

Karoon Gas Australia Ltd

# Corporate and Operations Review

October 2016



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*"Olinda Star" Semi Submersible Drilling Rig,  
Echidna-1 Production Test*

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# Corporate Overview



- Karoon is a Oil and Gas independent with operations in Australia and South America
- Exploration success, 13 discoveries from 18 wells since 2009 (72% success rate)
- Market cap A\$394 million (10/10/2016)
- A\$479 million cash at bank as at 30/6/15, no debt
- 245 million ordinary shares on issue, 7.5 million unlisted rights and options
- Discovered resource 129 mmbbls oil, Brazil Santos Basin, pending appraisal 2017



**2017 appraisal drilling and acquisitions in Brazil, if successful, will transition KAR to a significant production company**

# Investment Proposition



<b>High Impact Oil Focus</b>	<ul style="list-style-type: none"> <li>- Unique oil exposure relative to Australian peer group which are predominantly gas</li> <li>- Multi billion barrel net prospective resource exposure in Brazil, Australia and Peru</li> <li>- Successful exploration track record and technically focused company</li> <li>- High equity interest- meaningful impact on success</li> </ul>
<b>Brazil Appraisal/ Development Plan</b>	<ul style="list-style-type: none"> <li>- 2017 appraisal program expected to be followed by FEED and FID</li> <li>- Development is simple, manageable and appropriate for Karoon's size</li> <li>- Significant industry wide cost reductions being captured</li> </ul>
<b>Transition to Production</b>	<ul style="list-style-type: none"> <li>- Potential for meaningful oil production from 2020 from existing portfolio</li> <li>- Cost of reductions lowering break even floor price, Target \$40/bbl breakeven Echidna cost</li> <li>- Opportunities to acquire production at lower than organic rates</li> </ul>
<b>Asset Acquisition</b>	<ul style="list-style-type: none"> <li>- Active search for high-quality production or development assets in LATAM and Australia</li> <li>- Recent acquisition of high impact, oil-prone exploration acreage in the Great Australian Bight</li> <li>- Right to negotiate final agreement with Petrobras for Bauna and Tartaruga Verde oil assets offshore Brazil</li> </ul>
<b>Strong Balance Sheet</b>	<ul style="list-style-type: none"> <li>- A\$479 million cash at bank (as at 30/07/16)</li> <li>- US\$200 million of contingent milestone cash receivables remain outstanding</li> <li>- Cash burn typical for small growth company with high quality team</li> </ul>
<b>Recent challengers/ Market concerns</b>	<ul style="list-style-type: none"> <li>- PRE financial issues: Resolved, leaving control of the future work in the Santos Basin to Karoon</li> <li>- Utilisation of cash- currently working to swap cash for meaningful cash flow</li> <li>- Farm-out momentum (Australia / Peru): tough at high rig costs, improving in the current environment</li> </ul>

# Experienced Directors and Management



David Klingner	Independent Chairman	40 years resources and energy experience, head of global exploration Rio Tinto, ex Chairman Turquoise Hill
Robert Hosking	Managing Director	45 years international corporate experience including trading, shipping and energy related businesses 19 years ASX Directorship experience, founder.
Mark Smith	Exploration Director	40 years oil and gas experience –Geologist BHP Senior Technical Leadership . Principal explorationist, founder.
Jose Coutinho Barbosa	Non-Executive Director	50 years industry experience- Geologist Senior Leadership including CEO Petroleo Brasileiro (Petrobras) International and Interim CEO Petrobras.
Bernard Wheelahan	Non-Executive Director	50 years industry experience – Chemical Engineer Ex-senior leadership including President Shell Venezuelan and Director Shell Australia.
Peter Turnbull	Non-Executive Director	40 years commercial experience- Lawyer-Director Governance Institute of Australia, Chairman Corporate Secretaries International.
Luciana Rachid	Non-Executive Director	35 years experience-Chemical Engineer- leadership roles within Petrobras including Investor Relations, Strategy, Trading, Project Development and Operations.
Geoff Atkins	Non-Executive Director	45 years Experience on the offshore industry- Design and Implementation of Marine Infrastructure globally.
Clark Davey	Non-Executive Director	35 years experience- EX-PWC Specialist resource and oil and gas industry tax advisor.
Scott Hosking	Company Secretary	19 years experience Australian and International trade, finance and corporate management experience with public and private enterprise.

# Strategy



The late 2014 oil price crash devastated the global E&P industry. Since then, the Australian listed energy sector has returned an aggregate net loss of A\$8.7B and dividends have been slashed. Exploration spending has been cut, assets sold, staff levels reduced, and A\$8.5B of new equity raised to pay down debt. Now with lower reserves, less revenue, and fewer people, the industry appears totally reliant on higher oil prices for a return to prosperity.

