



# KAROON GAS AUSTRALIA LTD 2013 ANNUAL GENERAL MEETING OPERATIONS REVIEW

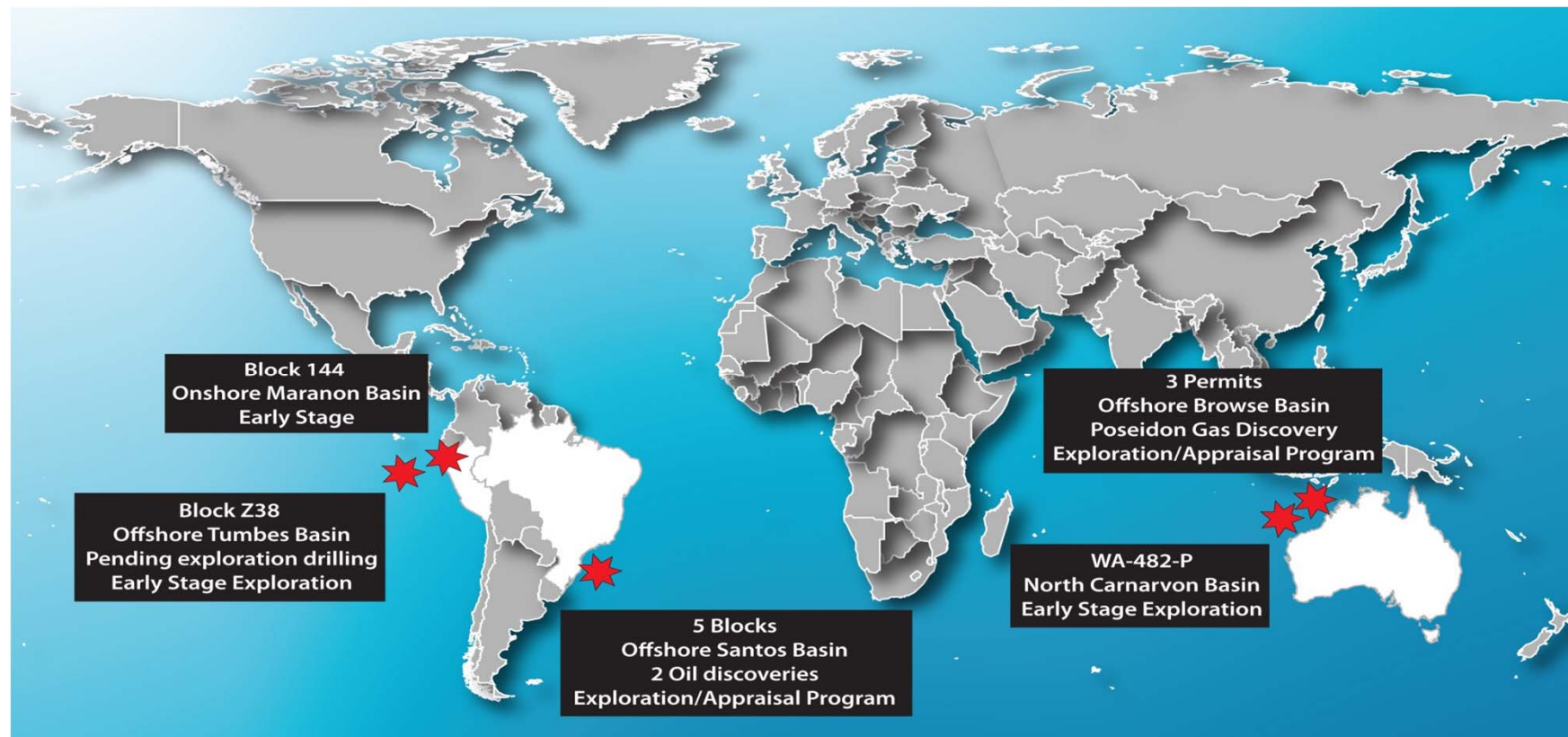
31<sup>st</sup> October 2013



# Company Snapshot



*Karoon seeks to apply its commercial and geotechnical skills to identify and secure entry into early stage, highly prospective exploration acreage. Karoon then creates value through the work-up of the acreage looking to leverage its high equity interest to explore and appraise with the ultimate goal of commercialisation.*



# Company Snapshot

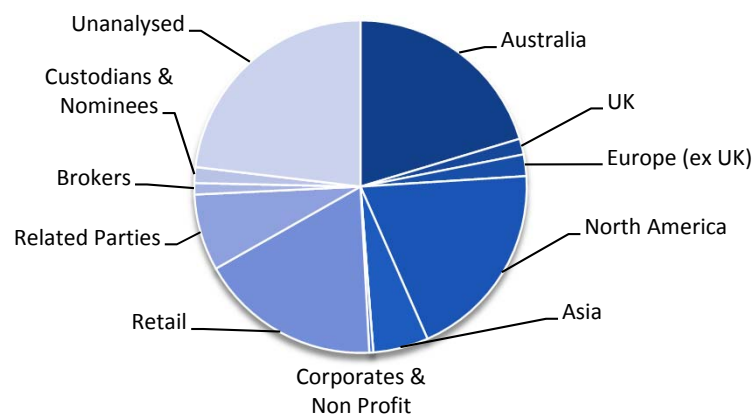
## Corporate Overview:

- Market Capitalisation A\$1.2 billion.
- 256 million shares on issue & 13 million unlisted options.
- Cash at Bank A\$270 million as at 30 September, 2013.

