2.50-3.10/mmBtu as follows -		
Period	Volume (mmbtu/month)		Strike Price	Premium
Apr-Dec 2021	25,000	Puts	US\$2.50	US\$0.34 (ave)
Apr-Sep 2021	50,000	Swap	US\$2.85	
Oct-Dec 2021	50,000	Swap	US\$3.10	US\$0.39 (ave) US\$0.41
Jan-Dec 2022	75,000	Puts	US\$2.50	
Jan-Dec 2023	25,000	Puts	US\$2.50	
2021 will be a relatively significant year for field capex		Cash capex of A\$2.9mn (A\$0.06mn expensed) for the quarter.		

Source: Company data; *analyst commentary*; (for the purposes of reference – mmBtu can be considered as a mcf/gj equivalent)

Figure 4: The remainder of 2021 will be busy...we suggest a development model is evolving based on horizontal drilling results to come.



Source: Company data

Disclaimer

The following Warning, Disclaimer and Disclosure relate to all material presented in this document and should be read before making any investment decision. This publication has been prepared by Taylor Collison for distribution to clients of Taylor Collison on the basis that no part of it will be reproduced, altered in any way, transmitted to, copied to or distributed to any other person without the prior express permission of Taylor Collison.

Warning (General Advice Only): Past performance is not a reliable indicator of future performance. This report is a private communication to clients and intending clients and is not intended for public circulation or publication or for the use of any third party, without the approval of Taylor Collison Limited ABN 53 008 172 450 ("Taylor Collison"), an Australian Financial Services Licensee and Participant of the ASX Group. TC Corporate Pty Ltd ABN 31 075 963 352 ("TC Corporate") is a wholly owned subsidiary of Taylor Collison Limited. While the report is based on information from sources that Taylor Collison considers reliable, its accuracy and completeness cannot be guaranteed. This report does not take into account specific investment needs or other considerations, which may be pertinent to individual investors, and for this reason clients should contact Taylor Collison to discuss their individual needs before acting on this report. Those acting upon such information and recommendations without contacting one of our advisors do so entirely at their own risk.

This report may contain "forward-looking statements". The words "expect", "should", "could", "may", "predict", "plan" and other similar expressions are intended to identify forward-looking statements. Indications of and guidance on, future earnings and financial position and performance are also forward-looking statements. Forward-looking statements, opinions and estimates provided in this report are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions.

Any opinions, conclusions, forecasts or recommendations are reasonably held at the time of compilation but are subject to change without notice and Taylor Collison assumes no obligation to update this document after it has been issued. Except for any liability which by law cannot be excluded, Taylor Collison, its directors, employees and agents disclaim all liability (whether in negligence or otherwise) for any error, inaccuracy in, or omission from the information contained in this document or any loss or damage suffered by the recipient or any other person directly or indirectly through relying upon the information.

Disclosure: Analyst remuneration is not linked to the rating outcome. Taylor Collison may solicit business from any company mentioned in this report. For the securities discussed in this report, Taylor Collison may make a market and may sell or buy on a principal basis. Taylor Collison, or any individuals preparing this report, may at any time have a position in any securities or options of any of the issuers in this report and holdings may change during the life of this document.

Taylor Collison raised approximately \$1M for EEG.ASX in the placement in August/September 2020, a fee of 2% was earned.

Analyst Interests: The Analyst does not hold shares in EEG.ASX. The Analyst's holdings may change during the life of this document.

Other Staff (including Principal accounts) hold approximately 1.46 million shares in EEG.ASX as of the date of this report in personal and family related accounts. These holdings may change during the life of this document.

Analyst Certification: The Analyst certifies that the views expressed in this document accurately reflect their personal, professional opinion about the financial product to which this document refers.

Date Prepared: May 2021

Analyst: Andrew Williams

Release Authorised by: David Pittman

TAYLOR COLLISON LIMITED
Sharebrokers and Investment Advisors
Established 1928

ADELAIDE

Level 16, 211 Victoria Square
Adelaide SA 5000
GPO Box 2046
Adelaide SA 5001
Telephone 08 8217 3900
Facsimile 08 8321 3506
broker@taylorcollison.com.au

SYDNEY

Level 10, 151 Macquarie Street
Sydney NSW 2000
GPO Box 4261
Sydney NSW 2001
Telephone 02 9377 1500
Facsimile 02 9232 1677
sydney1@taylorcollison.com.au

Participant of the Australian Securities
Exchange (ASX) Group.

ABN 53008172450
AFSL 247083