

The standout emerging oil and gas company on ASX October 2018

#### **DISCLAIMER & RESOURCE INFORMATION**



The resource estimates outlined in this report have been prepared by the Company's Chief Operating Officer, Mr Philip Huizenga, who is a full-time employee of the Company. Mr Huizenga has over 25 years' experience in petroleum exploration and engineering. Mr Huizenga holds a Bachelor Degree in Engineering, a Masters Degree in Petroleum Engineering and is a member of the society of Petroleum Engineers. Mr Huizenga is qualified in accordance with ASX Listing Rules and has consented to the form and context in which this statement appears.

All contingent and prospective resources presented in this report are prepared as at 28 August 2017, 23 April 2018, 20 August 2018 and 15 October 2018 per the Company's announcement released to the 28 August 2017, 23 April 2018, 20 August 2018 and 15 October 2018. The estimates of contingent and prospective resources included in this announcement have been prepared in accordance with the definitions and guidelines set forth in the SPE-PRMS. Carnarvon is not aware of any new information or data that materially affects the information included in this presentation and that all material assumptions and technical parameters underpinning the estimates in this presentation continue to apply and have not materially changed. Carnarvon used deterministic and probabilistic methods to prepare the estimates of these contingent resources. These contingent resources have been aggregated by arithmetic summation and hence the aggregate 1C may be a very conservative estimate and the 3C may be a very optimistic estimate due to the portfolio effects of arithmetic summation.

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#### THE STANDOUT EMERGING OIL & GAS COMPANY ON ASX



**OIL WEIGHTED** 

More than 60% of CVN's 104 mmboe contingent resource is oil

CONVENTIONAL

Resources discovered are in quality conventional reservoirs

**DEVELOPMENT** 

Projects are in shallow water close to infrastructure & services

**ECONOMICS** 

Low cost projects with attractive fiscal terms in low risk jurisdictions

**GROWTH** 

Significant volumes exist in prospects close to recent discoveries

#### CORPORATE SNAPSHOT AND EXECUTIVE MANAGEMENT

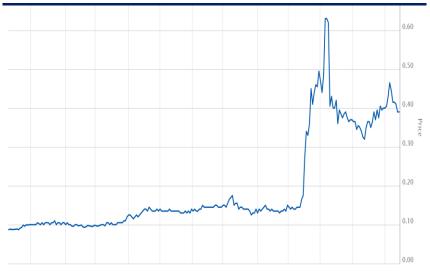


Carnarvon has a market capitalisation of ~A\$500m backed by an experienced management team with extensive in-house technical capability, led by Managing Director Adrian Cook.

#### **Capitalisation**

Ordinary shares on issue	m	1,190
Share price as at 10 Oct 18	A\$/sh	0.41
Market capitalization	A\$m	488
Debt (as at 30 Sept 18)	A\$m	-
Cash (as at 30 Sept 18)	A\$m	50
Enterprise value	A\$m	438

#### Last 12 month share price performance



#### Highly experienced team





- 25+ years experience in finance, primarily in the petroleum industry
- Former Managing Director of ASX Listed O&G explorer, Buru Energy Limited and Fellow of the Australian Institute of Company Directors







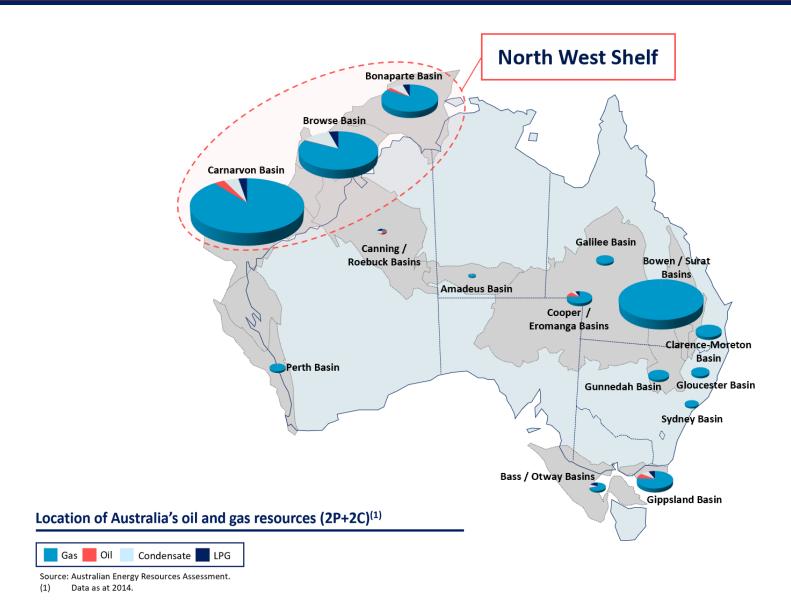




- 25+ years experience in O&G industry as petroleum engineer
  - Member of: Society of Petroleum Engineers, Industry Advisory Council to the Dept of Petroleum Engineering at Curtin University
- Chartered Accountant with 10+ years experience in financial management
- Experience in commercial transactions including the divestment of Carnarvon's Thailand production assets
- PhD in Geology and Geophysics from Imperial College London
- 25+ years of experience in O&G exploration, discovered over 5 billion barrels of recoverable oil