## What are we doing?

Re-deploying Karoon's strong technical, commercial and financial position, built during a period of high oil prices, into high quality E&P assets in prospective basins where Karoon can add value.

## How are we doing it?

- Sold Browse Basin gas assets for up to US\$800 million, monetizing 4 years of successful gas exploration.
- Farmed-out 35% of Brazil Santos Basin acreage to PRE in 2013, for US\$250m in cash and carry. Drilled 5 prospects for 3 oil discoveries, discovering 129 mmbbls of 2C oil resource. Opportunistic re-purchase of PRE's interest in Sept 2016 for US\$20.5m, approximating US 50c/bbl of 2C resource.
- Opportunistically acquired Great Australian Bight Acreage for a US\$26m work-program, providing a low cost exposure to an exciting new oil frontier where major companies plan to drill 9 wells for A\$1.2B over 3 years.
- Negotiating with Petrobras to acquire the Bauna oil field and Tartaruga oil development offshore Brazil. If successful, KAR could emerge with significant proven oil reserves, production and sustained free cash flow. This results from a competitive process and forms part of Petrobras' 2015-2016 Divestment Plan.
- Capitalising on falling rig and equipment costs to significantly enhance Echidna & Kangaroo economics.
- Retained strong balance sheet during the downturn, and returned cash via on-market buy-back at prices materially less than intrinsic value.



# Brazil Bid Success



## Key facts

- Petrobras announced it is “negotiating”: with KAR the sale of 2 assets, 100% the BM-S-40 concession including Bauna and 50% of Tartaruga Verde
- Sale by way of competitive tender launched November 2015
- Subject to DD, & regulatory approvals
- Assets include a development and a mid life production assets
- Plans to introduce additional E&P participants to defray risks and funding exposure
- Karoon will look to right size its exposure to the purchase taking into account;
  - Cash,
  - Staged payments,
  - Production cashflows, reflect effective date
  - Debt; and
  - Partner participation.

