

Warrego Energy Limited (ASX: WGO)

Drilling update 2nd September 2019 – initial High Cliff results look promising

Overview

Warrego's partner announced this morning that the West Erregulla-2 well had intersected the High Cliff formation, the second of two primary targets. Initial observations of elevated mud gas readings, clean coarse-grained sand and good visual porosity are positive. Confirmation of a gas discovery will require completion of drilling followed by wireline logging. We retain our base case valuation of \$0.46/sh. on discoveries at the Wagina and Kingia formations and retain our estimate of upside potential of \$0.63/sh on exploration success at the High Cliff. We note that Warrego continues to offer cheaper entry into the WE discovery than its joint venture partner and trades at a discount to recent Perth Basin market transactions.

Key points

Waitsia analogue: Warrego has a 50% non-operated interest in EP 469, adjacent to the large (786 bcf gross 2P) Waitsia gas project (Beach/ Mitsui), ~300 km north of Perth. The West Erregulla-2 well is targeting the same formations that are productive at Waitsia. Gross mid-case resource estimates range from 377-1,163 bcf, depending upon the resource assessor.

Drilling progress: The WE-2 well is at 5,017 m, in the High Cliff formation, and is now the deepest onshore well in Australia. The top of the High Cliff was interpreted to have been intersected at 4,092m. Planned TD of 5,200 m was not mentioned; rather the well will be drilled into the shale beneath the HC to provide a pocket to allow wireline logging of the HC.

High Cliff gas target: Whilst too soon to claim a discovery in the HC, the initial results are directionally positive. Importantly, formation porosity appears to have been preserved at depth and elevated mud gas readings indicates the HC will be gas charged. Wireline logging will be required to estimate if sufficient permeability exists for commercial production, to be verified by a production test later this month.

Upside potential: Should the High Cliff be a discovery, the pre-drill mid case estimate indicates a total recoverable gas resource at WE of ~1,163 bcf, ~40% larger than Waitsia, and the high side estimate of 1,669 bcf is double the size. Importantly, success at WE provides encouragement that the Kingia/HC play may extend north and south through the Perth Basin, providing multi-tcf potential for conventional gas. The value of acreage will then depend on commercialization options for future discoveries.

Valuation: Warrego continues to trade at a market cap discount to its JV partner, Strike, of ~40-50%, a level that is unlikely to be fully explained by Strike's operatorship of the permit or other portfolio assets. Both companies trade at a discount to the value of Perth Basin gas assets determined by the independent expert's determination in AWE's Target's Statement and from the related AWE/Mitsui and Origin/Beach transactions.

Near term news flow: Strike, as operator, is following an event-driven cycle. The next report is likely to be later this week after reaching TD and commencing wireline logging of both the HC and Kingia formations.