## CARNARVON'S STRATEGY IS FOCUSED ON AUSTRALIA'S MOST PROLIFIC OIL & GAS REGION

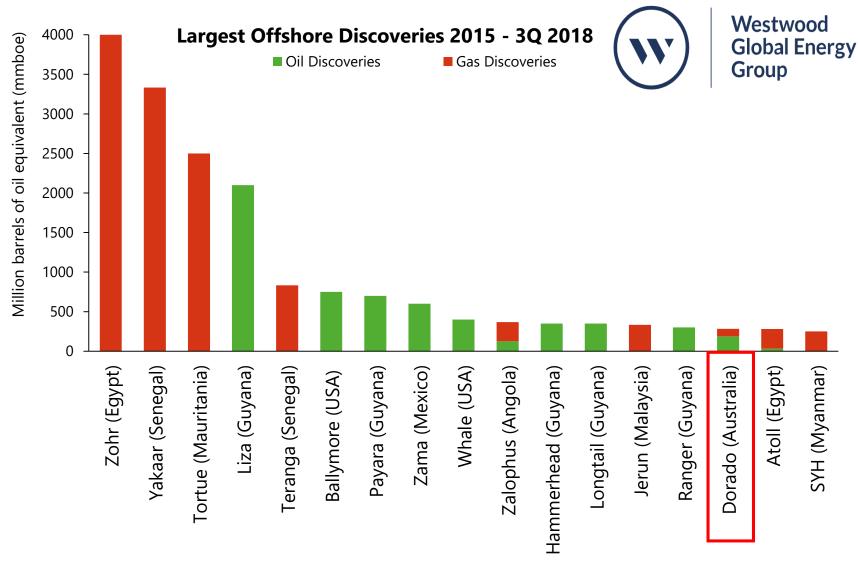




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#### 2018 - CARNARVON'S STRATEGY PRODUCED A WORLD CLASS DISCOVERY

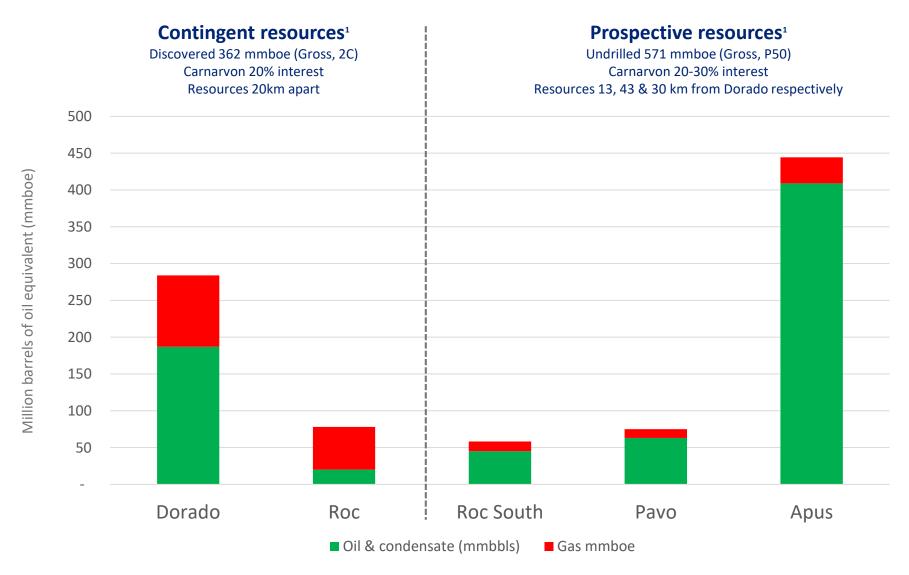




Mid-case recoverable volumes from company reporting where available, otherwise estimated by Westwood.

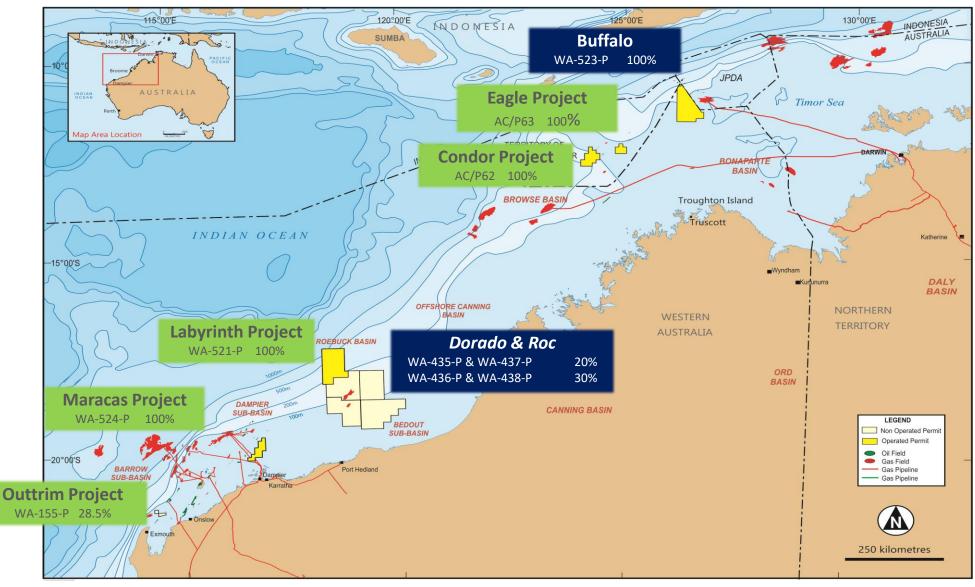
#### 2019 & 2020 - FOCUS IS ON DORADO AND RESOURCES AROUND DORADO





