

# **Doriemus Plc**

Farming-in to fund high impact Canning Basin gas & condensate exploration in H2 '19

# **Capital Structure**

ASX Code: DOR	
Shares	58.0 m.
Options Price	14.5 m. @ 34cts
Price	\$ 0.064
Market Cap	\$ 3.7 m.
Cash & Imt's (est Jun '19)	\$ 5.9 m.

### Valuation

	\$m	\$/shr Comment
Cash & Investments	\$ 5.9	\$ 0.02 Angus/UKOG
Residual UK	\$ 1.0	\$ 0.00
Legacy interests	\$ 6.9	\$ 0.03
New equity	\$ 10.3	\$ 0.04 Assumed CMP
Options <sup>1</sup>	\$ 4.2	\$ 0.02 NPV <sub>8</sub>
L-15	\$ 0.4	\$ 0.00 Risked
Butler Sand Risked	\$ 30	\$ 0.11 Risked
BCGS Risked	\$ 22	\$ 0.08 Risked
Corporate	-\$ 3.7	-\$ 0.01
Target value*	\$ 71	\$ 0.26

target relies on funding support

<sup>1</sup> Options currently out of the money

### Board

David Lenigas	Executive Chairman
Greg Lee	Executive Director
Donald Strang	Executive Director
Hamish Harris	Non-Executive Director

### Opinion

Doriemus has captured exposure to a significant gas exploration target in Australia's Kimberley region. Demand for gas to fuel power generation for local communities and multiple mining project operations offers an attractive, high value early target for discovered gas, while transport as CNG or LNG opens access to nearby markets.

Strachan assess a target value for success of \$600 million, which compares favourably with the company's current market value of <\$4 million.





# **Investment Drivers**

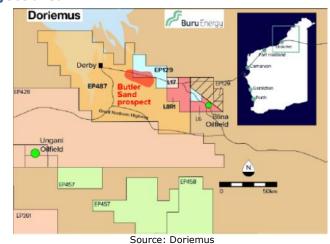
◆ HIGH IMPACT DRILLING: Doriemus has negotiated a farm-in to earn a 50% interest in EP-487 and L-15. The deal is conditional on raising funding by 30 June '19 to drill a well to a maximum depth of 4,000 metres in EP-487 by 27 March '20 and spending up to \$1 million on field development for a suspended well in L-15.

The company plans to use a rig that is currently working in the basin to drill Butler by September '19.

- MULTIPLE TARGETS IDENTIFIED AT BUTLER PLAY: Doriemus and its diluting partner Rey Resources have combined with Canning Basin specialist Buru Energy to commission an independent expert's report over the Butler gas target. This work concludes that the Butler Sand has a gross Prospective undiscovered (2U) conventional gas Resource target of 1,055 Bcf within EP-487, while the surrounding Laurel Sand, Basin Centred Gas System, which is a proven reservoir to the east of this permit, has a gross Prospective 2U gas Resource target of 2,784 Bcf plus associated condensate within the permit.
- STRONG GEOLOGICAL SUPPORT FOR EXPLORATION: Interpretation of seismic and nearby well data identifies Butler as a significant, potentially conventional wet gas target within a known Laurel Formation Basin-Centred petroleum system. In the success case, Doriemus will target net volumes estimated at 528 Bcf of gas plus 6 mmbbls of condensate in the Butler Sand play plus an additional 1,392 Bcf of gas and 9 mmbbls of condensate in the underlying basin centred, tight Laurel Formation system to its 50% account.
- **RISKED VALUATION \$ 52M. SUCCESS VALUE +\$600M**: A modest insitu valuation for gas is applied in this location by Strachan Corporate to assess a risked value to the Doriemus account of \$52 million or 19 cents per share on a diluted basis for the project. Success at the Prospective 2U classification is estimated to be worth \$261 million for the conventional Butler Sand target and \$343 million for the larger but commercially more challenging Laurel Basin Centred Gas system. These valuation estimates compare favourably to the company's current market capitalisation of <\$4 million.

Viable local markets for gas in this location are rapidly emerging. Valuation metrics from the low 10 - 20 cent per GJ initially applied to these exploration target valuations should increase once funding and firm off-take contracts are in place.





Strachan Corporate: 15 Florence St, Cottesloe, WA, Australia, 6011

Changing focus from modest UK onshore oil to high-impact Canning Basin oil & gas exploration.

High impact exploration

### Summary

Doriemus began with a portfolio of UK based exploration interest. Broadly speaking, these assets have performed well, delivering oil and gas discoveries and now testing oil flows at commercial rates.