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SHARE PRICE PERFORMANCE



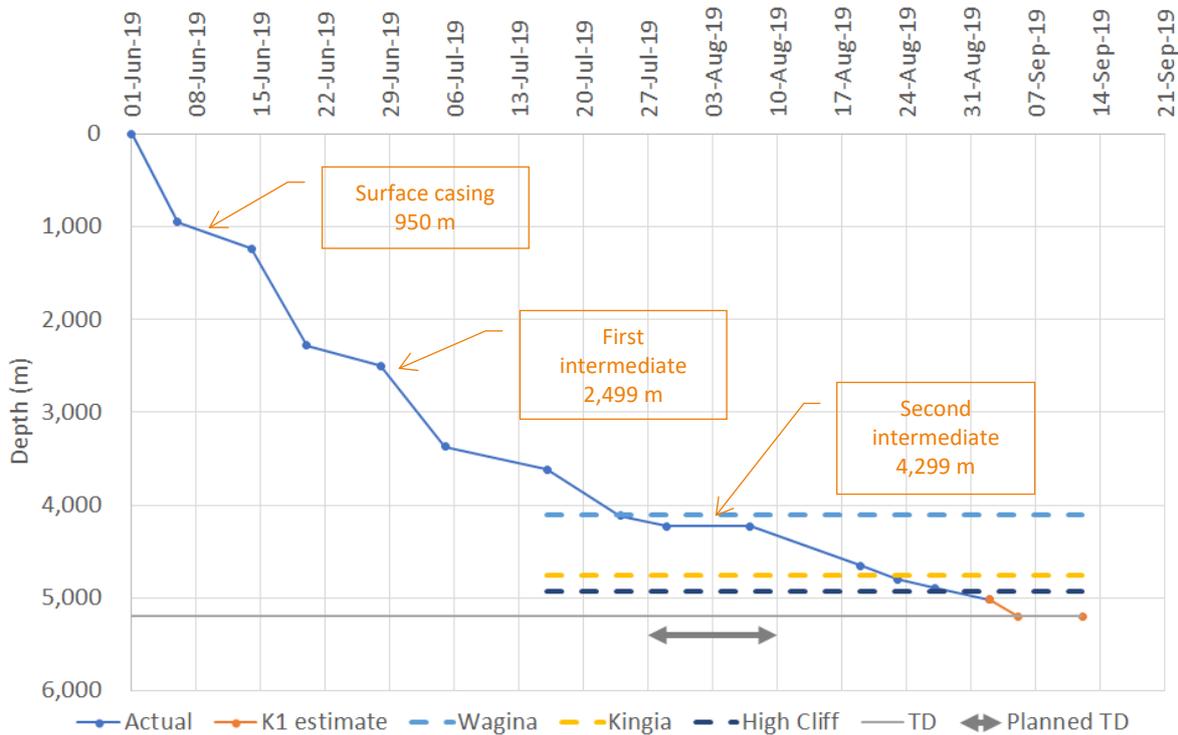
Closing price as of 30th August 2019

CAPITALIZATION	
Last price	\$0.37
52-week range	\$0.02-0.42
Capitalization	\$242m
Cash: 30 Jun	\$7m
Debt: 30 Jun	\$0m
EV	\$115m
Shares*	674.0m
Options/rights	7.7m
Conv Notes	-
Balance date	June
RESERVES AND PRODUCTION	
1P (30 Jun 19)	0.00 MMboe
2P "	0.00 MMboe
3P "	0.00 MMboe
2C "	0.00 MMboe
FY17a	0.00 MMboe
FY18e	0.00 MMboe
FY19e	0.00 MMboe
SHAREHOLDERS (%)	
Board*	53.1
* includes unissued founders shares	
LEADERSHIP	
Chairman	Greg Columbus
MD/CEO	Dennis Donald

Disclosure: This is a commissioned research report and K1 Capital will receive a fee for preparing this report.

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Figure 1 Estimated time-depth curve for West Erregulla-2 as of 2nd September 2019



Source: Actual data from company announcements, forecast from K1 Capital estimate.

- 1) Actual spud date not disclosed; assumed spud date of 1st June 2010 per Strike’s 31st May 2019 ASX release.
- 2) Well depth not disclosed in Strike’s 12 August 2019 drilling report. Only reference was that an “additional 5 metres of gas bearing Wagina sands drilled since last update”.
- 3) Planned TD timing based on planned drilling campaign of 8-10 weeks per Warrego’s “West Erregulla-2 Update & Capital Raising” presentation, 31st May 2019.

Figure 2 West Erregulla prospective resource - Strike Energy assessment

Reservoir	Gross prospective resource (Bscf)			Net attributable (Warrego 50%) (Bscf)		
	Low (P90)	Best (P50)	High (P10)	Low (P90)	Best (P50)	High (P10)
Basal Wagina	154	247	372	77	124	186
Kingia	283	454	670	142	227	335
High Cliff	324	462	627	162	231	314

Notes

- 1) These resource estimates are from Strike Energy’s 23rd January 2019 ASX announcement
- 2) These resource estimates are un-risked
- 3) The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons

Source: Petrel Energy Limited, Notice of Extraordinary General Meeting, 6th February 2019, p 2 of RISC report