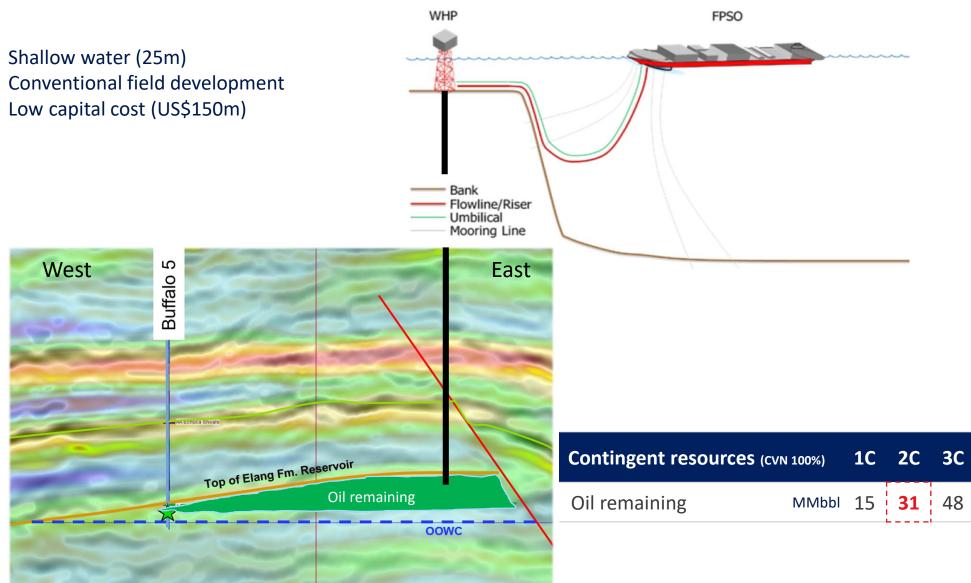
#### CARNARVON "LOADED UP" IN THE LOW OF THE CYCLE TO SET UP FOR FUTURE GROWTH





# **BUFFALO OIL FIELD REDEVELOPMENT REPRESENTS A LOW RISK / HIGH MARGIN OPPORTUNITY**





#### CARNARVON'S NEAR TERM FOCUS IS PRIMARILY ON 2019 DRILLING ACTIVITIES



**DORADO OIL** 

Prepare & drill two Dorado appraisal wells in 2019

**DORADO OIL** 

Progress oil field development plans to achieve FID in 2020

**BUFFALO OIL** 

Complete Production Sharing Contract with Timor-Leste

**BUFFALO OIL** 

Prepare & drill Buffalo well in Q3, 2019

**EXPLORATION** 

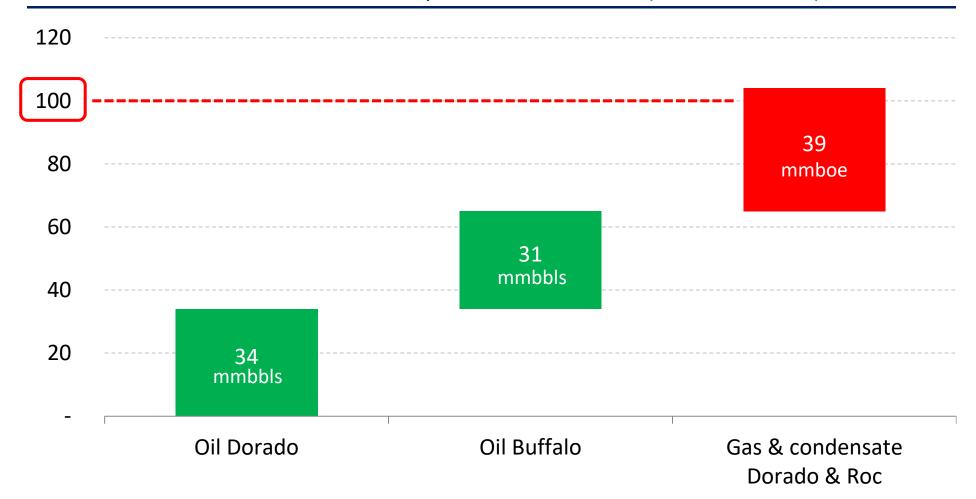
Around Dorado & farm out Labyrinth permit (adjoins Phoenix permits)

#### CARNARVON'S MID TERM FOCUS IS ON MAXIMISING VALUE FROM DISCOVERED RESOURCES



## **Carnarvon's share of discovered Contingent Resources**

Million barrels of oil / oil equivalent on a 2C basis (mmbbl /mmboe)