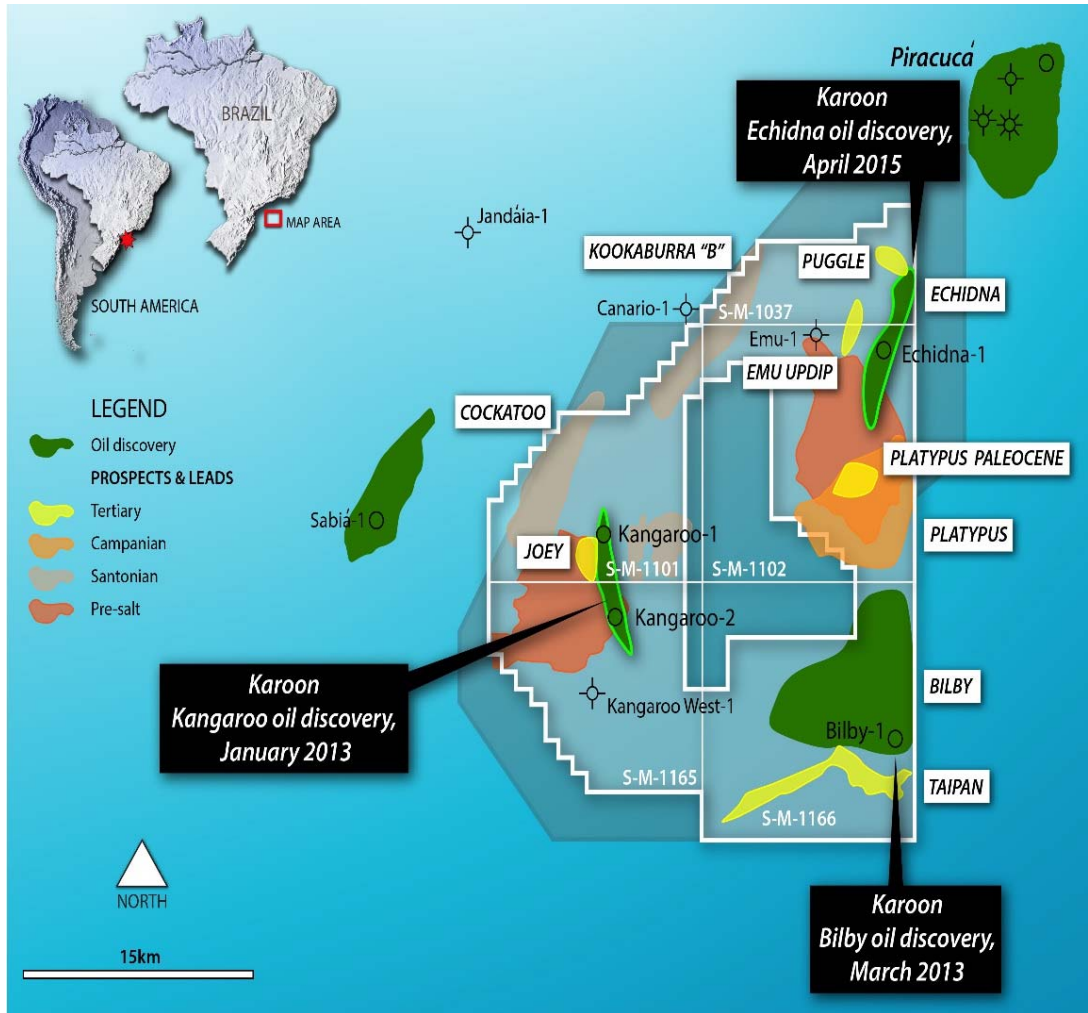
## Implications

- Provides investors with unique oil exposure and leverage to rising oil price. High quality assets, from conventional offshore FPSO style oil fields
- Large post salt reserves in Tartaruga,
- Bauna synergies with KAR’ Santos basin assets 40 kilometres away
- Profitable production with a low breakeven price

## Critical Transformation

- Production company versus previous explorer / developer
- Would expose shareholders to production and reserves, allowing a firmer valuation platform while Karoon look’s to grow organically from the rest of its portfolio
- Turns KAR into well placed long term financially sound company with pipeline of E&P projects

# Potential development Brazil: Santos Basin



Acquired 100% working interest in 5 blocks in 2008, in mid-water-depth blocks in Santos Basin. Not previously drilled.

- Farmed-out 35% to PRE in 2012, for cash & carry valued at US\$290 million
- Three oil discoveries (Kangaroo, Bilby & Echidna) from 7 wells
- Certified 2C resources of 54 mmbbls at Kangaroo, and 75 mmbbls at Echidna
- High quality oil, no gas, in excellent “post salt” sandstone reservoirs confirmed by logging and flow-rate testing
- Water depths <400m, not onerous
- Several undrilled prospects, including deeper “pre-salt” targets

PRE’s 35% working interest re-acquired by KAR in Sept 2016 for US\$20 million, = US\$0.50/bbl

Next phase: Appraisal, then development for production



# Key Brazilian Development Staff



Jose Formigli	Development Committee Chair	Chief Exploration and Production Officer for Petrobras in Brazil and a member of the Petrobras Executive Board- Personally responsible for 10 pre-salt development projects US\$20 billion of investment.
Edward Munks	Chief Operating Officer	30 years experience- Ex-Senior Leadership with medium to large operating companies in the industrial and oil and gas industry.
Tim Hosking	SA General Manager	15 years experience, 7 of which in South America-principally responsible for the acquisition and management of Karoon's South American Assets.
Ricardo Abi-Ramia	Production Manager	30 years project development and operating experience in Brazil, former head of the Rio De Janeiro Business unit of Petrobras.
<b>Jorge Camargo,</b>	Brazilian Business Advisor	35 years experience- Ex-Petrobras, and Brazilian country manager for Statoil.
Dennis Hining,	Drilling Manager	Mechanical Engineer with more than 40 years' experience in the oil and gas industry. Former head of ExxonMobil Worldwide Ventures Group for Deepwater Exploration Drilling in West Africa, Libya, Indonesia, Brazil, and the Gulf of Mexico.
Ricardo Canela	HSSE Manager	14 years' experience as a HSSE professional in the oil and gas industry with a further 9 years' experience working in heavy industry. Ricardo worked for El Paso Brazil for 11 years prior to joining Karoon.
Antonio Luis Tisi	Non-Executive Director	Exploration Lead for Shell International in Houston (SIEP) and as Regional Geologist and SEPCo in Colombia Implementation of Marina Infrastructure globally.
Oliver Seybold	Reservoir Team leader	25 years experience in Australasia, Europe, Middle East, Africa and South America. Key responsibilities for reservoir modelling Echidna & Kangaroo fields.
Ricardo Abi-Ramia	Project manager	Petroleum Engineer for 22 years, managing the Petrobras Marlim, Albarcora, and Manati fields. Operations Manager 3 years in Houston for Petrobras America. 3 years Production development manager at OGX in charge of Tubarao Azul installation.
Lino Barro	Engineering Manager (Melbourne)	35 years in reservoir and development engineering, and economic evaluation. Previously with BHPB, Kufpec, & Delhi in Australia, Persian Gulf, Tunisia and South America.