Figure 3 Base case valuation summary

NPV @ 10.0% WACC+country factor Valuation as of 30 Jun 2019	Net volume mmbœ	NPV value \$/US/boe	Risk factor %	Risked value M\$A	Risked value \$/A/sh	Unrisked value \$/A/sh	WACC %	Risked value \$/A/sh
Projects (DCF model valuation)	0.0			0	0.00	0.00		
Lochend Cardium tight oil	0.0	19.20	20	0	0.00	0.00	10.0	
Exploration / Appraisal	245.2			313	0.42	2.19		
EP 469 discovered gas	6.1	-	2	-	-	-		
West Erregulla Deep - Wagina	21.1	4.80	60	87	0.12	0.19		
West Erregulla Deep - Kingia	38.7	4.80	60	159	0.21	0.35		
West Erregulla Deep - High Cliff	39.4	4.80	7	19	0.03	0.36		
EP 469 Jurassic oil	9.4	7.90	8	9	0.01	0.14		
STP-EPA-0127	-	-	-	0	0.00	0.00		
Tesorillo (Spain) conv. gas	73.9	5.80	5	31	0.04	0.82		
Uruguay conventional	56.5	3.05	4	8	0.01	0.33		
Other (corporate, cash, debt, etc)				34	0.05	0.05		
Corporate costs				-4	-0.01	-0.01		
Hedging & Investments				-	-	-		
Franking credits (@ 0 %)				-	-	-		
Cash				11	0.01	0.01		
Additional Equity				26	0.03	0.03		
Debt				-0	-0.00	-0.00		
Minorities / Other				2	0.00	0.00		
Equity Valuation @ base case	-			347	0.460	2.25	0.28	
Equity Valuation @ spot prices @ \$US59/bbl real Brent & 0.67 f (and undiluted share count)				-	-	-	0.00	
Mkt Cap @ current share price				249	0.370			
Total shareholder return (%)					n/a			
Number of shares (undiluted)	000,000			673.0				
Number of shares (diluted)	000,000			748.6				

0.67 USD: AUD spot and 0.70 USD: AUD long term exchange rate. Per share valuation based on estimated post June 2019 capital raising share count of 674m shares (assuming issue of remaining founders' shares). Includes additional \$20-30m equity for West Erregulla appraisal (50% of seismic plus two wells at assumed \$18m each) on exploration success, plus G&A and Tesorillo expenditure commitments.

1.1.1 Gas resource valuation

We have assumed a gas resource value of \$0.70/GJ of mid-case resources. This is based on gas values for Waitsia derived from analysis of the independent expert's assessment for the AWE Target's statement and the two Waitsia-related M&A transactions. The Waitsia-derived numbers represented values for a fully appraised field close to the point of a final investment decision. We adjusted these estimates for two factors to provide an estimate appropriate for West Erregulla: (1) two years of time value for further appraisal at a 10% nominal discount rate, and (2) 60% commercial chance of success to account for West Erregulla project maturity (pre-development decision).

Figure 4 Perth Basin gas resource value

	Gas value \$/GJ
AWE Target's statement independent expert's Waitsia DCF mid-case	1.42
AWE/Mitsui transaction simple EV/2P reserves multiple	1.23
Beach acquisition of 50% of Waitsia from Origin Energy EV/2P reserves multiple	1.68
Assumed value, adjusted for time value and commercial probability of success	0.70
Gas value = \$1.42 * 1.10 ⁻² * 60% = ~\$0.70/GJ	

Source: K1 Capital analysis. N.B. Beach acquisition resource multiple corrected from value in our report of 27th August.

1.2 Relative valuation of Warrego and Strike

The West Erregulla discovery and surrounding EP469 permit is the major asset for both Warrego and Strike, each of which have a 50% share (with Strike as operator). However, the market valuation of each company is significantly different, with Warrego trading at a 40-50% discount to Strike, as shown below. We believe the market capitalization difference is due to four main factors, but is unreasonably large given consideration of the circumstances.

- 1) Larger size and increased liquidity of Strike,
- 2) Increased market awareness of Strike,
- 3) Perceived premium for operatorship in terms of potential acquisition attractiveness, and
- 4) Perceived value of Strike's near field acreage position.