#### A UNIQUE OIL & GAS POSITION WITH SIGNIFICANT GROWTH POTENTIAL



**UNIQUE** 

Exposure to Australia's most exciting exploration province around Dorado

**DISCOVERIES** 

Of over 100 million barrels of oil equivalent to date net to Carnarvon

**BLUE CHIP** 

Project in Dorado with Santos expected to be incoming operator

**FUNDING** 

\$50m cash and a broad range of options to fund significant growth

**CATALYSTS** 

Multiple share-price catalysts over the next 12-24 months

# 2016 – HIGHLY SUCCESSFUL ROC-2 WELL FLOW TEST







# **ADDITIONAL INFORMATION**

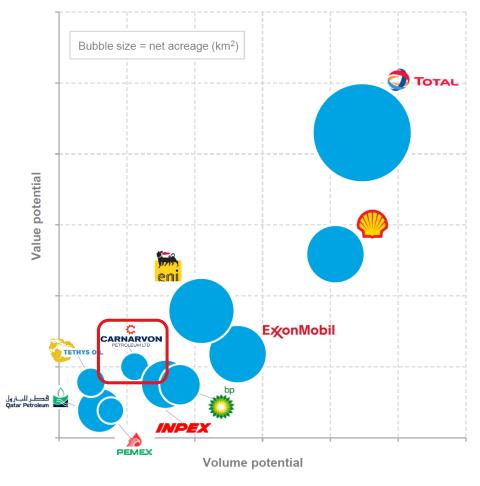
THINK DIFFERENT

**ACT DIFFERENT** 

#### CARNARVON SET ITSELF UP FOR GROWTH BY SECURING ACREAGE IN THE LOW OF THE CYCLE



#### Top 10 companies by value and volume



#### Carnarvon Petroleum holds highly prospective blocks in **NW Australia**

#### **Exploration acreage reload: Majors have the X Factor**



Winners and losers of the latest acreage reload

Heather Forgan and Kristina Beadle, September 2018



woodmac.com

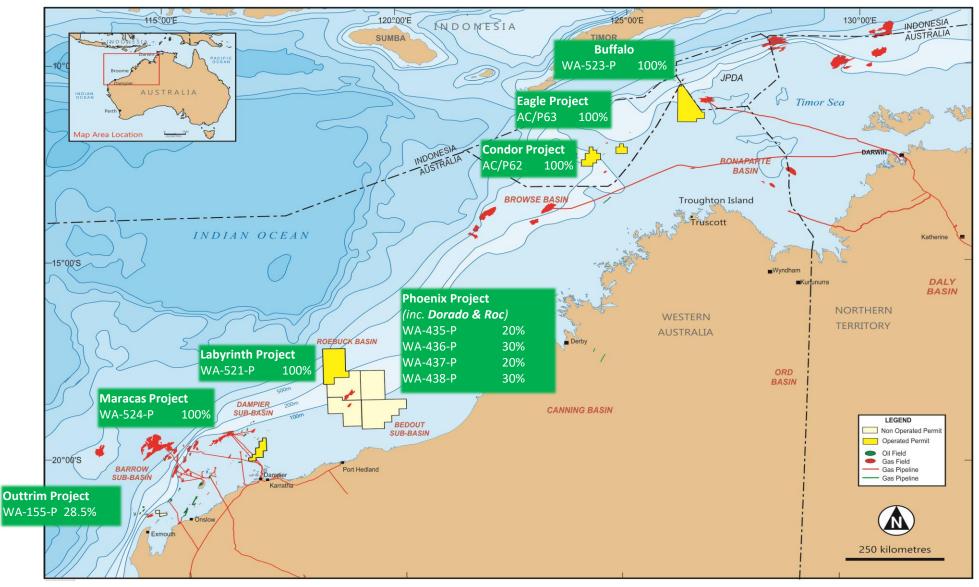
#### Methodology

- We examined licence awards between 1 January 2016 and 23 August 2018. We included active and under application blocks. Company interest represents the current participants in these blocks.
- Onshore data we show may include unconventional opportunities. Exploration licences are rarely awarded with a focus on unconventional resources only and are not distinguished from conventional exploration awards.
- EV<sup>2</sup> uses a Spatial Monte Carlo methodology to test the remaining potential of a basin. Subsurface maps (including a combined common risk segment map and prospect density map) and statistical inputs (including maximum pool size and number of prospects) define the Monte Carlo constraints for each geological play. The Monte Carlo simulation is run 1,000 times. The results of each simulation are the locations of dry holes and discoveries, which are assigned a value using a prospect database. The risked average yet-to-find (YTF) volume and expected monetary value (EMV) are then calculated from the 1,000 simulations.
- Potential values shown are post-tax EMVs at our base price scenario (US\$65/bbl longterm Brent). These are full-cycle, geologically risked valuations and do not include signature bonus payments.
- Potential volumes shown are risked average prospective resource and do not include discovered resource.

Source: Wood Mackenzie FV2

#### CARNARVON NOW HAS A SUBSTANTIAL PORTFOLIO ACROSS THE NORTH WEST SHELF







#### Carnarvon's portfolio of oil & gas assets include two near-term oil developments

# DORADO OIL (20% Carnarvon)

- Potential near-term oil development
- Third largest oil resource ever discovered in the North West Shelf
- Appraisal drilling plans in progress

# BUFFALO OIL (100% Carnarvon)

- Potential near-term oil development
- Low cost re-development of previous oil field shifting to Timor-Leste territorial waters
- Buffalo well scheduled for drilling in Q3, 2019

#### DORADO/ROC GAS & COND. (20% Carnarvon)

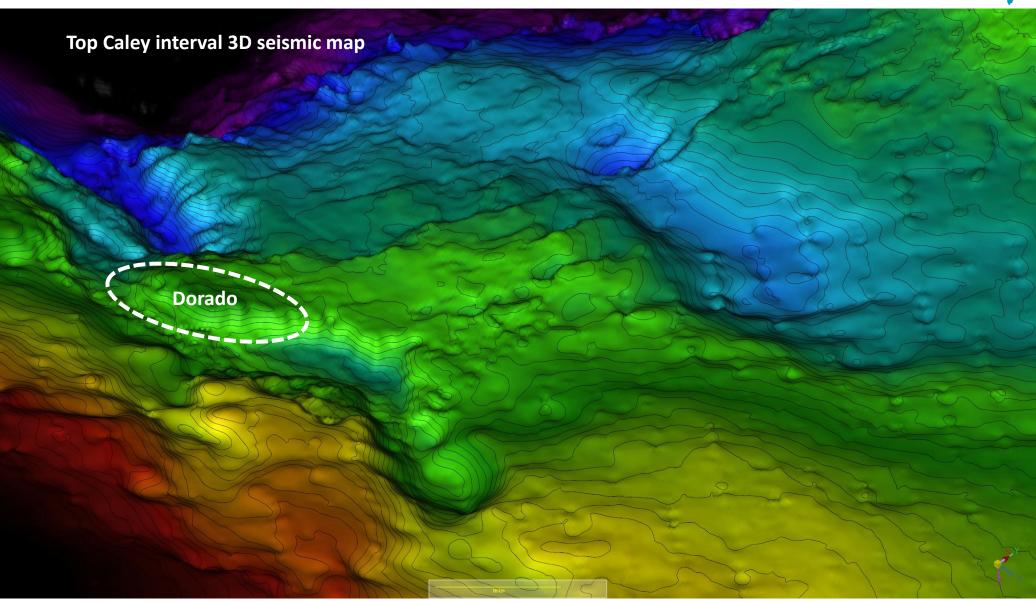
- Potential medium-term gas & condensate development
- Strategically located within close proximity to infrastructure and in shallow water
- High liquids component markedly improves commerciality