# Santos Basin: Development Plan



- Ongoing Echidna development target breakeven oil price ~ \$40/bbl, down from ~US\$60/bbl due to (1) industry deflation (2) simpler, optimised development with fewer wells, less sub-sea equipment
- Appraisal Drilling H1 2017. Rig contracted for 2 firm & 2 well options
- Target FEED 2017/18, and first production 2020

## The Preliminary Optimised Echidna Development Concept

- Previous 2015 development concepts considered both Echidna standalone and combined Echidna+Kangaroo developments using an early production system (EPS)
- Following detailed optimisation work & materially lower per well development costs, the current preferred scenario is for a stand-alone Echidna field development, with Kangaroo integrated at a later date
- Industry wide cost reductions lowering development costs by as much as 35% and pre-FEED tendering has resulted in significant indicated well and equipment costs

## Current activity

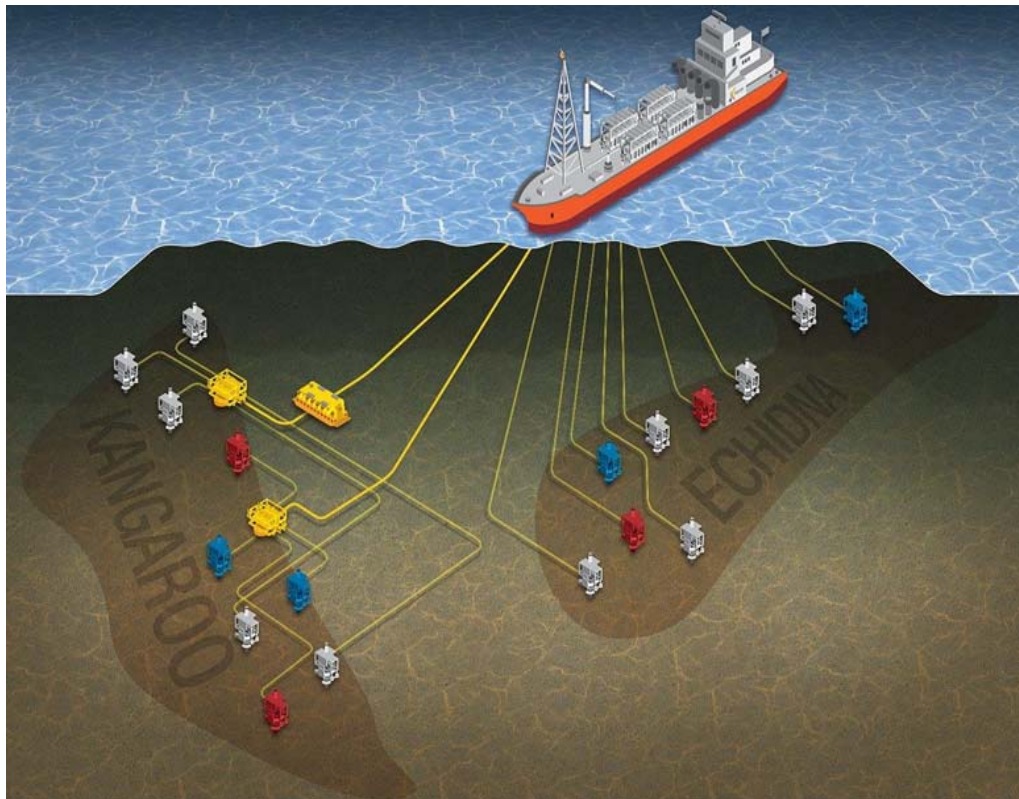
- Rig contracted for appraisal drilling, 2 firm wells plus 2 options
- Initiated discussion with new partners following the acquisition of PRE's interests

	Sept-16 Est.		Sep-15 Est.
Development Well Cost - US\$'M	Cost / well	Change	Cost / well
Production Wells	\$90	↓ (35%)	\$140
Injectors	\$75	↓ (24%)	\$100
OPEX /day (FPSO+ logistics + shore support)	<\$400 k/d		US\$ 400-450 k/d
Break-even (Brent) – US\$/bbl	<US\$40 /bbl		US\$50-\$60 /bbl

# Preferred Development Concept



Increased confidence in the contingent resource volumes, strong production test results, and the shallow water and shallow reservoir setting continue to support the potential for a combined or standalone development option



