

# Karoon Annual General Meeting





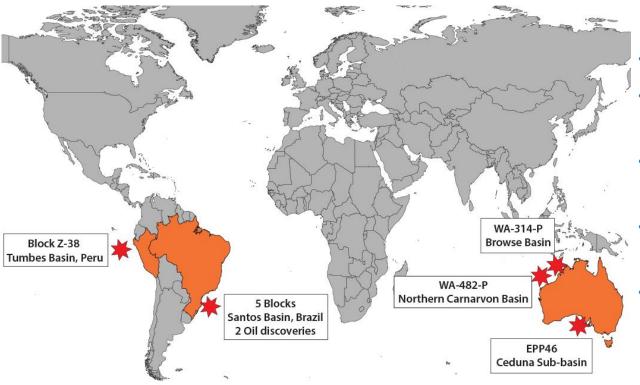
# **Section 1 – Corporate Review**

Robert Hosking, Managing Director



## **Corporate Overview**

Karoon is an oil and gas exploration company with assets in Australia, Brazil and Peru. The Company has been listed on the Australian Securities Exchange since 2004 and has a current market cap ~A\$220 million.



- A\$333 million cash as at 30 September 2018, no debt.
- Net 2C Contingent Resources 82 mmbbls.\*
- Net Prospective Resources totalling 1,947 mmbbls (best estimate).\*
- International track record of exploration in Australia,
  Brazil and Peru with 62% success rate in drilling.
- 24 to 36 months of due diligence work to purchase a high quality production asset.
- Browse Basin asset sold for up to US\$800 million in 2014. Outstanding US\$200 million payment dependent on milestones.
- Successful farmouts in Australia, Brazil and Peru between 2007 and 2018, in excess of US\$350 million.
- 2018 marks 10 year milestone in Latin America.

<sup>\*</sup>Reference 8 May 2018 resource update ASX release



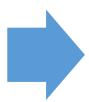
## **Karoon's Strategic Vision**

Karoon's strategic vision is to transform into a global Exploration and Production company with material production to underpin cash flow and enable cashflow generated exploration.

### **Our Vision**

Transform from an exploration company into an emerging independent energy company with material cash generating production assets

Provide a foundation for future exploration and production growth



## **Our Strategy**

Expand portfolio to acquire a high quality, cash flow generating, production asset

Continue to drive value through geotechnical evaluation to identify high quality opportunities in prolific basins

Acquire high quality offshore acreage within prolific petroleum systems



## How will we make it happen?

1. Acquire high quality cash generating production asset

Karoon's
Strategic
Pathway to
Production

2. Bring existing assets through development to production

Continued development of Karoon's portfolio

3. Targeted exploration



## **Karoon's Production Acquisition Aspirations**

Production asset with synergies to existing portfolio

- Establish wider relationships to expand development and production to nearby discoveries
- Make use of availability of economic redeployed FPSOs
- Simple low risk operations
- Potential for up 50,000 bopd regional production

High quality production asset to generate long term cash flow

- Long term cash flow
- Partner with high quality global operator
- Ongoing brownfield expansion of an existing reserve base
- Partner with companies with high quality bona fides
- Oil trading partnership
- Robust low cost production for approx. 20 years



## Disciplined approach to high quality production acquisitions

Building a portfolio of assets to sustain long term value and provide cash flow for further growth.

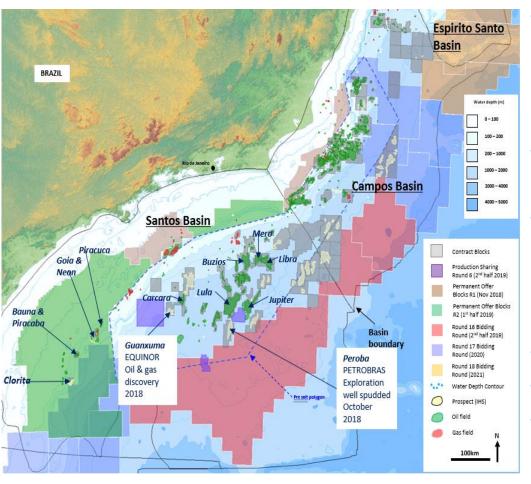


- Production asset acquisitions offer the prospect of game changing rewards, which will continue to create value for the long term.
- Karoon avoids overly risky assets. We are looking to build a high quality asset base.
- Sticking to our strategy means that we have high due diligence hurdles for all investments, including reservoir risk, partner risk and size of reserves.
- Karoon's disciplined approach ensures we are best placed to recognise these high quality production asset opportunities that will make a material difference to our portfolio.