#### **EXPLORATION**

- Dorado success increases the probability of follow up discoveries in this area
- Exploration yielded 3 potential development projects in 4 years at low cost
- Farm-out discussions progressing on other North West Shelf assets

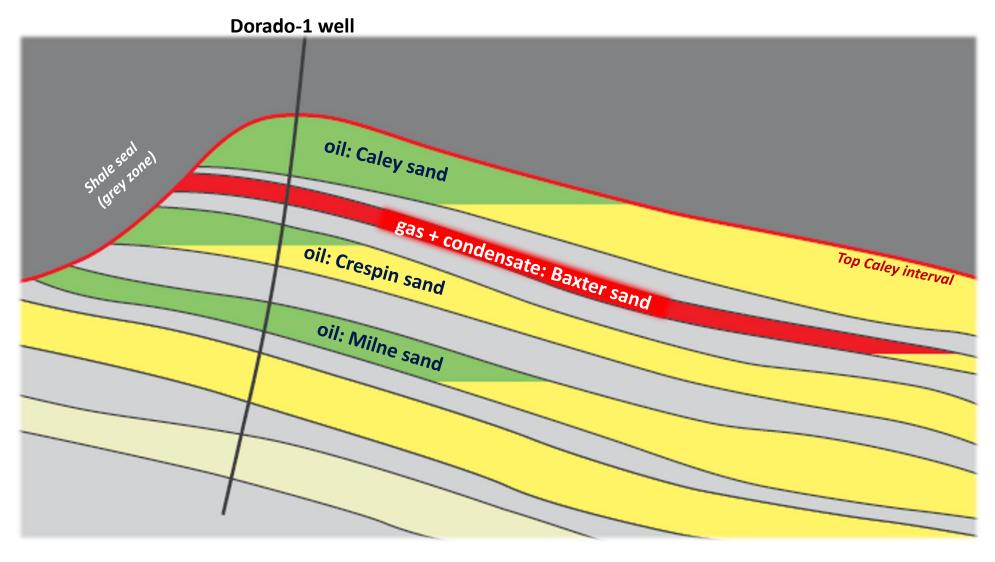
## **DORADO IS A MAJOR DISCOVERY ACROSS STACKED SANDS**





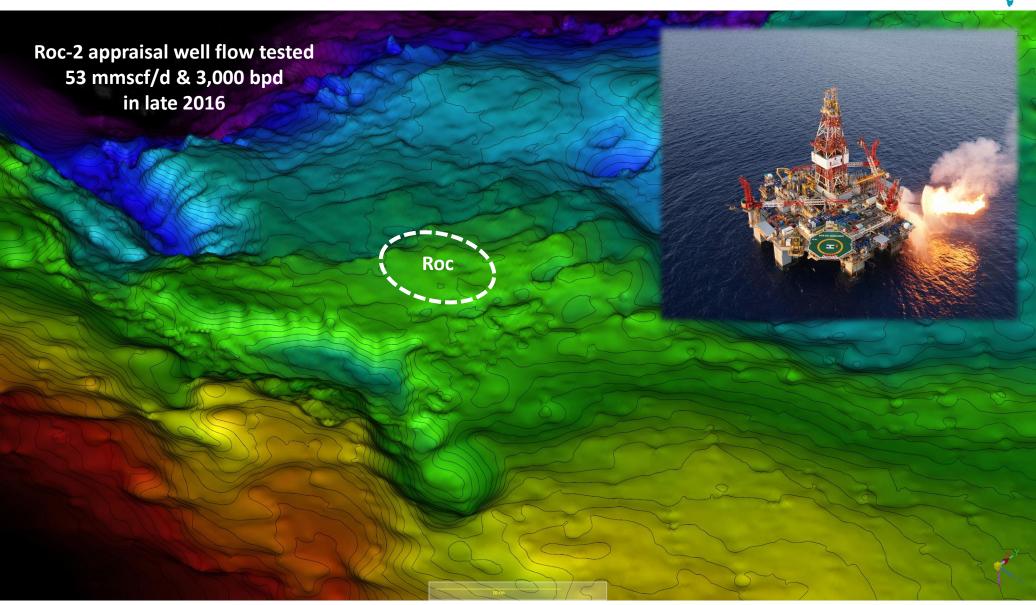
#### **DEPICTION OF DORADO STACKED SANDS**