## Substantial Shareholders:

1. Wellington Management	13.45%
2. Talbot Group	10.29%
3. Paradise Investment Management	5.49%
4. FMR LLC	5.38%

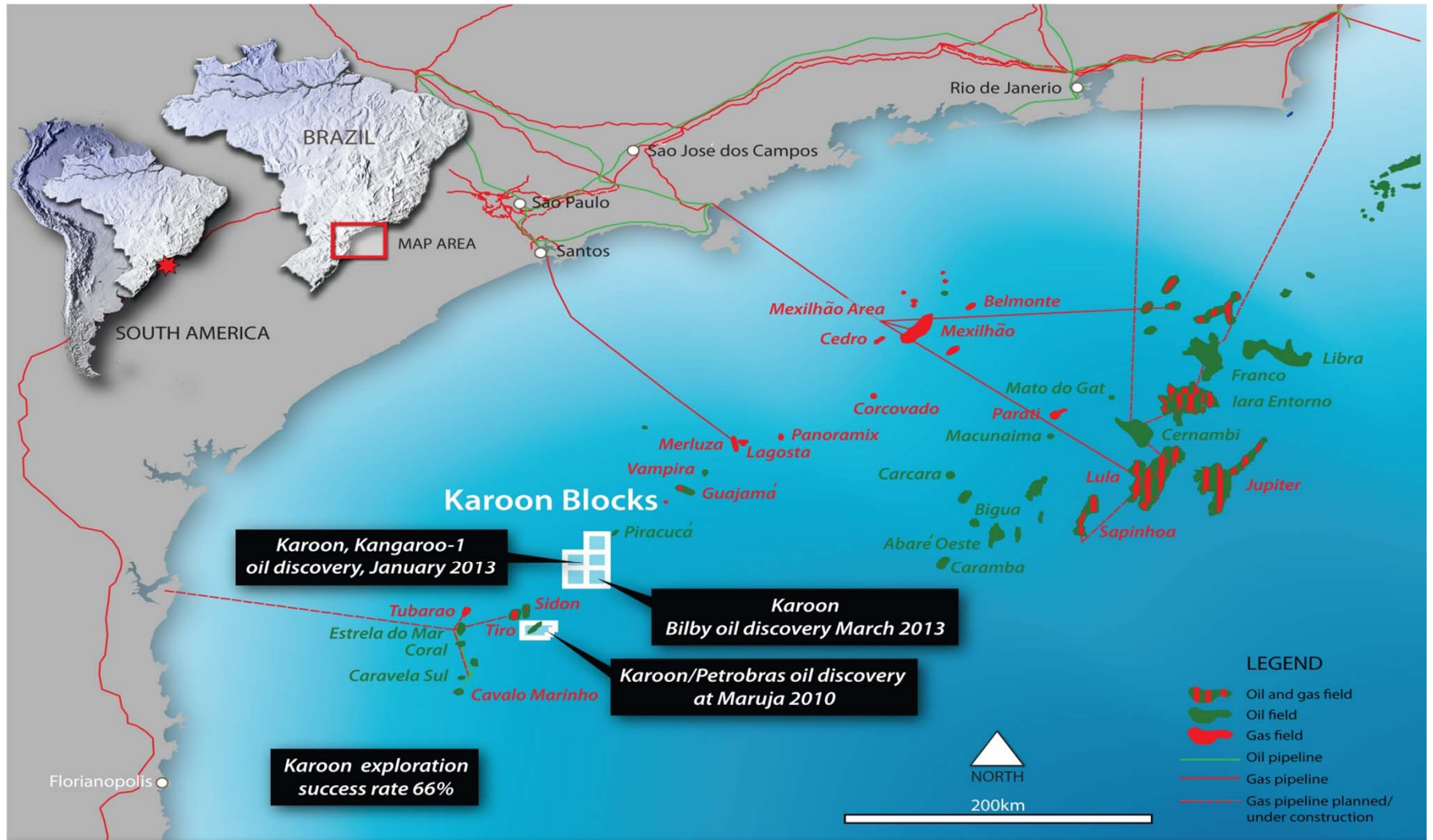
## Register Composition:



## Year's Highlights:

- 2 oil discoveries in the Santos Basin Phase 1 exploration campaign.
- Kangaroo contingent resource 1C 11, 2C 135, 3C 487 mmbbls.
- Santos Basin Phase 1 campaign completed on time, on budget and with no significant incident.
- Farm-out agreement with Pacific Rubiales for Karoon's 5 wholly owned Santos Basin Exploration Blocks.
- 2 gas and condensate discoveries in Browse Basin Phase 2 exploration campaign thus far.
- Proteus-1 discovery in the Browse Basin opening a new play in the Montara Formation.
- Acquired the right to 100% of Permit WA-482-P in the North Carnarvon Basin. Gross unrisks mean prospective resource 2.8 billion bbls.
- Completion of 2,704 square kilometres of 3D seismic acquisition in WA-482-P and WA-314-P.
- 70% success rate in all off-shore exploration drilling to date.
- All blocks and permits remain in good standing.
- Successful \$175 million capital raising via an Institutional placement and Shareholder Purchase Plan.

# Brazilian Assets



# Activity Summary

## Background

Santos Basin, Brazil. 300-450 metre water depth. Karoon's equity interests:

- 65% interest in Blocks S-M-1101, S-M-1102, S-M-1037 , S-M-1165
- 20% interest in Maruja Block S-M-1352

## Santos Basin Farm-out

Pacific Rubiales agreed to acquire a 35% interest in Karoon's wholly owned Santos Basin Blocks in September 2012.

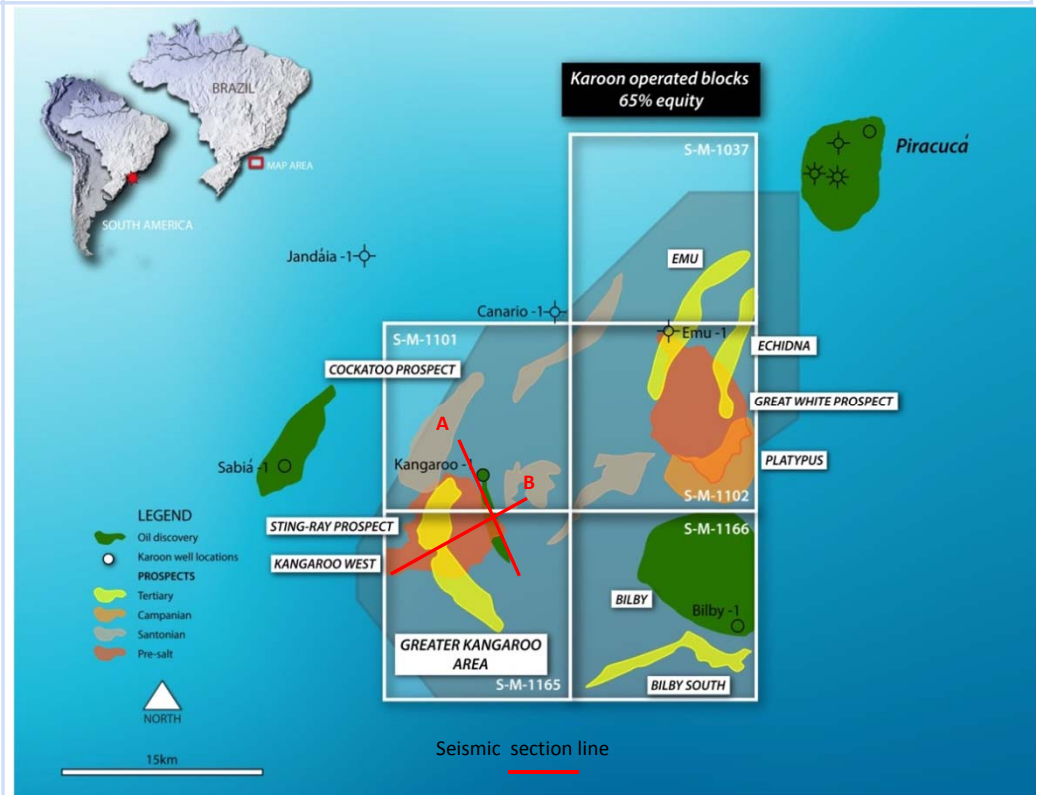
## Completed Phase 1 Exploration Drilling Campaign - 3 Wells:

1. Kangaroo-1 (oil discovery; contingent resource)
2. Emu-1 (oil & gas shows)
3. Bilby (oil discovery)

## Forward Program

Phase 2 appraisal and exploration drilling campaign plan: 2 firm (Kangaroo-2 and Kangaroo West) + 4 contingent. Targeting 1H 2014 spud.

Kangaroo is the top priority in the Phase 2 campaign.



# Kangaroo-1 Oil Discovery

## Kangaroo-1 Oil Discovery

*This is a priority asset due to size, quality and production potential.*

Discovered 76 metre oil column in Eocene to Maastrichtian interbedded sands.

Oil measured at 40 degrees API.