## Focus on prolific proven petroleum systems

#### Karoon's portfolio includes assets in some of the world's most prolific basins.



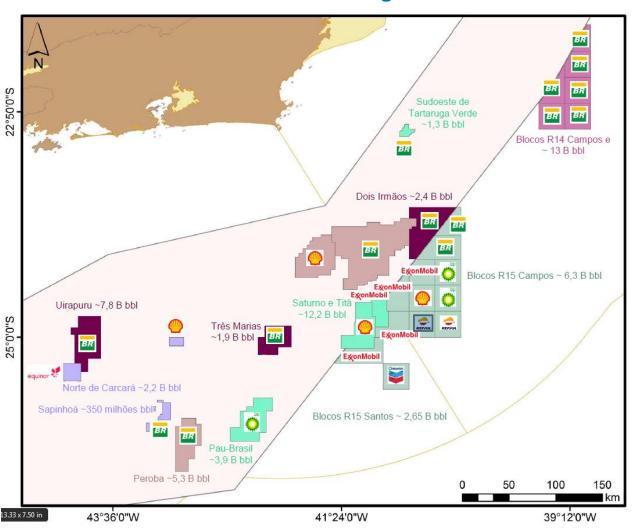
- Karoon's Neon and Goiá (Echidna and Kangaroo) fields are in the Santos Basin which has an average undiscovered oil reserve of 60 billion barrels.
- Campos Basin has an average undiscovered oil reserve of 15 billion barrels.
- In comparison the Gulf of Mexico, North Sea Graben and Gippsland Basin have 48 billion, 5 billion and 0.1 billion barrels of undiscovered oil respectively.
- Existing pre-salt discoveries are being developed.
- Exxon to drill up to 22 presalt wells.
- 60% of the worlds FPSOs predicted to be deployed in the Santos and Campos Basins by 2020.
- Brazil production is forecast to rise to 3 million bopd.

<sup>\*(</sup>Data from USGS survey of worldwide conventional undiscovered oil and gas(2012) and BOEM assessment of the USA outer continental shelf (2016))



## Majors continue to be attracted to Brazil

#### The 2017/18 Brazil Bid Rounds saw significant interest from industry majors.



Four pre-salt and two concession bid-rounds in 2017/18 resulting in:

- 72 block acquisitions by 28 companies
- ~BRL 28 bill bonus payments (US\$7 billion)
- Map shows main winning companies (by bonus paid) with estimate unrisked in place oil volume\*



## Why are we so focused on Brazil?

Our 10 years of knowledge and working experience in Brazil places Karoon at an advantage when navigating regulatory regimes and searching for quality opportunities in the region.

Karoon's knowledge of the Campos and Santos
Basins places us at a significant advantage

Karoon's understanding and experience of South American regulatory regimes enables optimal assessment of acquisition and development opportunities

44% (56 billion barrels) of conventional undiscovered oil in Latin America is in the pre-salt of Santos, Campos and Espirito Santo Basins\*

Brazilian offshore basins have prolific oil prone source rocks and proven potential for large fields

**SUCCESS**IN BRAZIL

Brazil has around 9 times the crude oil production of Australia:\*\*

- Brazil ~2,500,000 bopd
- Australia ~280,000 bopd

<sup>\*(</sup>Data from USGS survey of worldwide conventional undiscovered oil and gas(2012) and BOEM assessment of the USA outer continental shelf (2016)) \*\*www.tradingeconomics.com, November 2018



## The changes improving investment opportunities in Brazil

## Regulatory changes

- Petrobras no longer sole operator for pre-salt
- New Local Content Policy for new bid rounds
- New E&P policies
- Exploratory phase extension
- Extension of REPETRO fiscal regime
- Local Content Waiver for contracts up to 13<sup>th</sup> bid round