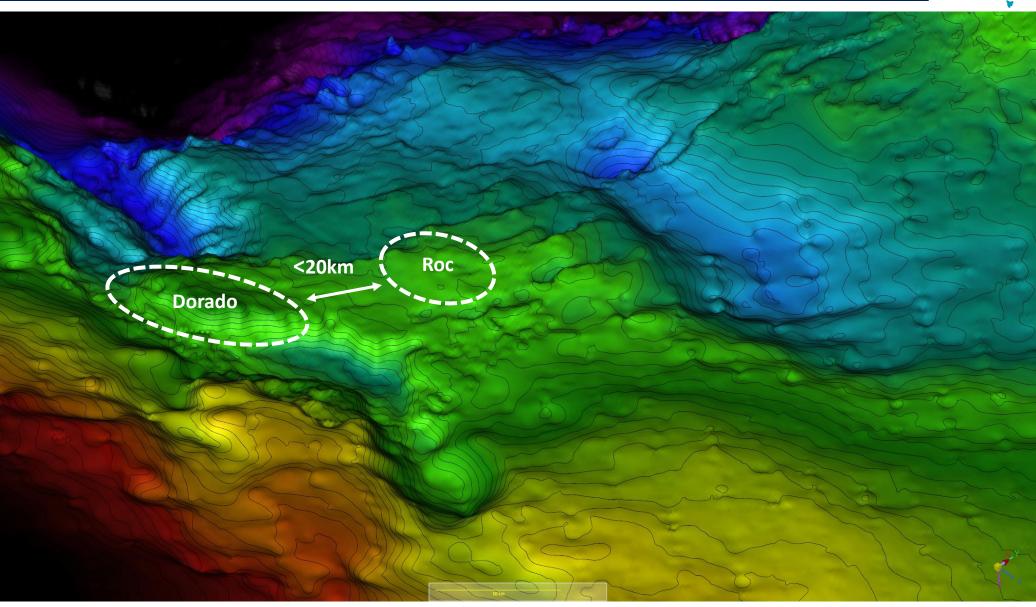
#### **ROC HAS ALREADY CONFIRMED FLOW RATES AT COMMERCIAL LEVELS**





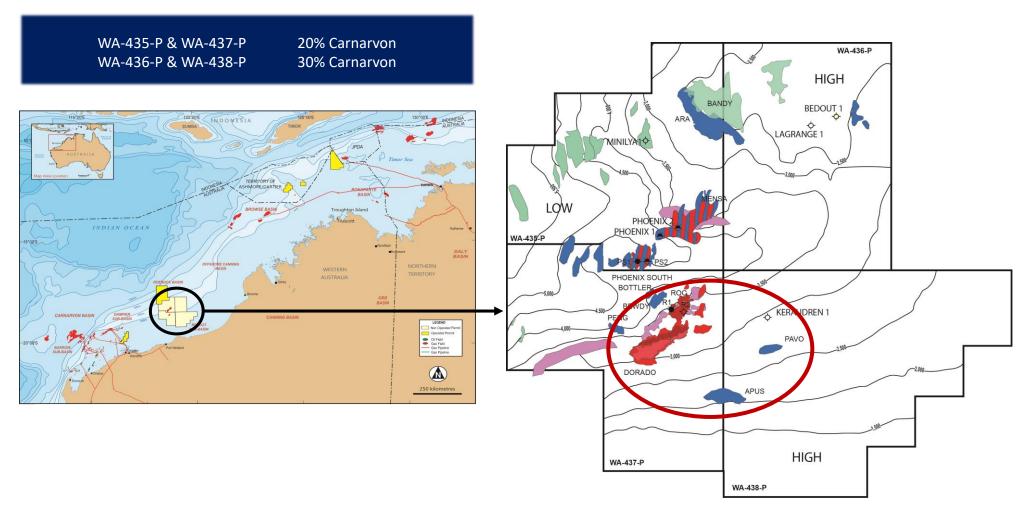
# DORADO & ROC COMFORTABLY WITHIN TIE-BACK DISTANCE



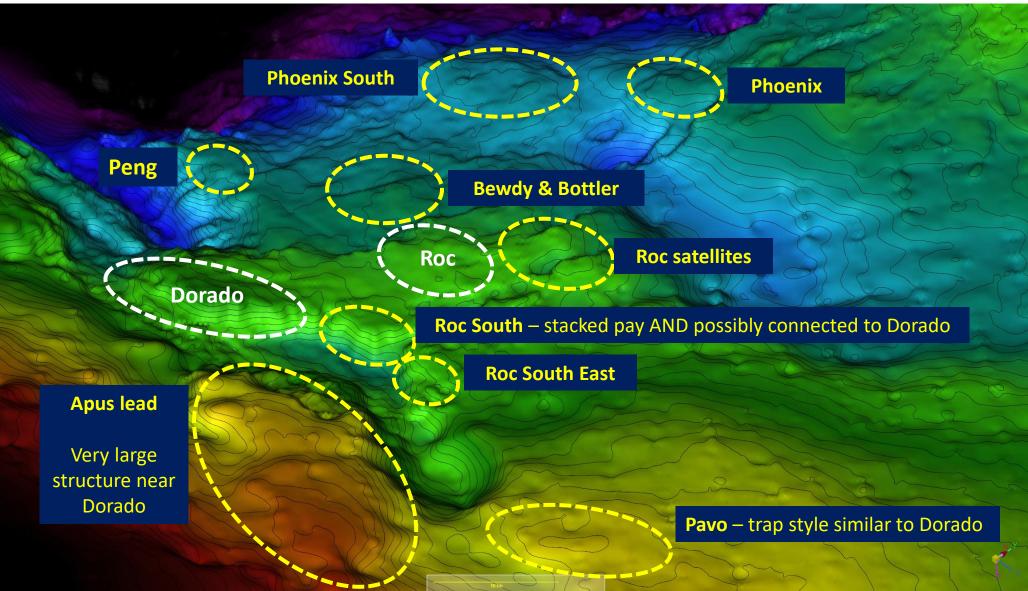


#### FOUR PERMITS COVER THE ENTIRE HYDROCARBON BASIN









#### WHY DORADO IS AN IMPORTANT DISCOVERY



OIL

3<sup>rd</sup> largest discovery in the history of the NWS

**GAS** 

Plus half a trillion cubic feet of gas and associated condensate

**PLAY TYPE** 

The discovery de-risks similar prospects nearby

**LOCATION** 

Ideal for development in shallow water Western Australia

**PRODUCTION HUB** 

Opens up a multitude of tie back potential



Gross Contingent Resources (CVN 20%	5)	<b>1C</b>	<b>2</b> C	3C
Oil - Dorado	MMbbl	82	171	320
Condensate - Dorado + Roc	MMbbl	18	36	71
Gas - Dorado + Roc	BCF	434	884	1,777
Total oil equivalent	MMboe	176	362	702