Doriemus has recently begun to monetise its small stakes in UK production and development assets and is now looking towards exploration and development of Greenfield and Brownfield assets as a way of embracing additional risk and creating more value for its shareholders.

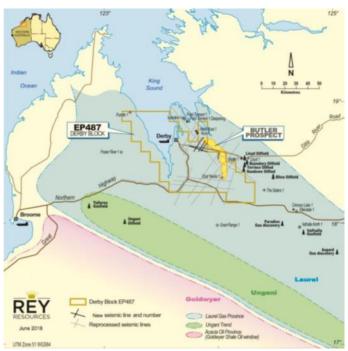
### Canning Farm-ins earning 50%

#### THE DERBY BLOCK- EP-487

Doriemus has negotiated a process by which it can farm-in and subject to government approvals, earn a 50% interest as well as the Operatorship from Rey Resources (REY) over permit EP-487 on the northern edge of the Devonian to Permian aged Canning Basin.

The agreement relies on Doriemus showing evidence that it will raise sufficient funds by the end of June 2019 followed by drilling a well to a depth of up to 4,000 metres on the Butler prospect by the late March 2020.

The permit is underlain by prolific Laurel Sandstone units that have flowed gas from stimulated wells drilled into the formation at locations to the south-east of the permit. The Valhalla well tested gas at up to 44 mmcuft per day and averaged 13.5 mmcuft per day during blow-down after reservoir stimulation, while the Asgard well also flowed at rates of up to 3 mmcuft per day. Gas was measured with low CO<sub>2</sub> levels of 2-5% with a very useful 25-38 barrels of condensate per million cubic feet of gas.



Consultant finds potential for conventional wet-gas reservoir

Consultant ERC Equipoise Pte Ltd (ERCE) is a globally recognised independent specialist resource assessment consulting group. The partners in EP-487 have joined with their neighbour Buru to commission an independent report by ERCE on the Butler prospect, which straddles permit EP-487 and Buru's 100% held EP-129 to the north.

Reworking good quality but sparse 2D seismic data in the vicinity of the Butler Prospect reveals potential for generally improved reservoir quality in shallower parts of the Laurel sedimentary sequence that have been derived from local, more recent sedimentary input. Seismic mapping by ERCE identifies potential for thick sections of reworked Laurel Formation where reservoir with good quality porosity and permeability could be encountered in locations where sediments have in-filled an eroded top of underlying units. This potential reservoir, with thickness of up to 280 metres has been characterised as the "Butler Sand", and ERCE assigns a 16% technical probability of success to drilling.

A more extensive, Basin Centred Gas System (BCGS) in deeper tight Laurel sediments appears to have a total thickness of 1,700 metres mostly below the Butler Sand, to which ERCE assigns a very high, 77% probability of technical success. Commerciality of this tight gas would depend on its cost of extraction as well as the volume and value of gas marketed at that location.

High technical CoS for tight gas & 16% chance of technical success for conventional target

ERCE's resource evaluation has been confined to sedimentary packages identified on individual seismic lines, but as the packages are potentially much more widely distributed and continuous, the Prospective Resources could be considerably larger than has been allowed by ERCE. An earlier study for Rey Resources (REY) found potential for 28 Tcf of P50 recoverable gas Resources in EP-487 alone.

Doriemus targeting net gas of up to 5.5 Tcf at the 3U level

Laurel gas to the east of EP-487 held much higher condensate levels than ERCE estimates for Butler

Potential for unstimulated gas production from Laurel using multiple sidetracking

Shut-in oil well to be tested for production

Work by ERCE finds estimated 2U Prospective Undiscovered Resources to Doriemus' account of 528 Bcf of gas plus 6.2 mmbbls of condensate in the Butler sand plus an additional 1,392 Bcf of 2U gas and 7.5 mmbbls of associated condensate in the

additional 1,392 BCf of 20 g underlying Laurel BCGS. However Strachan Corporate notes that if elsewhere, the Laurel gas has a minimum of 25 bbls of condensate per mmcuft of gas, as reported by Buru in tests to the east of EP-487, then this target

Net Prospective	Doriemu	is Net int	PoS			
Resources	Bcf	/mmbbls	tech	Commercial		
EP-487	10	20	30			
Butler Sand Gas	193	528	1,205	16%	15%	
Condensate	1.7	6.2	17.7			
BSCS Gas	414	1,392	4,358	77%	19%	
Condensate	1.9	7.5	25.5			
Source: Deriemus	Strachan (	Cornorato				

Source: Doriemus, Strachan Corporate

could yield a total of over 47 mmbbls of condensate to the Doriemus account, if hydrocarbons are present.