## Political changes

- Safe and fair elections with a strong new anticorruption, pro-investment leader
- Lava Jato (Car Wash) instigator Sergio Moro appointed as Justice Minister
- Improving social and economic climate



#### Cost conscious in a transformational time

Work programs

- US\$365 million work program expenditure reduced from Karoon's 1 to 5 year exploration commitments
- Joint Venture cost sharing on operated work programs in 2019
- Engagement with regulators led to a reduction in minimum guaranteed exploration work commitments

Corporate costs

- Continued reduction in our global headcount
- Rationalisation of overseas office locations to benefit from softening markets, providing basis for a cost efficient operating framework going forward
- Strategy for Australia to be implemented during 2019 when lease renewals begin
- Acquisition of a production asset will dilute capital costs

Long Term Planning  Extensive due diligence and planning being undertaken now to purchase a high quality production asset, continue to work on an efficient development plan in Brazil and commence drilling operations in Peru, which will ultimately result in long term operational cost savings



### **Global Oil Market**

Oil consumption growing in coming decades due to rising petrochemicals, trucking and aviation demand, requiring doubling of approvals of conventional oil projects\*.

# 5 Year Weekly Europe Brent Spot Price FOB Dollars per Barrel (US\$)\*\*



<sup>\*</sup>IEA World Energy Outlook 2018 \*\* https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RBRTE&f=W



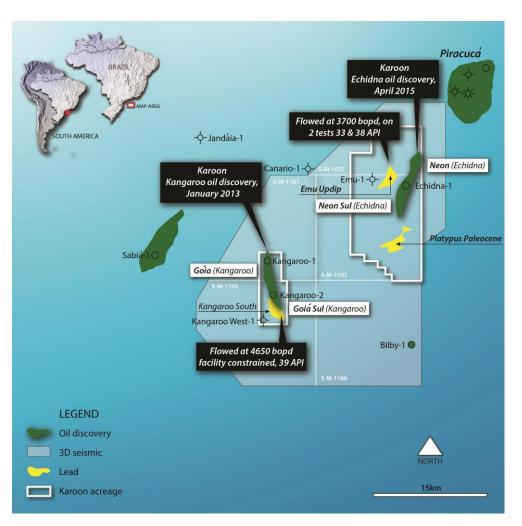
## Section 2 – Technical Review

Mark Smith, Executive Director Exploration



## Brazil: Santos Basin, Neon & Goiá fields

#### Progressing field development planning and nearfield exploration target evaluations.

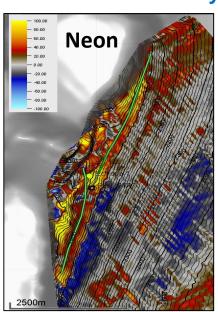


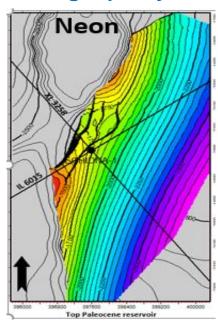
- Currently planning for the Development and Production Phase ahead of FID.
- Awaiting ANP approval of Annexation of the Area submission, which is required before Karoon can submit the Development Plan.
- Declaration of Commerciality awarded for blocks S-M-1037, 1102,1101 and 1165 in April 2018.
- Southern Santos Basin is a known oil and gas producing region.
- Karoon has over 10 years of operational experience in the Santos Basin in Brazil and 100% interest in the blocks.
- Karoon has invested in high quality 3D seismic to reduce nearfield target risk.
- Nearfield opportunities being evaluated.



## Brazil: Santos Basin, Neon & Goiá fields

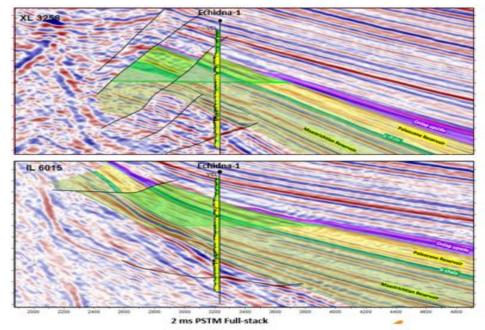
#### Subsurface summary with high quality 3D seismic.