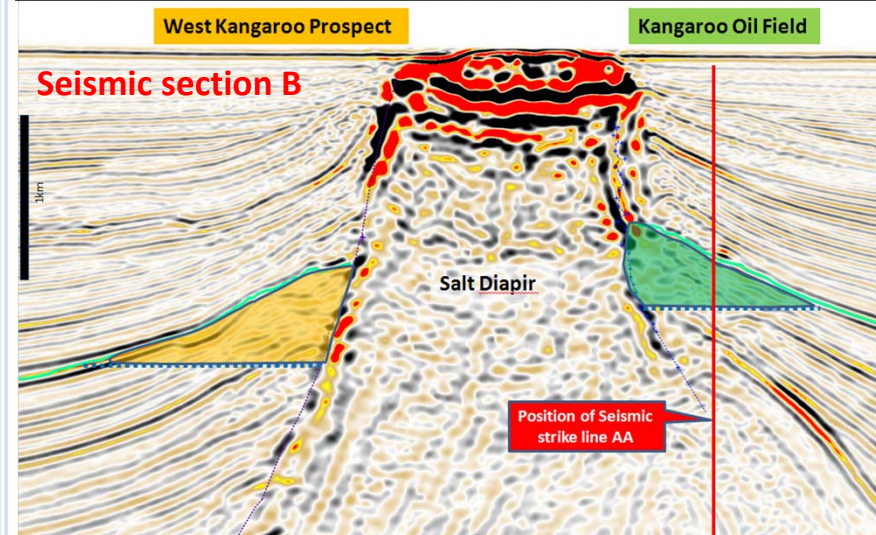
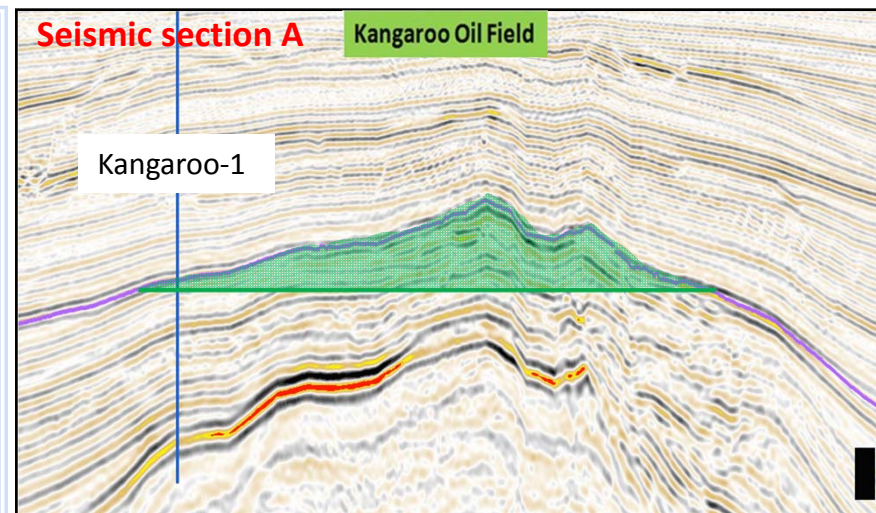
Good porosities and permeabilities measured.

Additional updip hydrocarbon potential with a gross column in the structure of approximately 650 metres.

## Contingent Resource

Kangaroo, currently carrying out seismic and geological studies to locate appraisal drilling location/s.

Contingent Resource Category	Prospective Resource (million standard barrels)
1C	11
2C	135
3C	487



# Santos Basin – Bilby-1 Oil Discovery

## Bilby-1 Oil Discovery

Discovered a proven 320 metre oil column with a probable gross oil column of 560 metres in the Eocene and Maastrichtian aged sandstones.

Oil measured at 28 degrees API.

Structure significantly larger than pre-drill estimate.

## Forward Program

Low net to gross ratio, poorer reservoir than at Kangaroo, and larger than expected structural / stratigraphic trap area, means that additional work is required.

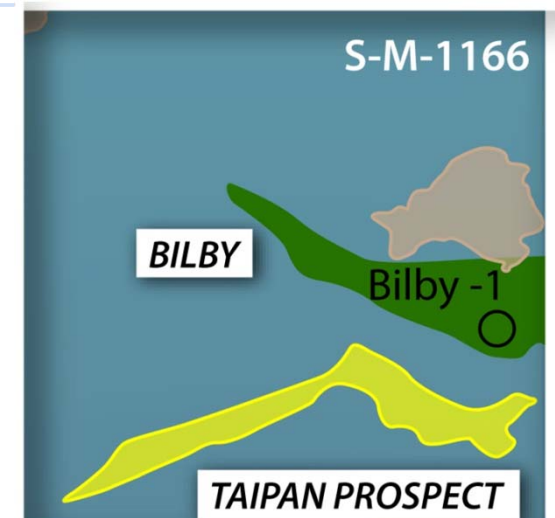
Seismic to be recalibrated with Bilby-1 well data.