A proposed drill location for the Butler well sits about 1,900 metres off the sealed Gibb River Road that runs to Derby, 20 kilometres to the west, and is set to be ~50 metres from EP-487's northern boundary with adjoining permit, EP-129. This location should be easily reached late in the dry season through until December, provide that the wet season is normal. Doriemus intends to drill the Butler well in September '19, after Buru Energy completes its initial programme of development and exploration drilling.

The Butler well is planned to target the conventional Butler Sand prospect at a depth of about 1,700 metres and will drill to a depth of up to 4,000 metres to test unconventional Laurel Sands that might be developed using multiple horizontal completions from a single wellbore.

### **ВLOCK L-15**

L-15 is a production licence granted in 2010, containing the West Kora oilfield with previous production history dating back to its suspension in 1996, when the oil price was much lower. The well produced 20,000 bbls at an initial rate of 350 BOPD and water cut of 35%. However, the water cut increased rapidly to 85% and Operator Esso, shut the well in. The L-15 oilfield is fully permitted to bring back into production and the well could be a profitable producer aided by application of modern oilfield technology.

Doriemus intends to earn a 50% interest and operatorship, alongside its partner Rey Resources over the 163  $\text{km}^2$  WA onshore block L-15, which contains the fully permitted but suspended West Kora oil field.

The company aims to provide funds of up to \$1 million to undertake a field evaluation and a work-over at Kora West that would aim to isolate water ingress and restore oil production. Strachan Corporate estimates that even a flow of 50-100 BOPD could be commercial at the current oil price of ~A\$100 per barrel, delivering net cash flow of up to \$75,000 per month to Doriemus' account.

The company estimates that the West Kora oilfield has 380,000 barrels of estimated gross 2P Reserves and a further 120,000 barrels of Contingent Resources while the nearby Point Torment Gas field has estimated 2C gas Resource amounting to 4.7 Bcf. Strachan Corporate estimates that if the Kora West field flows oil, it should have an NPV of about \$9 million, or \$4.5 million to Doriemus' account.

Rey has been granted a suspension and extension of commitments for EP-487 and its one-well commitment has been deferred until March 2020.

### Legacy UK assets

# UK ONSHORE PEDL-137 HORSE HILL OIL FIELD & PEDL-246

### (2.6%)

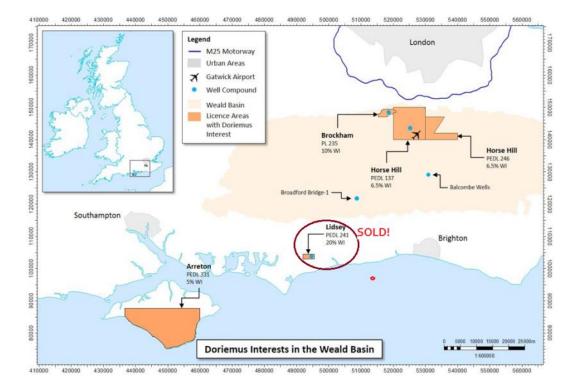
Doriemus holds 4% of Horse Hill Developments Ltd, which owns 65% of both PEDLs 137 and 246, giving it an effective 2.6% interest in the project,

Extended well testing at the project is now delivering continuous oil production from two main reservoir units at Horse Hill-1 (HH-1). The parties now plan to drill and production test two horizontal wells, HH-1z and HH-2 by the end of 2019. Planning consent and environmental permits are in place and the operating company is fully funded for both wells.

The first new horizontal well, HH-2, will target the Portland oil field, while the second, HH-1z, a horizontal sidetrack off HH-1, will target the combined 109 metre thick Kimmeridge Limestone 3 (KL3) and KL4 oil pools, currently on sustained test production at a rate of about 220 BOPD from the HH-1 wellbore.

Residual 2.6% of Horse Hill oilfield

#### STRACHAN CORPORATE AFSL 259730



# Small oil production in UK appears to be non-core

The company estimates that each of the new horizontal wells has potential to sustain an initial daily production rate of between 720 and 1,080 BOPD.

Further field development involving horizontal production wells and a water reinjection well are planned to be drilled in early 2020 following the grant of regulatory approvals for permanent oil production. The company expects regulatory permits supporting a 20 year production life to be in place by the end of 2019. Current development planning sees a total of six production wells and assumes a maximum daily rate of around 3,500 BOPD from the field or ~140 BOPD to Doriemus' account.