#### **Neon PSDM RTM- Fullstack Amplitude map at Top PalB**

Contingent Resource (Statistical Aggregation), Oil (mmbbls)							
Field	Interest	1C	2C	3C			
Neon	100%	30	55	92			
Goiá	100%	16	27	46			



- Water depth: 300 m.
- Reservoir depth: 1700 m.
- Paleocene: 70 m net pay with 39°API light oil and no contaminants.
- Paleocene interval DST flowed 4650 bbl/d (facility constrained).
- No depletion observed after pressure build-up.
- No water and no sand production on the test.
- Clear Seismic DHI for the Paleocene oil accumulation.

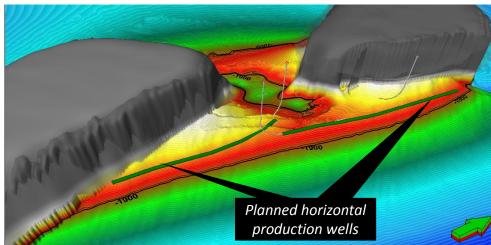
<sup>\*</sup> Reference 8 May 2018 resource update ASX release. The contingent resource figures reflect recoverable resource for the entire field, including the current development plan. FID is subject to farmout and Joint Venture approval of a final development plan



## **Brazil: Santos Basin, Neon & Goiá fields**

#### Progressing field development planning and nearfield exploration target evaluations.





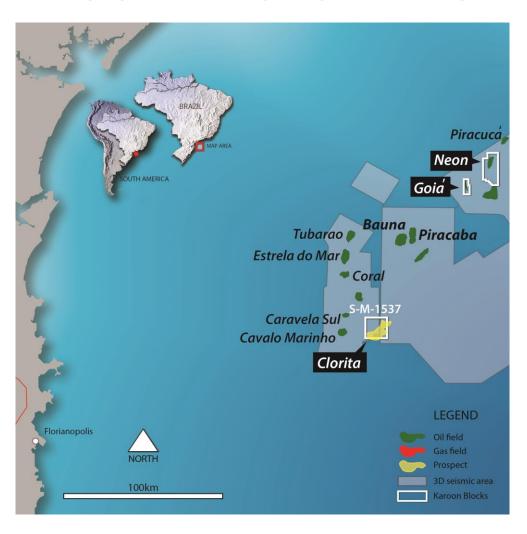
\* Reference 8 May 2018 resource update ASX release

- Risk sharing and funding flexibility with possible deferred capex payment, equipment financing.
- Aim to achieve a cost effective solution with expected opex of approx. \$18-\$25 per barrel and expected capex of approx. \$6-\$10 per barrel.
- First phase of development proposes 2 extended horizontal production wells and 1 gas injection well.
- Potential to include Goiá as a second phase option.
- Maastrichtian reservoir proved by Echidna-1 but not targeted by Phase1 development.
- FPSO and supplier's agreement under negotiation. Current indications offer potential to reduce or defer capex.
- Potential peak production of approximately 25,000 to 28,000 bopd.\*



## Brazil: Santos Basin, S-M-1537 Clorita prospect

#### Leveraging a decade of geological knowledge and operational experience in Bid Round 14.

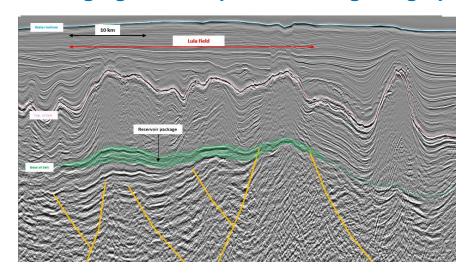


- The block is located in the Southern Santos Basin, a known oil and gas producing region in a water depth of less than 400m.
- Targeting good quality Oligocene turbidite reservoir as seen in the nearby producing Baúna Piracaba fields.
- The Clorita Prospect is located approximately 120 km from Neon and 60 km from Baúna and Piracaba oil fields.
- Similar target resource potential to nearby Baúna and Piracaba fields.
- Karoon 100% interest.
- Low capital commitment work program consists of seismic acquisition and geological studies.
- Part of the Southern Santos Basin Strategy.