## Phase 1

FFD – Echidna Standalone

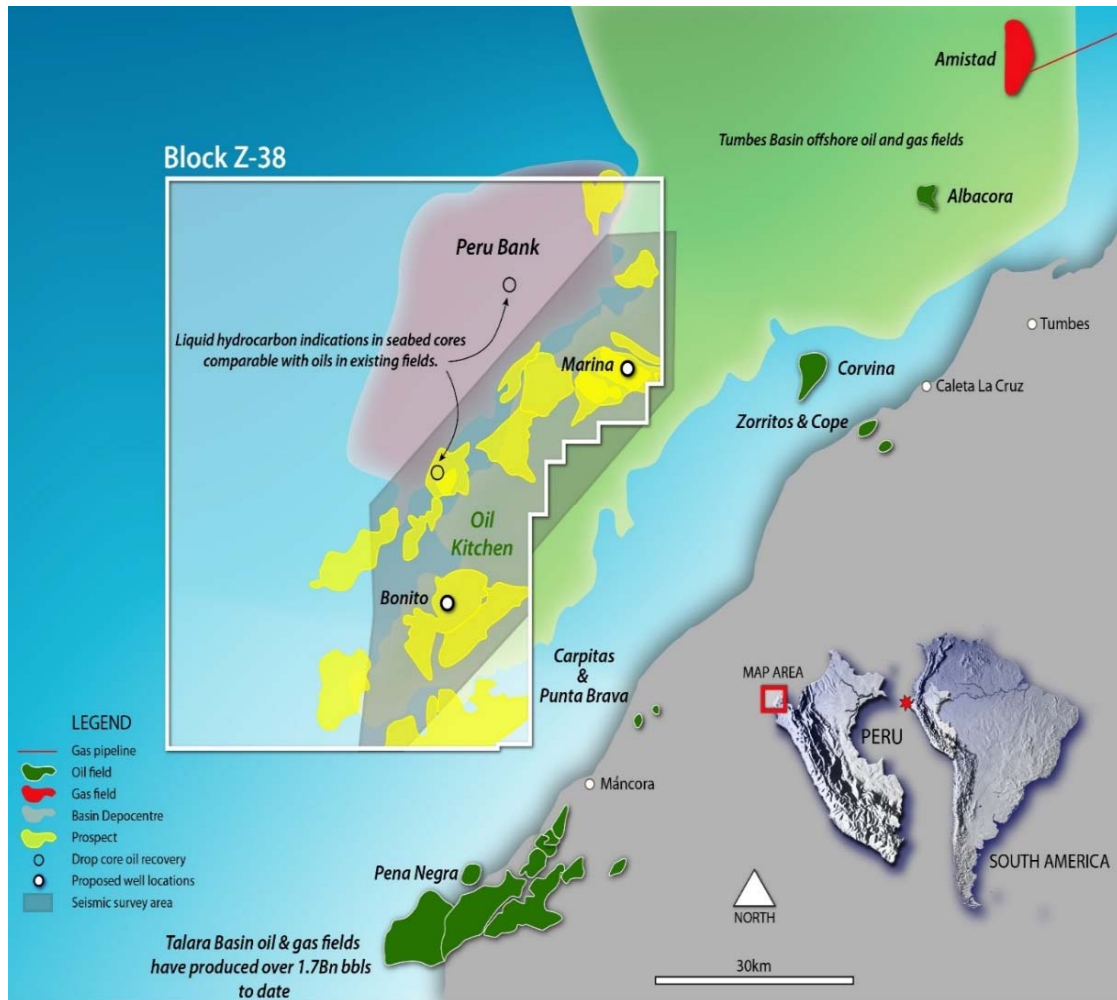
- 2C resource: 75mmbbls (gross)
- 5 horizontal producers
- 2 gas and 2 water injectors

## Phase 2

FFD –Kangaroo integration subject to further work

- 2C resource: 54 mmbbls (gross)
- 10 horizontal producers
- 4 gas and 4 water injectors