# UK ONSHORE ISLE OF WIGHT PEDL331 ARRETON MAIN OIL DISCOVERY AND ARRETON SOUTH EXPLORATION (5%)

Doriemus holds 129.6 million shares in the project's operator UK Oil and Gas Investments (UKOG). UKOG intends to convert 14.9 mmbbls of net un-risked Contingent Resources at the Arreton discovery into Proven and Probable Reserves by drilling and testing an appraisal well, Arreton-3 ("A-3") within the Arreton Main oil discovery.

The Arreton oil discovery is a geological analogue of the Company's Horse Hill Portland oil field. It contains three stacked Jurassic oil pools with aggregate, estimated gross P50 oil in place that is over four times larger than that estimated for the Horse Hill Portland oil field.

The partners also plan to drill, core and test the geological look-alike Arreton South prospect with operations planned to follow after A-3 testing. UKOG estimates that the Arreton South prospect contains almost twice volume of oil in place as the currently producing Horse Hill Portland field.

### **BROCKHAM PL-235** (10%)

Doriemus has a 10% direct interest in PL-235 and owns 8.3 million shares in the permit's Operator Angus Energy.

Flow testing from a perforated zone in stimulated well BRX4Z from an interval of 195 metres below a depth of 960 metres, has produced water with traces of light oil. The testing programme now aims to isolate the zone of water ingress so that a better test of oil deliverability can be made.

DOR converting interests to shares in both operators, Angus Energy & UKOG

### Valuation

Risked value of \$72 million provided funding is in place

Doriemus has crystallised value and added cash from the sale of some of its UK petroleum assets which currently amounts to an assessed total value of about \$5.9 million.

Strachan Corporate assumes that the company will raise ~\$11 million before costs to cover working capital and farm -in funding commitments in EL-15 and EP-489 for 2019.

	\$m	\$/shr	Comment
Cash & Investments	\$ 5.9	\$ 0.02	Angus/UKOG
Residual UK	\$ 1.0	\$ 0.00	
Legacy interests	\$ 6.9	\$ 0.03	-
New equity	\$ 10.3	\$ 0.04	Assumed CMP
Options <sup>1</sup>	\$ 4.2	\$ 0.02	NPV <sub>8</sub>
L-15	\$ 0.4	\$ 0.00	Risked
Butler Sand Risked	\$ 30	\$ 0.11	Risked
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Corporate	-\$ 3.7	-\$ 0.01	_
Target value*	\$ 71	\$ 0.26	_

\* target relies on funding support
<sup>1</sup> Options currently out of the money

The company may choose to fund this commitment in some other way, such as further farm-down or even some form of debt, but either way there will be dilution for existing shareholders to arrive at a point where Butler can be assessed as either a discovery or a project requiring further work.

While options are currently significantly out of the money, they are included in the valuation on an assumption that they are long-dated being late '21 and '22, and if work at Butler is a success, they would definitely be exercised!

Prospect	V	VI	Net		Target 100%		Success value		Success	POS	DOR	Risked		
	•	<b>Vo</b>	WI%	% Gas Oil Bcf mmbbl Ga		ISV* Project DOR		Value <sup>1</sup> %		Cost	Value			
	Now	Earn				Gas Oil \$m		\$m	\$/share		\$m	\$/	share	
L-15	0%	50%	50%	-	0.5	0.20	18	\$ 9	\$ 5	\$ 0.02	30%	1	\$	0.00
Butler Conventional	0%	50%	20%	3,139	42	0.20	16	\$1,300	\$261	\$ 0.95	15%	9	\$	0.11
Butler Unco	0%	50%	39%	5,215	40	0.10	9	\$ 882	\$343	\$ 1.25	19%	44	\$	0.08

The Butler structure extends north from Doriemus' interests in permit EP-487, into Buru's permit EP-129. ERCE estimates gross Prospective Undiscovered Resources at the 2U category of 3.2 Tcf of gas plus 42 mmbbls of condensate for the entire conventional Butler sand target plus 5.2 Tcf of gas and 40 mmbbls of condensate in the entire Laurel tight sands BCGS target.

Strachan Corporate prefers to address the entire field. It believes that on success, the partners on both sides of the permits would come to a sensible agreement to pool resources, unitise the Resources and proceed as a project over the entire field rather than compete with each other for development funding and gas markets.