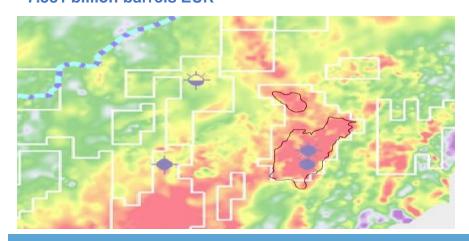


## **Brazil: Santos and Campos Basins, New Ventures**

#### Leveraging basin expertise to target high potential pre-salt plays.



Lula pre-salt field Santos basin, Brazil – Reserves 7.381 billion barrels EUR

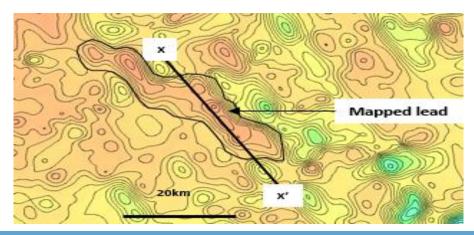


Mapped lead

Mapped lead

Reservoir package

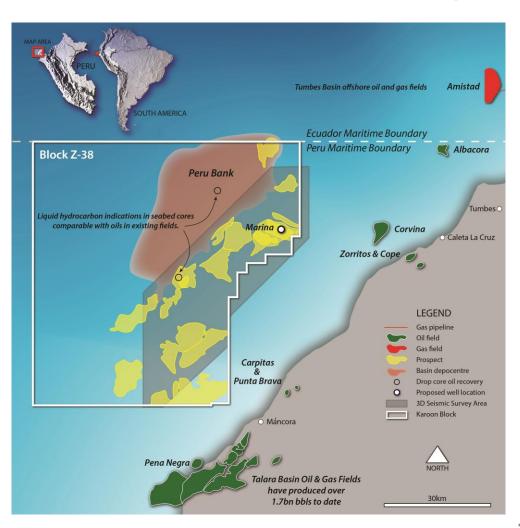
Mapped pre-salt lead in open acreage, Brazil – Lula lookalike





## Peru: Tumbes Basin, Z-38

#### Farmout success with offshore Peru heating up as a new industry focus.



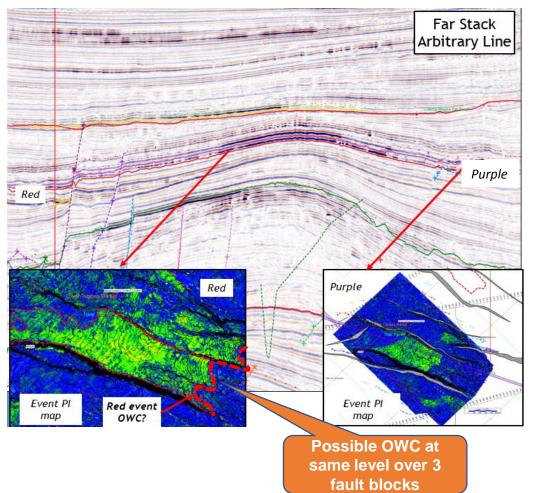
- Force majeure lifted from Block Z-38 in July 2018.
- Karoon 40%\* (Operator), Tullow 35%\*, Pitkin 25%\*.
- Tullow farminee has a long established successful track record for exploration in frontier areas.
- Potential high impact of the Marina-1 exploration well in opening up offshore exploration in the Tumbes Basin.
- Could be transformational for Karoon and the Peruvian petroleum industry.
- Karoon is examining opportunities for rig and vessel sharing to significantly reduce costs of drilling.