Figure 5 Market capitalization of Warrego and Strike, past 12 months

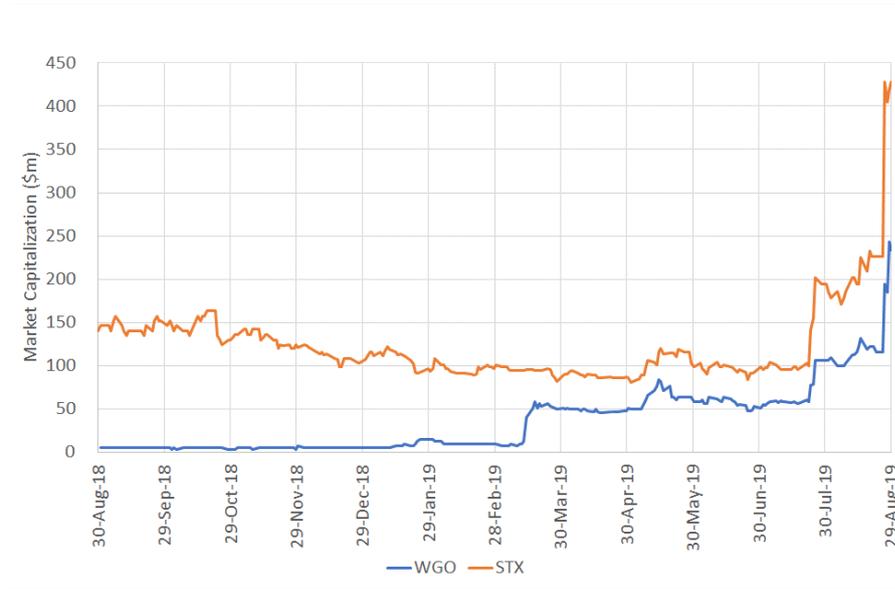
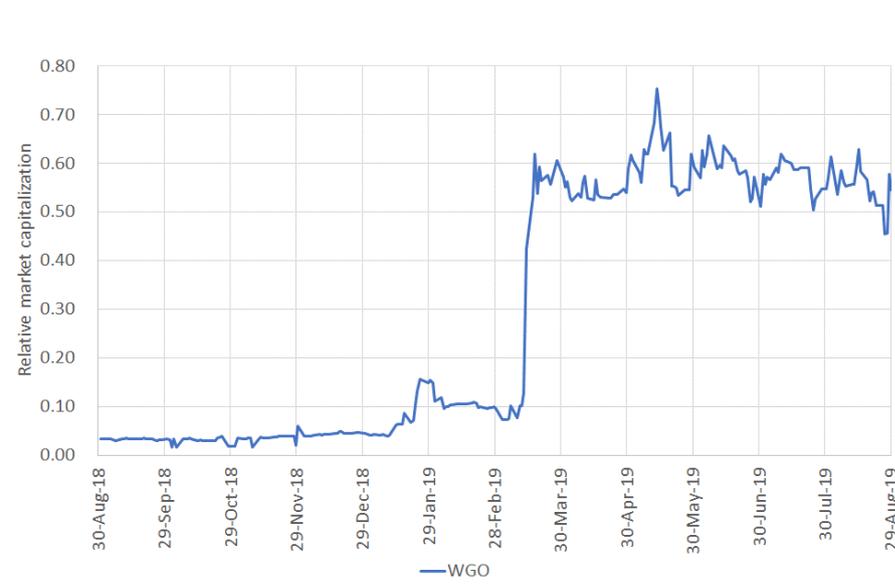


Figure 6 Relative market capitalization of Warrego to Strike



Reverse takeover by Warrego of Petrel Energy approved 11th March 2019; additional shares issued for RTO 15th March 2019 corresponds to step change in relative market capitalization