In this case, as the Prospective fields are currently mapped and understood, Doriemus would end up with 20.1% of the conventional Butler gas and 38.9% of the Laurel Formation gas.

At this early stage of assessment, with exploration funding yet to be finalised, an exploration well yet to be drilled and gas marketing options yet to be contracted and funded, the Prospective value of undiscovered gas in this location, away from established gas markets, must suffer a considerable discount.

Recent transactions demonstrate the value that the market currently ascribes to different categories of gas at its many and various stages of development.

While developed and producing gas can attract a price of close to \$2/GJ, discovered gas with a clear path to market can be worth \$1.20/GJ but discovered gas with a poor, long-term or expensive path to market can be found for as little at 2 to 28 cents per GJ.

Given the examples outlined below, Strachan Corporate feels comfortable to ascribe an insitu value for undiscovered conventional gas in the Kimberley at 20 cents per GJ while the more costly and problematic unconventional gas targeted in the Laurel Formation gains an insitu value of 10 cents per GJ.

Clearly, once the gas' chemical quality and reservoir characteristics that define a discovery, along with marketing and funding options for any discovered can be defined and formulated, the insitu value of any discovered gas would appreciate accordingly.

ERCE ascribes a 16% chance of technical success to the Butler Sand target, for which Strachan Corporate ascribes a 15% probability of commercial success (PoS) while ERCE ascribes a high, 77% chance of success for finding tight gas in the Laurel Formation, but Strachan Corporate prefers to apply a 19% PoS to this more technically challenging and thus capital intensive target.

Gas to be more valuable when discovered, contracted for sale and funded for development

## Potential value of gas in the Kimberley region

The EP-487 permit is located about 30 kilometres east of the Port of Derby on a very tidal inlet of King Sound on the Kimberley coast. The permit is crossed by the Gibb River Road, which is sealed to within 1.9 km of the Butler well site and the all-weather Great Northern Highway linking Derby to Fitzroy Crossing in the east and on to the Northern Territory and to Broome with its airport facilities about 200 kilometres to the west. The region is about 760 kilometres north-east of Port Hedland, from where access to Western Australia's domestic gas pipeline transport network would be available.

Developing a prospective gas discovery at Butler would need to rely on:

- Developing local markets via:
  - Conversion to compressed gas (CNG) or mini-LNG for transport to remote power sites at mines or towns.
  - ◊ Possible regional pipelines to nearby mine sites and towns
- Establishing a virtual export pipeline of containerised CNG or LNG for delivery into local and/or nearby Asian markets.
- Attracting downstream processing or manufacturing activity that could access gas locally.

Recent market activity demonstrates a wide variance in valuation for gas at various stages of evaluation and development.

- 1. **Mitsui** is estimated to have paid about \$500 million for its share of the Waitsia gas field in the Perth Basin, paying about \$1.20/GJ for a Resource that is in easy reach of the Western Australian domestic gas transport network and was well-defined by four wells, flow testing and 3D seismic data.
- 2. Recently, **Beach Energy** sold an interest in its Otway gas fields that supply gas to the lucrative Eastern Australian market for \$1.90/GJ, demonstrating the value of developed and producing assets.
- 3. Similarly, **Santos** paid \$2,940 million for Quadrant Energy's 1,320 PJe of gas Resource, representing \$2.23/GJe for its developed fields, which Strachan Corporate estimates would have been about \$1.20/GJe after allowing value for Quadrant's recently outlined contingent and Prospective Resources and exploration potential.
- 4. Last year, **Woodside Petroleum** paid about \$0.28/GJ for Exxon's interest in the Scarborough gas field development. This modest price was struck for a well -defined Contingent gas Resource despite the gas having a clear and defined path to market.
- 5. **Blue Energy** holds well understood CSG Resources in the Bowen Basin, yet its market capitalisation per GJ of gas is \$0.08 per GJ of 2P + 2C and \$0.02 per GJ of 3C Resources.

### **Risks**

Exploration:	This is an exploration company and has risk associated with geological interpretation and discovery.			
Engineering-mechanical:	The programme may face unexpected mechanical risks.			
Weather:	The region is subject to severe wet season weather events that could impact on exploration and development plans.			
Marketing:	The gas market in this part of Australia is emerging.			
Regulation:	Government regulation surrounding petroleum extraction technology, environmental standards and Native Title matters has been fluid and may impact of development options.			
Social License:	Working in the Kimberley region has ongoing obligations to maintain a working social license with people in local communities and towns.			

#### Disclaimer

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