Net Prospective Resource (at completion of farmout), Oil (mmbbls)**						
	Interest	Low	Best	High		
Block Z-38	40%	223	549	1,350		
Marina Prospect	40%	42	102	247		



## Peru: Tumbes Basin, Block Z-38 Marina Prospect

#### Advanced geophysical studies have identified new targets.



\* Reference 8 May 2018 resource update ASX release

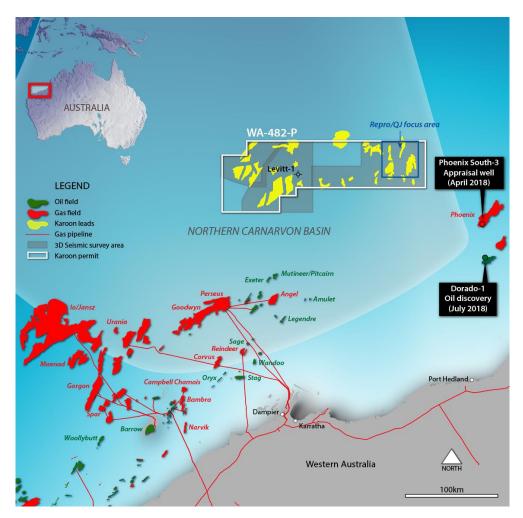
- Marina-1 Prospect drilling early 2020 with a gross prospective best estimate resource of 256mmbbls (net 102 mmbbls to Karoon)\*.
- Detailed mapping and seismic pore-fill attribute extraction strongly support the presence of trapped hydrocarbons.
- Reservoirs are stacked, ponded turbidite sands.
- Reservoir pore-fill attribute distribution appears to have some stratigraphic controls consistent with the depositional model.
- Conformance of anomalies with mapped contours could indicate oil water contacts.
- Calibration of seismic with Marina-1 will derisk numerous other seismic anomaly targets in the block.

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## Australia: Carnarvon Basin, WA-482-P

#### The right address: Australia's newest oil province.



\* Carnarvon Petroleum Limited ASX Release 20 August 2018 "Dorado Contingent Resources"

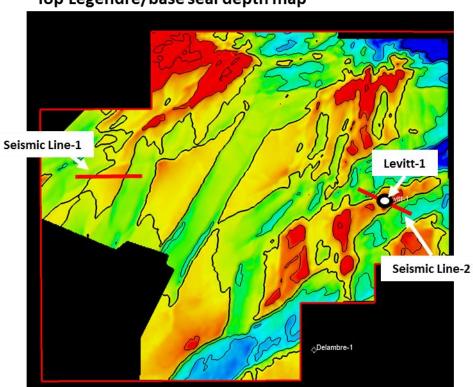
- Permit extended with G&G work program only.
- Karoon 50%, Quadrant/Santos 50% (Operator).
- Large 13,539 sq km permit in an emerging oil prone area.
- Farmed out 50% in 2014 and drilled Levitt-1 exploration well.
- The right address nearby oil discoveries in Dorado,
   Phoenix South, Roc, highlight oil potential of the region.
- Evaluating reprocessed seismic data on eastern section of the block and seismic AVO anomalies structures across the permit.
- Dorado billed as the largest oil discovery in Australia for 30 years with a contingent resource of 186mmbls\*



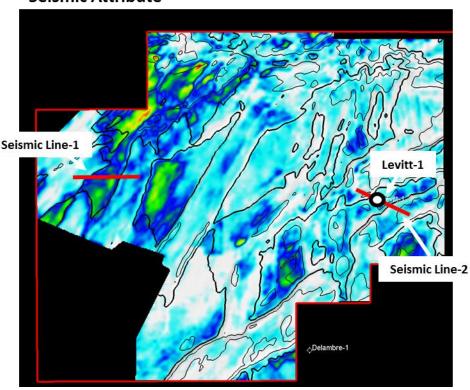
## Australia: Carnarvon Basin, WA-482-P

#### New high potential plays identified.

#### Top Legendre/base seal depth map



#### Seismic Attribute

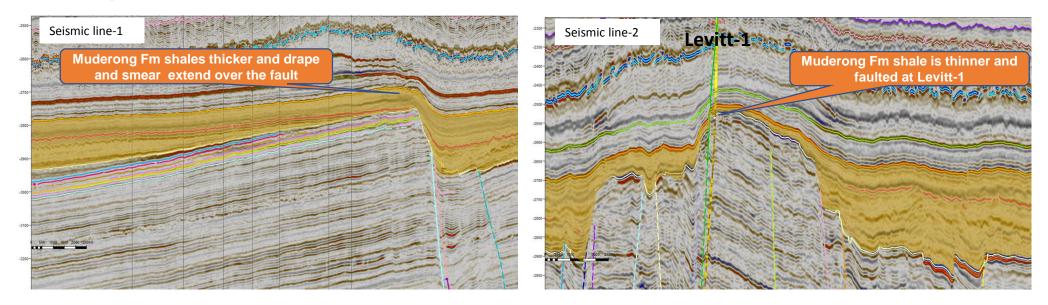


- No anomaly at Levitt-1 consistent with well results at Top Legendre level.
- Some structures with anomalies and some without (potentially fault breached seals).
- Early analysis encouraging with more work to be done.