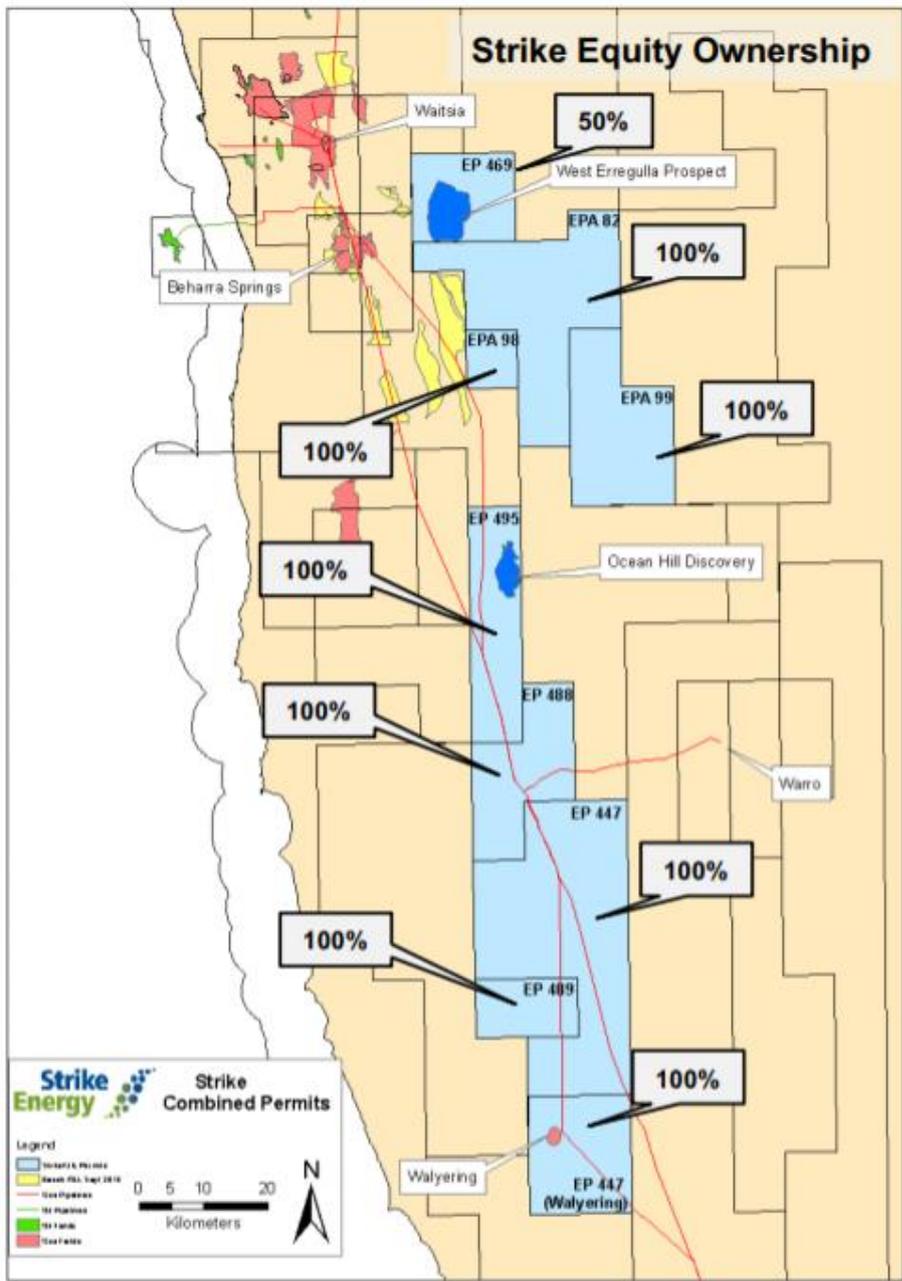
Source: K1 Capital analysis

Market capitalization per closing share price and shares on issue based on Appendix 3B disclosures

1.2.1 Perth Basin acreage - Strike

Strike has 2,768 km² of net Perth Basin acreage, of which it assesses 40% is prospective for Kingia/High Cliff (Waitsia) and Wagina (Beharra Springs) conventional gas plays. This could provide significant upside if these areas are determined to be productive. However, the extent of the play into these areas is yet to be validated by drilling, and even if exploration success follows, the sale of the resulting gas volumes will need to be addressed. The market may already be adequately supplied, with ~2 tcf of recoverable gas from Waitsia and West Erregulla, plus possible additions from Beharra Deep about to be drilled by Beach and Mitsui. Potential backfill of North West Shelf capacity as offshore gas declines may be possible but is likely to be commercially difficult due to existing contractual restrictions and lack of alignment within the current NWS joint venture on possible expansion options.

Figure 7 Perth Basin acreage position - Strike



Source: Strike Energy Limited, General Meeting Presentation, 16th August 2019, p7

1.2.2 Perth Basin acreage – Warrego

Warrego also has additional Perth Basin acreage, via its 100% interest in STP-EPA-0127, north of West Erregulla. EPA-0127 covers 2.2m acres (8,700 km²) across much of the Coolcalalaya sub-basin, with possible analogues to Waitsia. The permit is traversed by the Dampier to Bunbury Gas Pipeline and immediately north of the Midwest Pipeline. The permit area, whilst larger than Strike’s acreage to the south, is at an earlier stage of evaluation.