Seismic reprocessing and inversion work is proposed to be a third term appraisal commitment.

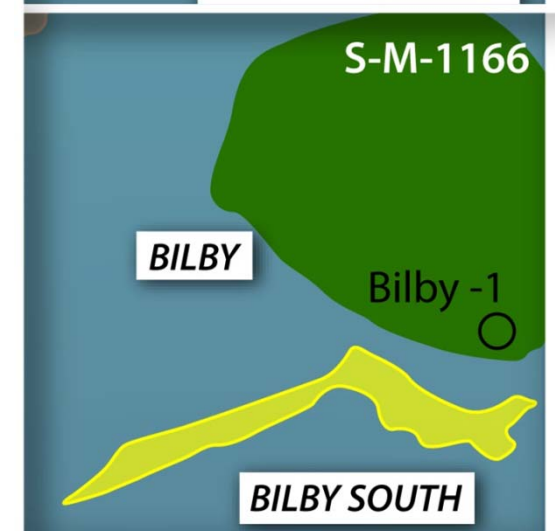
Phase 2 drilling may include further Bilby drilling, which will be contingent on the timing of further geotechnical and engineering work.

Note: the Taipan Prospect was renamed Bilby South.

Pre-drill



Post-drill



# Santos Basin – Resource Potential



## Additional Prospective Resource Potential

As a result of the Phase 1 exploration success, additional exploration prospects have been de-risked. The Kangaroo West, Bilby South, Platypus, Echidna and updip Emu prospects have been high-graded with evaluation work ongoing.

Total certified prospective resource range for the **Kangaroo West and Bilby South** prospects in Eocene and Maastrichtian intervals are:

Prospective Resource Category	Prospective Resource (million standard barrels)
Low Estimate (P90)	81
Best (Median) Estimate	278
High Estimate (P10)	550

Volume estimates for the prospects **Platypus, Echidna and updip Emu** are still being assessed.

## Pre-salt Prospects

Pre-salt seismic expression matches reservoir sequence characteristics in proven fields to the east. Early interpretation shows multi-billion barrel potential with 400 metres of relief in the Stingray and Great White prospects.

With acreage retention highly likely, Karoon retains the optionality on large pre-salt prospects potential.

Planned targeted 3D seismic acquisition will improve resolution and allow better definition of large closed pre-salt tilted fault blocks.

# Santos Basin – Operational Summary



## **Acreage and Permitting**

Discovery Appraisal Plan (Plano de Avaiiaco de Descobertas, or “PAD”) application submitted to ANP. Approvals pending.

## **Operational Highlights**

Kangaroo - Carrying out Seismic Quantitative Interpretation (QI) studies, integrating core and other data to locate appraisal drilling location/s.

Bilby - Waiting on seismic reprocessing and analysis. Preparing to start seismic QI analysis.

Phase 2 proposal finalised and submitted with ANP. Approvals expected next month.

## **Future Exploration and Appraisal Programs**

Initial Phase 2 drilling will focus on Kangaroo and Kangaroo West.

Drilling is expected to include 2 firm plus 4 optional wells. Rigs being investigated with potential for 1H 2014 spud.

Technical and commercial assessment of the Maruja oil discovery, Block S-M-1352, ongoing.