## Australia: Carnarvon Basin, WA-482-P

#### New high potential plays identified.

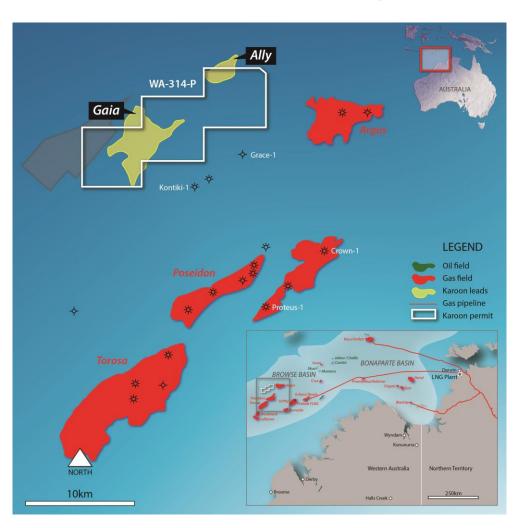


- AVO anomalies on Legendre Fm. prospects have been identified beneath thick Muderong Fm. seals.
- Muderong Fm. seal was thin and faulted at Levitt-1 and failed to trap hydrocarbons.
- AVO will be analysed on all structures.
- Reprocessing of seismic will be considered.



## Australia: Browse Basin, WA-314-P

#### Cooler outboard source rocks: wet-gas, condensate and oil-prone.

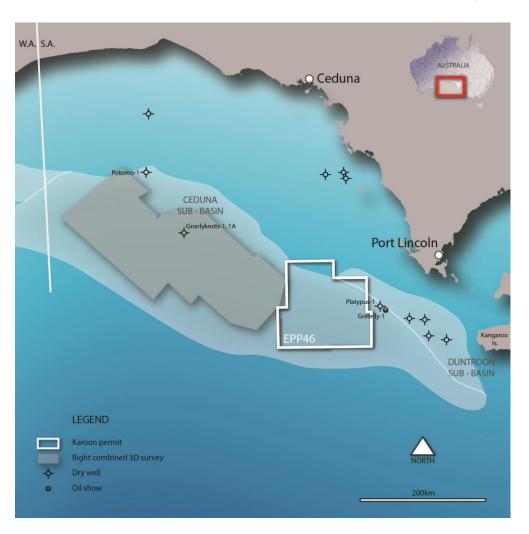


- Karoon 100% (Operator).
- Renewal term G & G studies next two years.
- Reprocessed seismic data shows potential for Montara Formation liquids rich play with leads Gaia and Ally.
- Prospect re-evaluation underway.
- Any future drilling subject to farm-out. In discussions with potential partners.



## Australia: Ceduna Sub Basin, EPP46

#### Industry awaits NOPSEMA approval of drilling Environment Plan.



- Karoon 100% (Operator), awarded October 2016.
- Large, 17,649 sq. km permit in an emerging frontier,
   prospective oil and gas basin.
- Equinor has re-affirmed their commitment to drilling a well in the GAB and preparing an Environment
   Plan (EP) as required by Australian regulations.
- Karoon continues to discuss seismic acquisition with contractors.
- Operations will only be initiated if the EP is acceptable to NOPSEMA.
- Karoon is watching closely the activities of Equinor.



## **Summary**

Continuing to work on 3 key pillars, with existing portfolio well placed to deliver on key pillars 2 and 3 – "Bringing existing assets through development to production" and "Targeted exploration".

Key Pillar 1: Focussed on production asset acquisition to fund exploration led growth strategy



Key Pillar 2: Santos Basin Neon field development planning and nearfield exploration target evaluation



Key Pillar 3: Return to drilling with preparation of Peru drilling plans



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