Figure 8 Perth Basin acreage position - Warrego



Source: Warrego Energy Limited, Investor presentation, 30th August 2019, p17

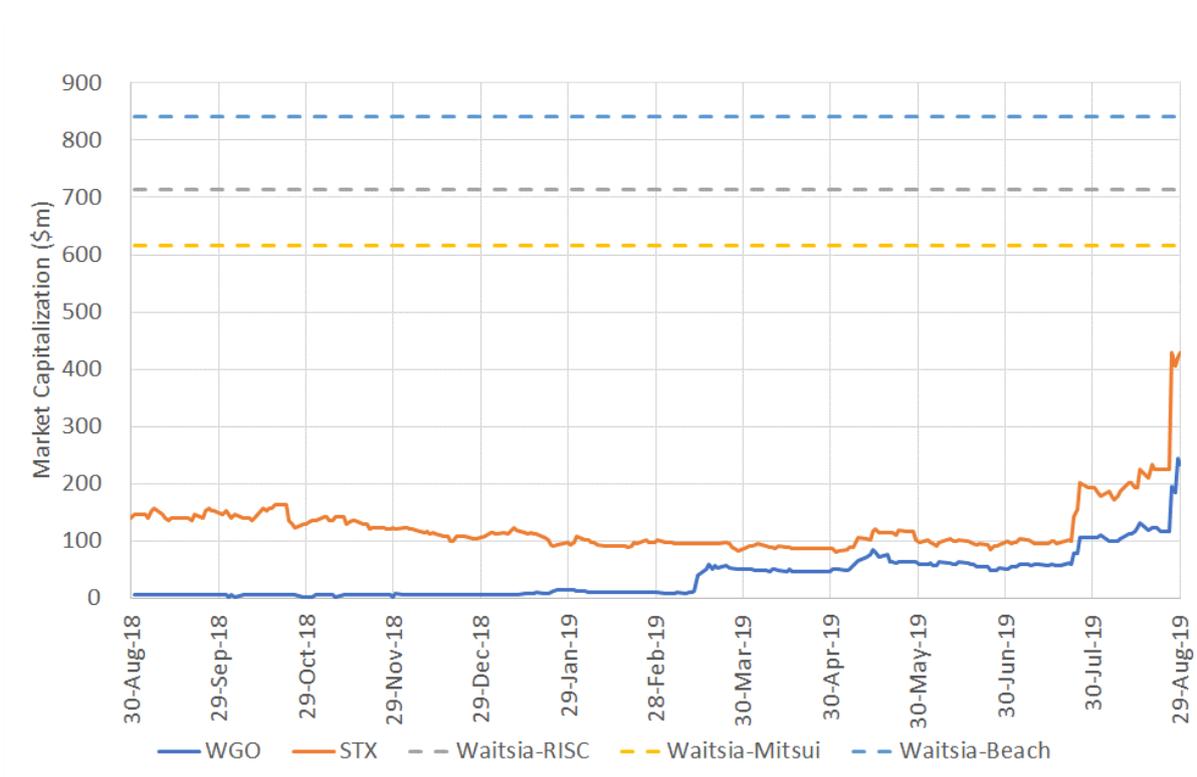
1.3 Comparison versus Perth Basin gas valuation benchmarks

Warrego (and Strike) are both cheap relative to our estimate of the valuation benchmarks for Perth Basin gas assets. In the chart below we compare the market capitalization of Warrego and Strike to the value of their respective shares of the West Erregulla discovery, relative to three benchmarks:

- 1) The DCF based value derived from the independent expert's assessment in AWE's Target's Statement for the takeover of AWE by Mitsui,
- 2) The market transaction multiple derived from the takeover of AWE by Mitsui, and
- 3) The market transaction multiple derived from Beach's acquisition of Origin's Lattice Energy assets.

The market transaction multiples are based on pro-rating of 2P energy equivalent reserves for Waitsia relative to the overall transactions and do not adjust for hydrocarbon value impacts (for oil, condensate, LPG and gas) or reserve development and hence should be considered indicative only. However, they are broadly consistent with the detailed DCF modelling conducted specifically for the Waitsia asset, which provide additional confidence. The benchmarks have been adjusted for the estimated size of West Erregulla compared to Waitsia and for the time value for the further appraisal of West Erregulla to move it to a similar level of 2P reserve maturity.

Figure 9 Perth Basin asset valuation comparison



Source: K1 Capital analysis

- 1) "Waitsia-RISC", "Waitsia-Mitsui" and "Waitsia-Beach" represent the estimated value of 50% of West Erregulla based on the benchmarks derived from AWE Target's Statement and the Mitsui/AWE and Beach/Origin transactions.
- 2) These values have been adjusted for the relative size of WE (1,163 bcf mid case gross) vs. Waitsia (817 PJ 2P gross) and discounted for two years of time value (at 10% nominal discount rate) assumed required until WE is at the same level of resource and reserve maturity as Waitsia was at the time of the Mitsui and Beach transactions.
- 3) Further discounting for current commercial maturity may also be appropriate but has been set aside to illustrate the current discount versus the three benchmark values.

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1.4 Appendix 1

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