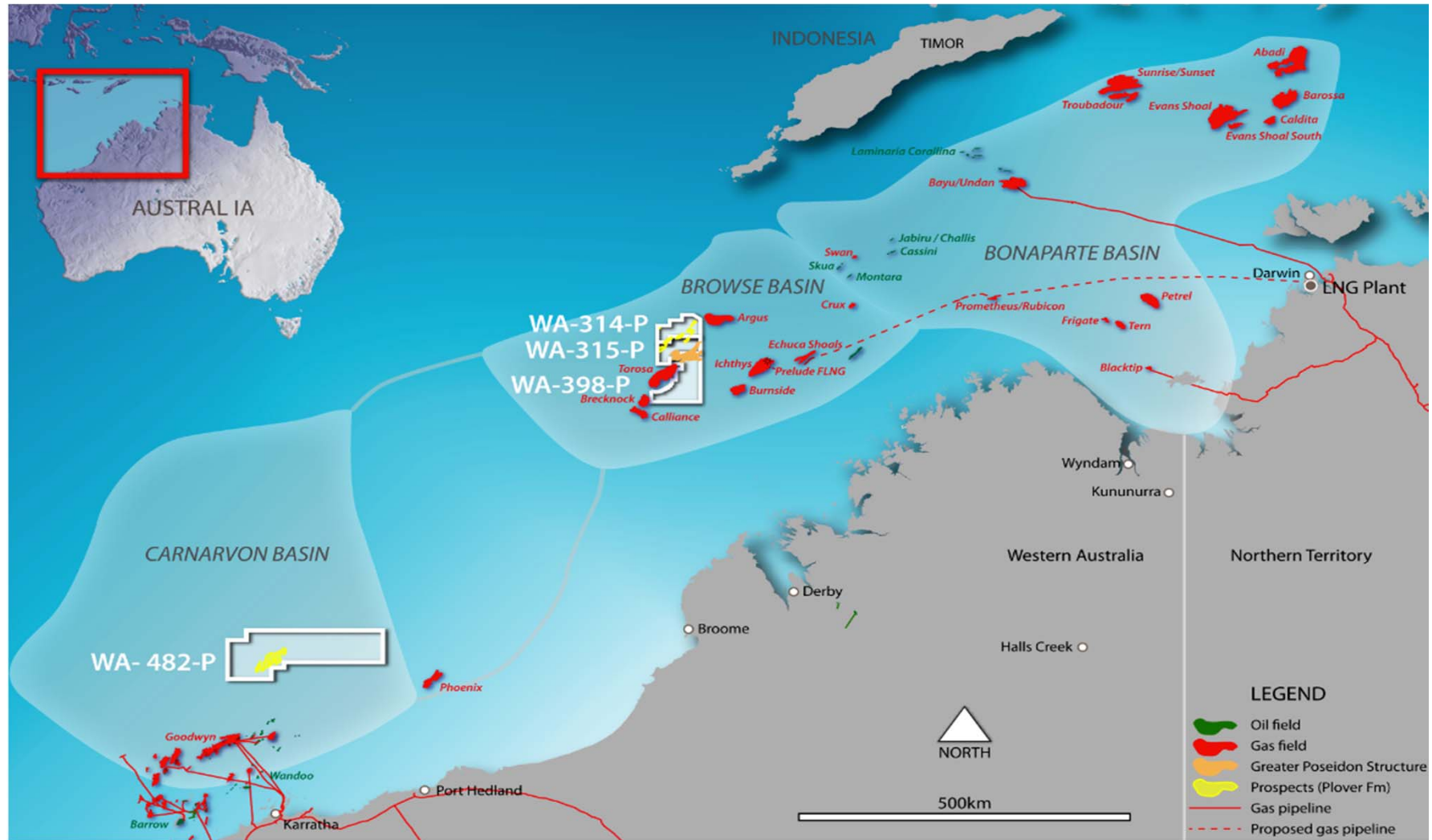
## **Farm-out Status**

Karoon committed to farming down approximately 15% equity interest ahead of Phase 2 drilling. Good interest from a number of prospective oil and gas companies.

## **Development Options**

Pre-FEED development studies are underway, first oil from a Kangaroo development possible in late 2017 / 2018.

# Australian Assets



# Browse Basin

## Background

The Browse Basin permits are located 350km off-shore north western Australia, in 450-600m water depth. Karoon's equity interests:

- 40% in WA-315-P and WA-398-P (ConocoPhillips 40%, Operator; PetroChina 20%),
- 90% in WA-314-P (ConocoPhillips 10%, Operator).

## Phase 2 Exploration Drilling Campaign Continuing

Currently drilling Grace-1

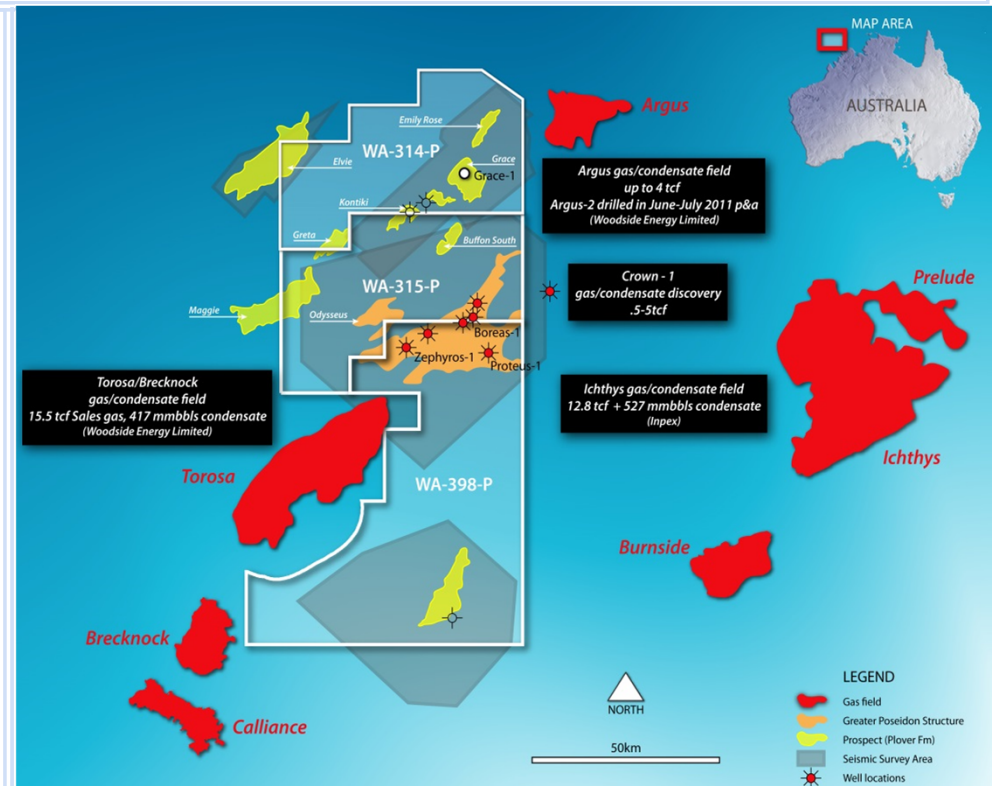
Phase 2 consists of 6-7 wells, designed to better define the quality and size of the resource. 3 wells drilled:

1. Boreas-1 (discovery, gas & condensate, flow tested)
2. Zephyros-1 (discovery, gas & condensate)
3. Proteus-1 (discovery, gas & condensate, flow tested)

Certified Contingent Resource update expected toward the end of the Phase 2 drilling campaign.

## Forward Program

Phase-2 drilling program to continue through 2014. Next well, Poseidon North-1 expected to be spudded early 2014.



# Resource Potential

## Proteus-1

Proteus-1 penetrated an 87m gross, good quality gas condensate bearing reservoir in the Jurassic aged interval opening up the Montara play over the greater Poseidon structure.

The well was successfully flow tested over the open hole section covering the Plover and Montara formations. The well flowed at a constrained 7.3mmscf/d measured through a 16/64" choke with a flowing well head pressure of 4457psi. The condensate rate was 19-22 bbl/mmscf/d.

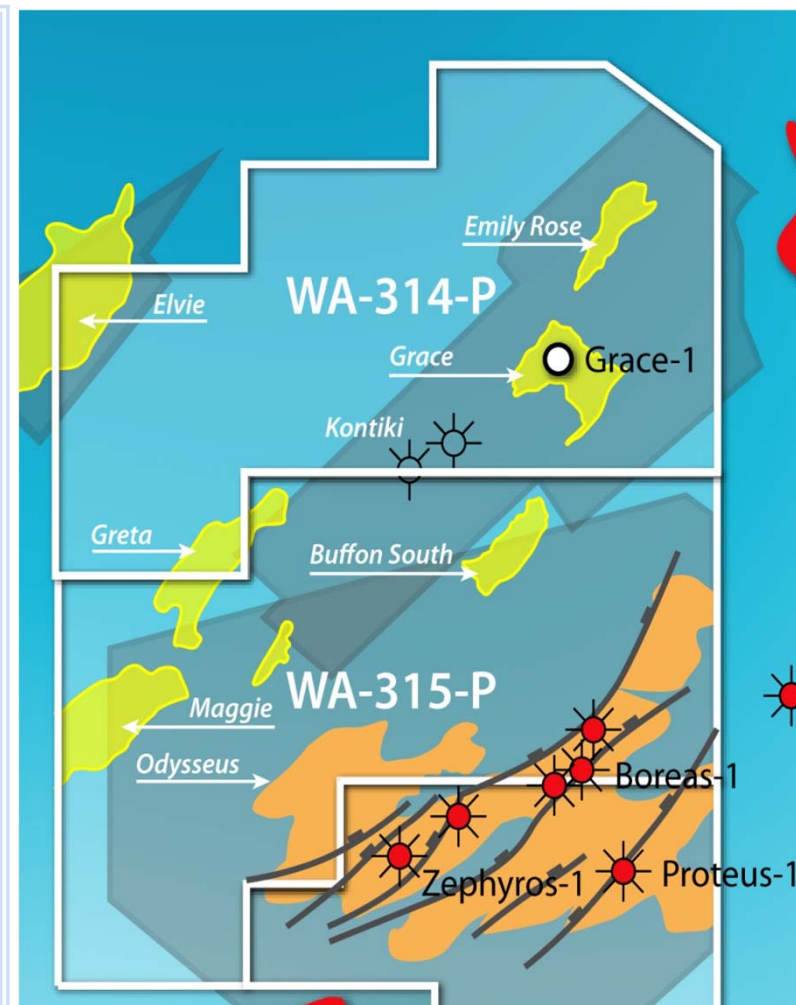
Consistent with the other flow tests in the Greater Poseidon structure, production wells in the Proteus block are expected to be commercial, flowing >100mmscf/d.

## Greater Poseidon Structure

A total of 6 wells drilled to date in the Greater Poseidon structure, with only 3 wells of the 6-7 Phase 2 drilling program drilled to date.

## Additional Resource Potential

Outside greater Poseidon trend, additional exploration potential is present with 7 prospects identified with gross unrisked mean prospective resource of 15 tcf.



Note: This data represents the views of Karoon Gas and do not necessarily represent the view of ConocoPhillips.

# Grace Prospect

## Grace-1

Located in permit WA-314-P (Karoon 90% equity interest).