# Exploration Peru: Tumbes Basin

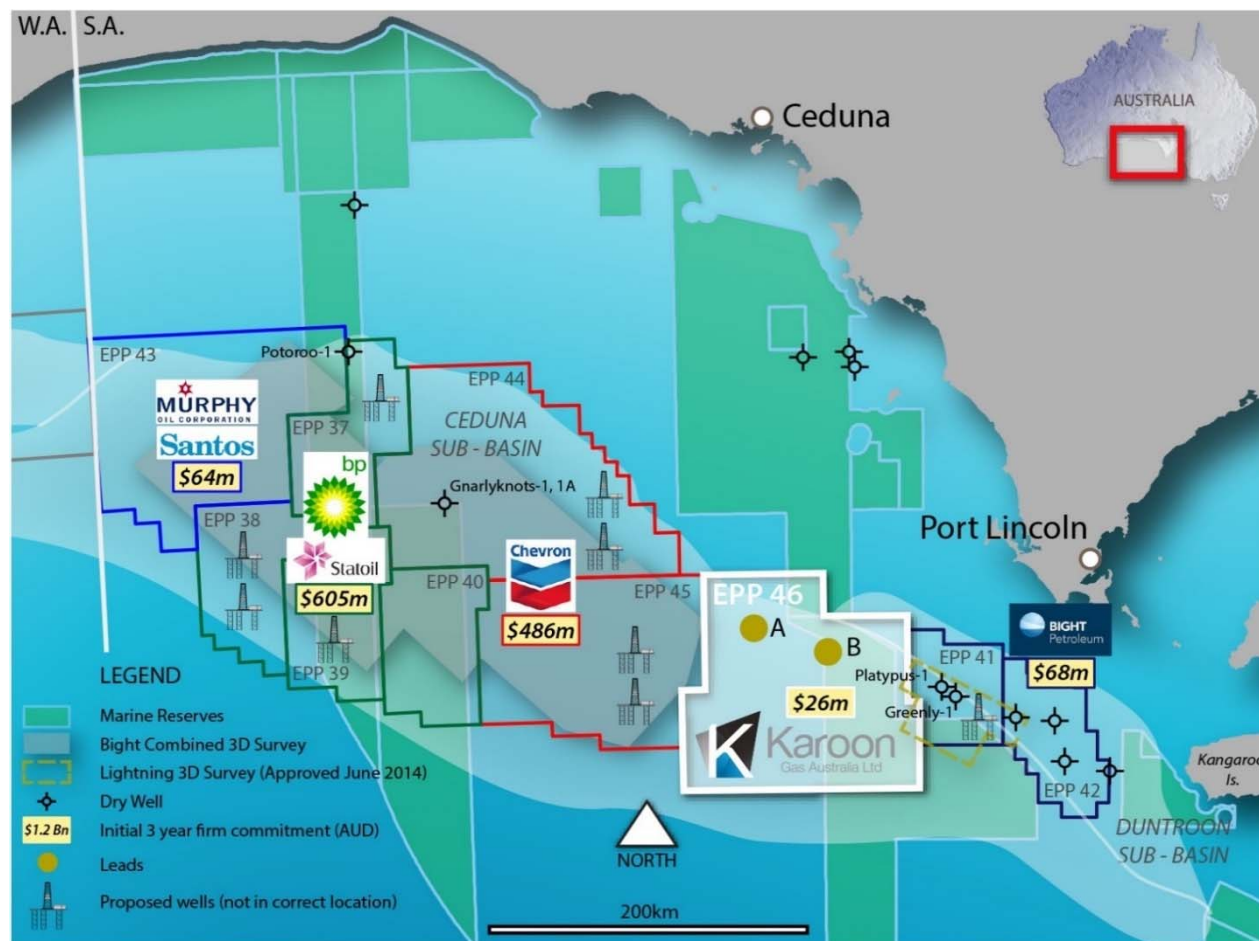


Very large mid to deep-water acreage, lightly explored but oil prone.

- Currently in force majeure
- KAR 75% (Op), Pitken 25%
- Proven hydrocarbon basin
- Large prospects
- Drop cores show significant oil seeps
- Historically high drilling cost have proven prohibitive but falling rig rates may catalyse drilling
- Large prospects well defined by 3D seismic and attribute analysis
- Marina (240 mbbl mean prospective) and Bonito (415 mbbls mean prospective) both drill ready
- Environmental approvals received
- Farm-out discussions continue