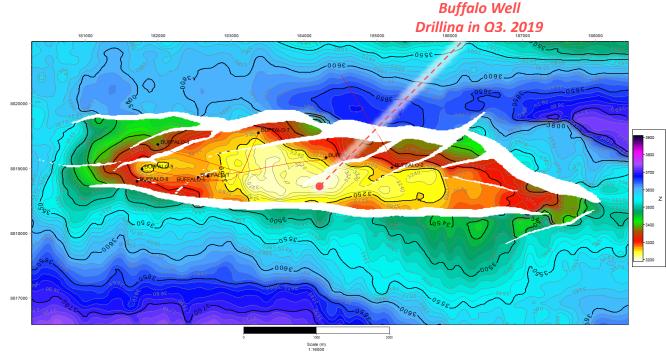


#### 100% owned low risk oil field re-development project

#### **Summary**

- Gross 2C light oil contingent resource of 31 MMbbls (independently reviewed by RISC)
- Low risk and low cost development plan
- Development cost of ~US\$150m could be predominately or entirely funded by Carnarvon
- Operating costs of ~US\$80 100m p.a. based on a 4-year initial production life
- Production Sharing Contract (PSC) negotiations progressing with the Australian & Timor-Leste Government

#### **Buffalo Development Field**

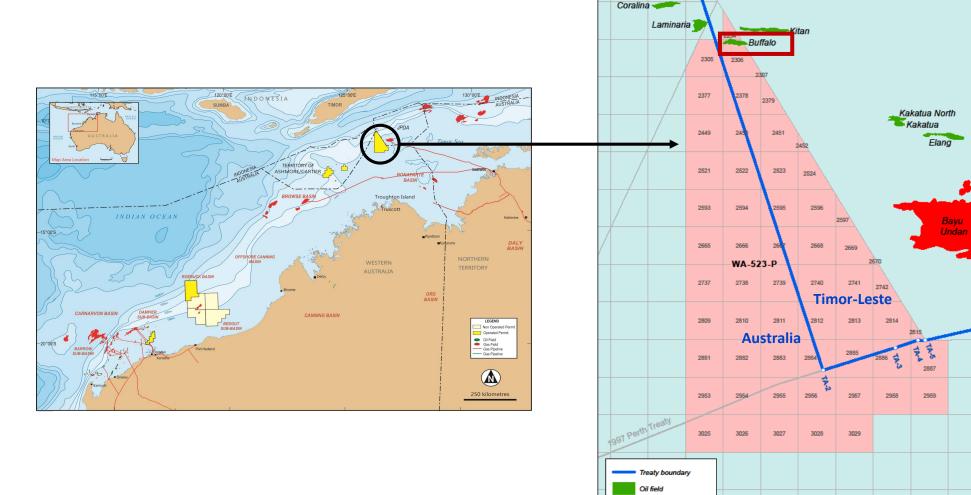


#### **Resources volumes**

Gross Contingent Resources		1C	2C	3C
Oil	MMbbl	15	31	48

#### **BUFFALO OIL FIELD REDEVELOPMENT TRANSITIONING TO TIMOR-LESTE**





New maritime boundary line

SC52 graticular blocks

Jahal

## **OTHER PROJECTS**



## CVN utilises its strong inhouse technical capabilities to access high growth opportunities

# LABYRINTH (100% Carnarvon)

- Very large oil prospects with the project in the process of being farmed out
- Located in the Rowley Sub-basin in the North West Shelf (WA-521-P)
- Seeking new 3D seismic over primary prospect followed by an exploration well

# CONDOR & EAGLE (100% Carnarvon)

- Targeting multiple oil prospects around the current Montara oil field
- Located in the Vulcan Sub-basin in the North West Shelf (AC/P62 & AC/P63)
- Carnarvon is aiming to be ready to commence farm out discussions by mid 2019

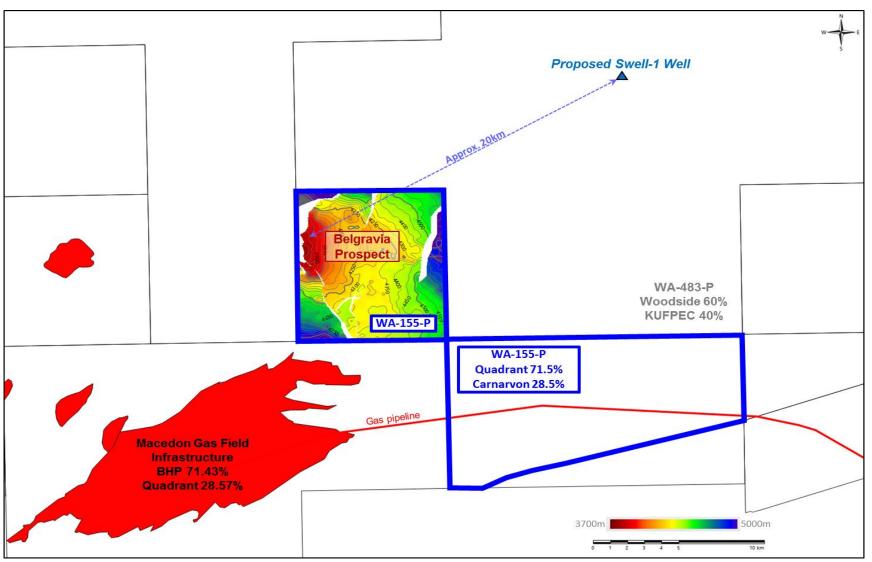
# **OUTTRIM** (28.5% Carnarvon)