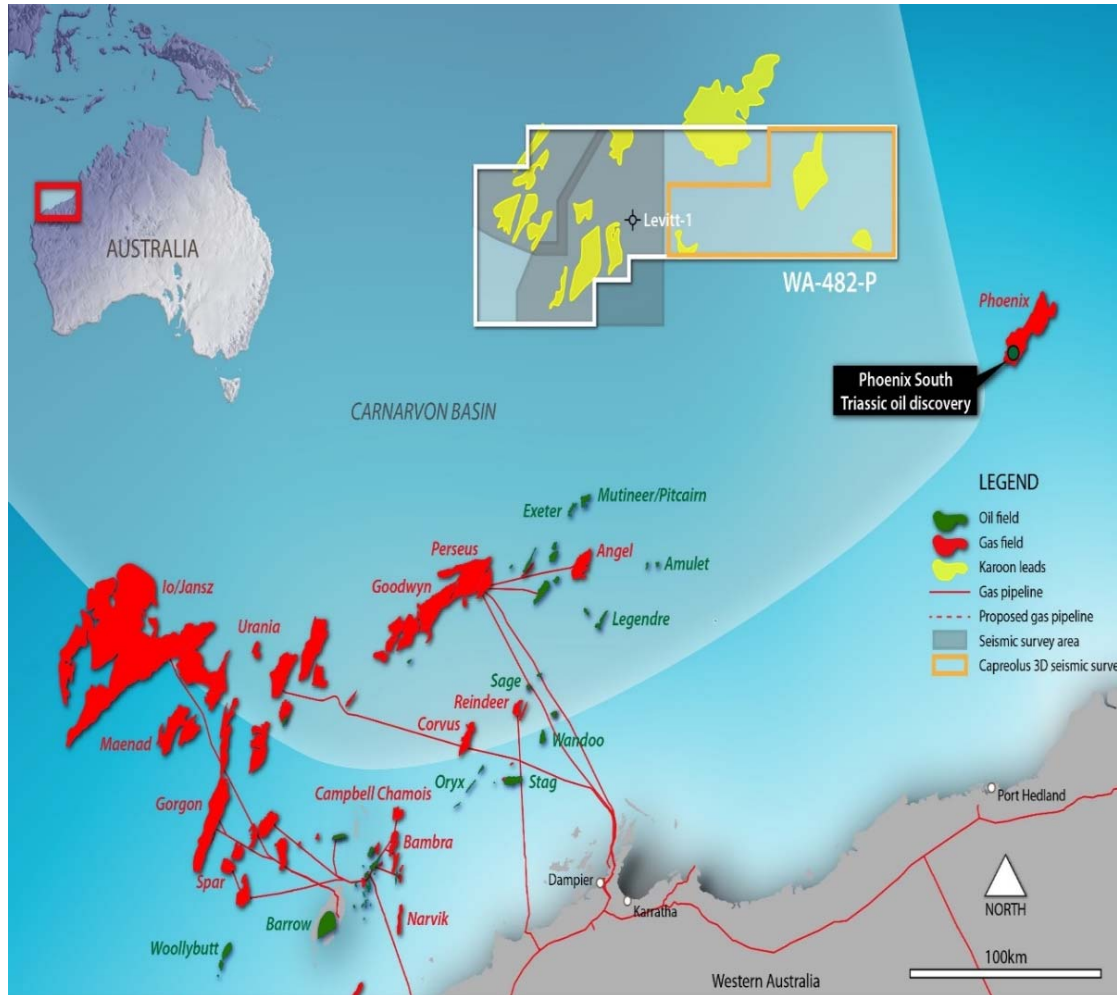
# Australia: Great Australian Bight



- EPP-46 awarded to KAR 100%, October 2016
- Large 17793 km<sup>2</sup> permit, in lightly explored emerging frontier
- Prospective for oil, with shows recorded in wells drilled in adjacent acreage
- Industry majors including BP, Statoil, Chevron, Santos & Murphy have committed approximately A\$1 billion to drilling 9 exploration wells in the surrounding permits during the next 24 months
- Karoon's initial 3-year firm commitment requires the acquisition of 2D and 3D seismic surveys and does **not** include a well
- Karoon's investment of US\$26m is a low-cost option



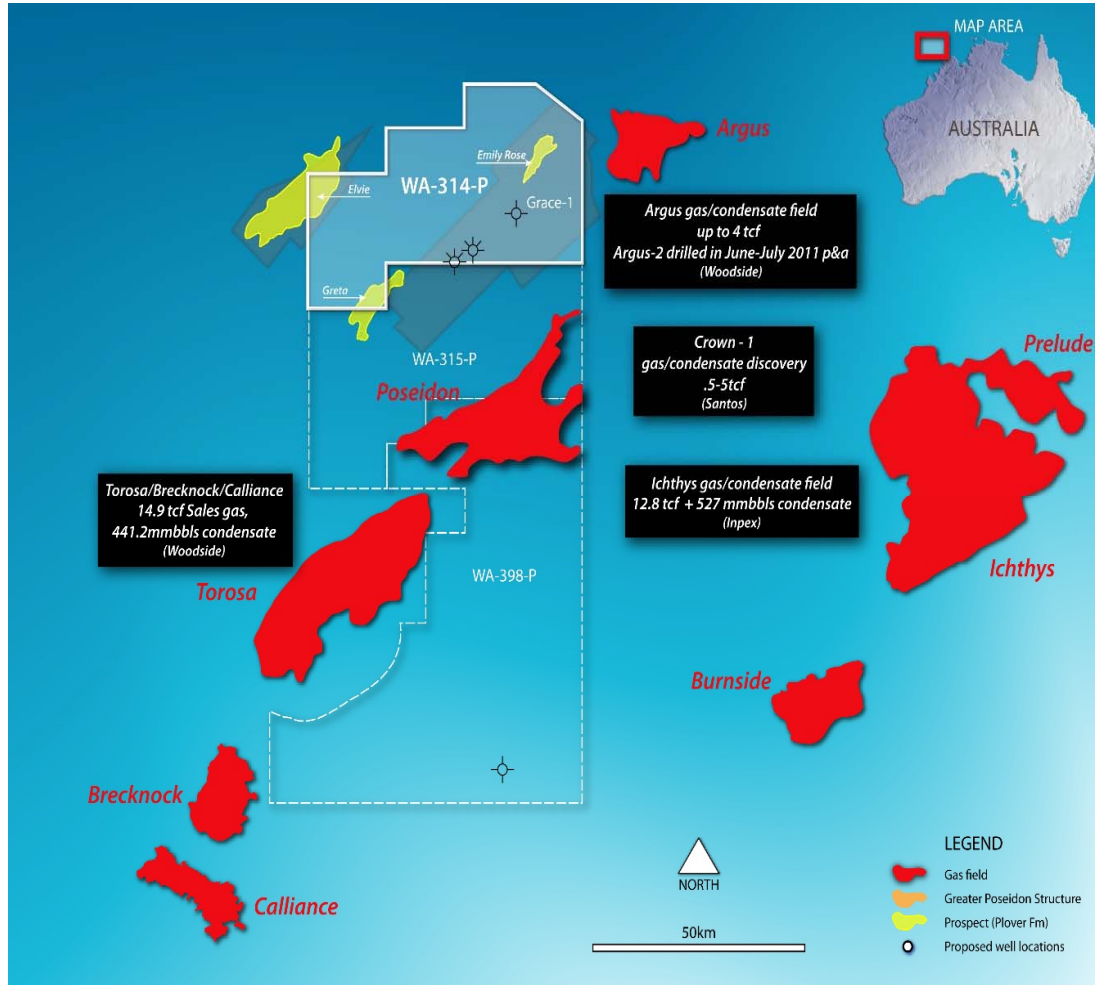
# Exploration Australia: Carnarvon Basin



Large 10,000km<sup>2</sup> block in an emerging oil prone area, acquired by KAR in 2012

- KAR (50%), Quadrant (Op) 50%
- Fully covered by modern 2D & 3D seismic
- Farmed out 50% to Quadrant in 2012 for US\$79m of cash+carry through exploration
- Exploration well Levitt-1 drilled mid-2015, dry hole but proves geological model with oil shows
- multiple leads and prospects identified following subsequent 3D survey, evaluation ongoing
- Forward focuses on eastern section of the block adjacent to BHP, REPSOL, CNOOC to the north

# Exploration Australia: Browse Basin



Block retained for exploration upside following divestment of Poseidon gas discoveries in 2014.

- KAR working interest 100% (op)
- Recently renewed 3 year term with no well commitment
- Prospect evaluation underway, with 3D seismic identifying tertiary turbidite fairway
- Large Elvie prospect being high graded for drilling, supported by seismic anomalies and likely oil
- Future drilling subject to farm out

# Resource Summary



**Prospective Resources Cautionary Statement:** The estimated quantities of petroleum that may potentially be recovered by the application of a future development project 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. There is no certainty that any portion of the prospective resource estimated on behalf of Karoon will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the prospective resources evaluated.

Internal Management Assessment*					NET Contingent Resource			NET Un-risked Prospective Resource		
Discovery	Interest	Basin	Country		1C	2C	3C	Low	Best	High
Kangaroo (S-M-1101, S-M-1165)	100%	Santos	Brazil	Oil (mmbbls)	20	54	99	-	-	-
Echidna (S-M-1037, S-M-1102)	100%	Santos	Brazil	Oil (mmbbls)	24	75	151	-	-	-

Independent Assessment - DeGolyer & MacNaughton**					NET Contingent Resource			NET Un-risked Prospective Resource		
Block	Interest	Basin	Country	Type	1C	2C	3C	Low	Best	High
Block Z-38	75%	Tumbes	Peru	Oil (mmbbls)	-	-	-	686	1,686	3,764
Block 144	100%	Marañón	Peru	Oil (mmbbls)	-	-	-	53	107	195

Note: The Santos Basin contingent resource volumes presented represent Karoon's internal management estimates and have not necessarily been validated or agreed by joint venture partner Pacific Exploration and Production Corporation.

\* The Kangaroo and Echidna contingent resource volumes were prepared on a probabilistic basis and have been disclosed in Karoon's announcement 'Contingent Resource Volume Update: Santos Basin Brazil', 17 September 2015. Karoon is not aware of any new information or data that materially affects the resource estimates and all material assumptions and technical parameters underpinning these estimates continue to apply and have not materially changed.

\*\* Prospective resource volume estimates have been independently assessed by DeGolyer and MacNaughton on a probabilistic basis and disclosed in Karoon's 30 April 2014 announcement. Karoon is not aware of any new information or data that materially affects the resource estimates and all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

## **Australian Exploration Permits WA-482-P and WA-314-P**

Following the drilling of Levitt-1 (WA-482-P) and thermal modelling and interpretation of the final Kraken 3D seismic survey data (WA-314-P), new data is available that could materially impact assumptions and technical parameters underpinning previously announced prospective resource estimates. Karoon needs to interpret and consider this new data prior to publishing revised prospective resources estimates.

# Contact Information



**For further information please see the Karoon website or contact:**

Investor Relations Manager James Wootton  
T: +613 9616 7520  
E: [jwootton@karoongas.com.au](mailto:jwootton@karoongas.com.au)

Collins Street Media Ian Howarth  
T: +614 0782 2319  
E: [ian@collinsstreetmedia.com.au](mailto:ian@collinsstreetmedia.com.au)