- Predominantly a gas asset on trend with Woodside's Swell-1 gas discovery
- Located in Exmouth Sub-basin (WA-155-P), held in joint venture with Quadrant
- CVN is assessing Outtrim project having regard to its other development projects

# MARACAS (100% Carnarvon)

- Predominantly an oil asset flanking the Wandoo and Stag oil fields
- Located in the Carnarvon Basin in the North West Shelf (WA-524-P)
- Technical work under way to ascertain the merits of the identified play type





# OIL & GAS VOLUME SUMMARY (CONTINGENT RESOURCES)



#### **Gross Contingent Resources (100% basis)**

		Light Oil		Natural Gas			(	Condensat	е	Barrels of Oil Equivalent			
		MMbbl		BCF				MMbbl		MMboe			
	1C	2C	3C	1C	2C	<b>3C</b>	1C	2C	3C	1C	2C	3C	
Dorado	82	171	320	229	552	1,197	6	16	36	128	283	566	
Roc	-	-	-	205	332	580	12	20	35	48	78	137	
<b>Phoenix South</b>	7	17	30	-	-	-	-	-	-	7	17	30	
Phoenix	2	7	16	-	-	-	-	-	-	2	7	16	
Phoenix Project Sub-Total	91	195	366	434	884	1,777	18	36	71	185	385	748	
Buffalo	15	31	48	-	-	-	-	-	-	15	31	48	

#### **Net Contingent Resources (CVN's share)**

		Light Oil		I	Natural Ga	ıs	C	Condensat	e	Barrels of Oil Equivalent			
		MMbbl		BCF				MMbbl		MMboe			
	1C	2C	3C	1C	2C	3C	1C	2C	3C	1C	2C	3C	
Dorado	17	34	64	46	110	240	1	3	7	26	57	113	
Roc	-	-	-	41	66	116	2	4	7	10	16	27	
<b>Phoenix South</b>	1	3	6	_	-	-	_	-	-	1	3	6	
Phoenix	0	1	3	-	-	-	_	-	-	0	1	3	
Phoenix Project Sub-Total	19	39	73	87	176	356	3	7	14	37	77	149	
Buffalo	15	31	48	-	-	-	_	-	-	15	31	48	
Total	34	70	121	87	176	356	3	7	14	52	108	197	

### OIL & GAS VOLUME SUMMARY (SELECTED PROSPECTIVE RESOURCES)



#### **Gross Prospective Resources (100% basis)**

			Ligh	t Oil		Natural Gas				Barrels of Oil Equivalent				
														Probability
		MMSTB	MMSTB	MMSTB	MMSTB	BSCF	BSCF	BSCF	BSCF	MMBOE	MMBOE	MMBOE	MMBOE	Geological
	Permit	P90	P50	Pmean	P10	P90	P50	Pmean	P10	P90	P50	Pmean	P10	Success
Roc South	WA-437-P	9	45	56	118	15	76	100	217	12	59	74	156	63%
Pavo	WA-438-P	11	63	82	179	3	31	108	249	11	68	101	223	34%
Apus (i)	WA-437/8-P	57	409	612	1,431	15	201	805	1,803	59	444	753	1,747	21%
	Arith Total	77	517	750	1,728	32	308	1,013	2,269	82	571	928	2,126	

<sup>(</sup>i) Note Apus prospect lies across WA-437-P and WA-438-P in which Carnarvon has 20% and 30% equity respectively

#### **Net Prospective Resources (CVN's share)**

			Ligh	t Oil		Natural Gas				Barrels of Oil Equivalent				
														Probability
		MMSTB	MMSTB	MMSTB	MMSTB	BSCF	BSCF	BSCF	BSCF	MMBOE	MMBOE	MMBOE	MMBOE	Geological
	Permit	P90	P50	Pmean	P10	P90	P50	Pmean	P10	P90	P50	Pmean	P10	Success
<b>Roc South</b>	WA-437-P	2	9	11	24	3	15	20	43	2	12	15	31	63%
Pavo	WA-438-P	3	19	25	54	1	9	32	75	3	20	30	67	34%
Apus (i)	WA-437/8-P	13	96	143	335	3	47	189	422	14	104	176	409	21%
	Arith Total	18	124	179	412	7	72	241	540	20	136	221	507	

<sup>(</sup>i) Note Apus prospect lies across WA-437-P and WA-438-P in which Carnarvon has 20% and 30% equity respectively



#### **INVESTOR INQUIRIES:**

**Thomson Naude** 

Company Secretary Phone: (08) 9321 2665

Email: <a href="mailto:investor.relations@cvn.com.au">investor.relations@cvn.com.au</a>

#### **MEDIA INQUIRIES:**

**Luke Derbyshire** 

Managing Director, Spoke Corporate

Phone: 0413 809 404

Email: Luke@spokecorporate.com

THINK DIFFERENT

**ACT DIFFERENT**