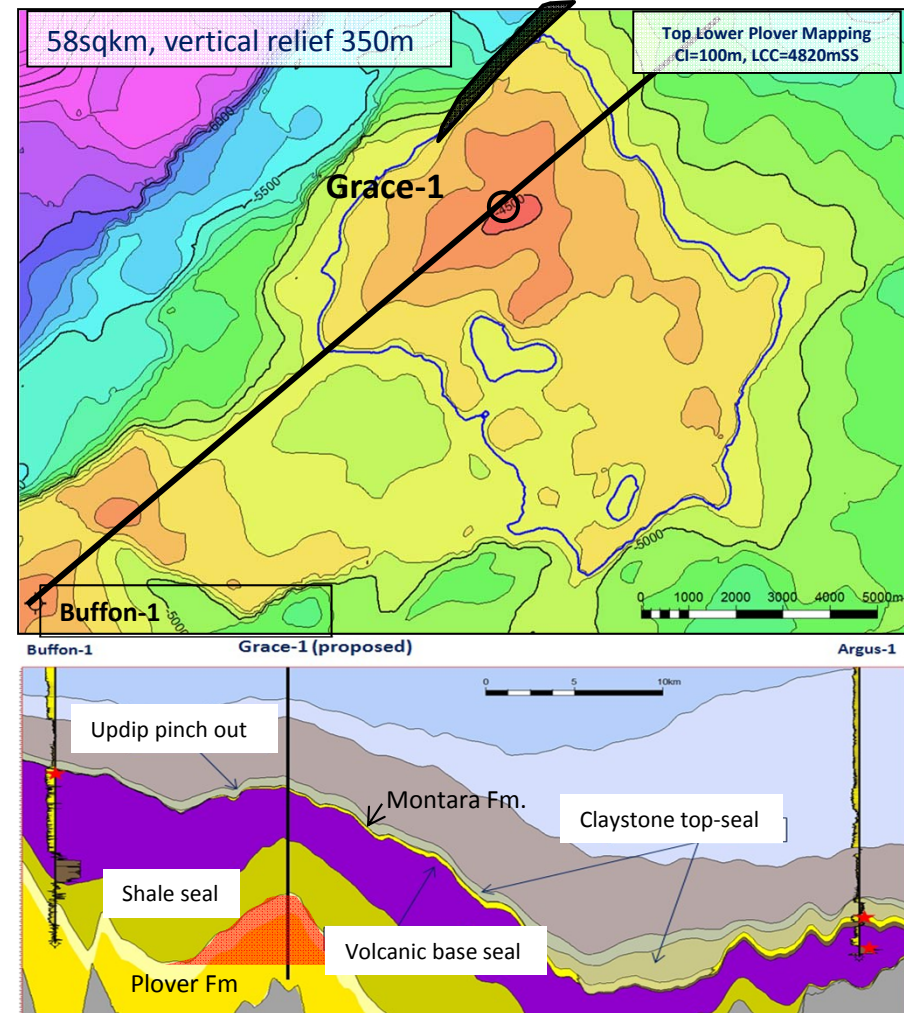
Plover Formation and Montara Formation targets.

- Gross unrisked mean prospective resource – 4.15 tcf
- Probability of success 15-33%

Primary reservoir target is regionally developed and present in the nearby dry Buffon-1 well (encountered good quality reservoir section down-dip).

Well position at a crestal location on a larger NE-SW orientated structural high, dip closed along strike with minor fault dependency.

The prospect is defined on a reprocessed modern 3D seismic dataset.



Note: This data represents the views of Karoon Gas and do not necessarily represent the view of ConocoPhillips.

# Browse Basin – Operational Summary



## **Acreage and Permitting**

All permits in good standing. Planned wells fulfilling Work Program requirements.

## **Operational Highlights**

3 wells drilled of the 6-7 well Phase 2 exploration drilling campaign. Phase 2 designed to better define the quality and size of the resource, will extend into 2014.

Karoon sole risk 3D seismic program over the Elvie lead, Permit WA-314-P, completed in August 2013.

## **Farm-out status**

Karoon remains committed to the current farm-out processes over WA-314-P, WA-315-P and WA-398-P.

## **Development Options**

- Brownfield back fill to Bayu-Undan
- Brownfield Stand-alone tie back to Darwin
- FLNG

# North Carnarvon Basin

## Background

North Carnarvon Basin, ~300km from NW Australia in 400 to 2,000m metres water depth. Karoon's equity interest:

- Farm-in agreement entered September 2012 to earn 100% of Permit WA-482-P by completing a 2 year work program of geological and geophysical studies and acquisition of 3D seismic.

## Acreege and Permitting

Permit in good standing. Current seismic program fulfilling years 1 and 2 of the primary permit term.

6 prospects, gross unrisksed mean prospective resource 2.8 Bn bbls. Additional prospects being defined.

## Operational Highlights

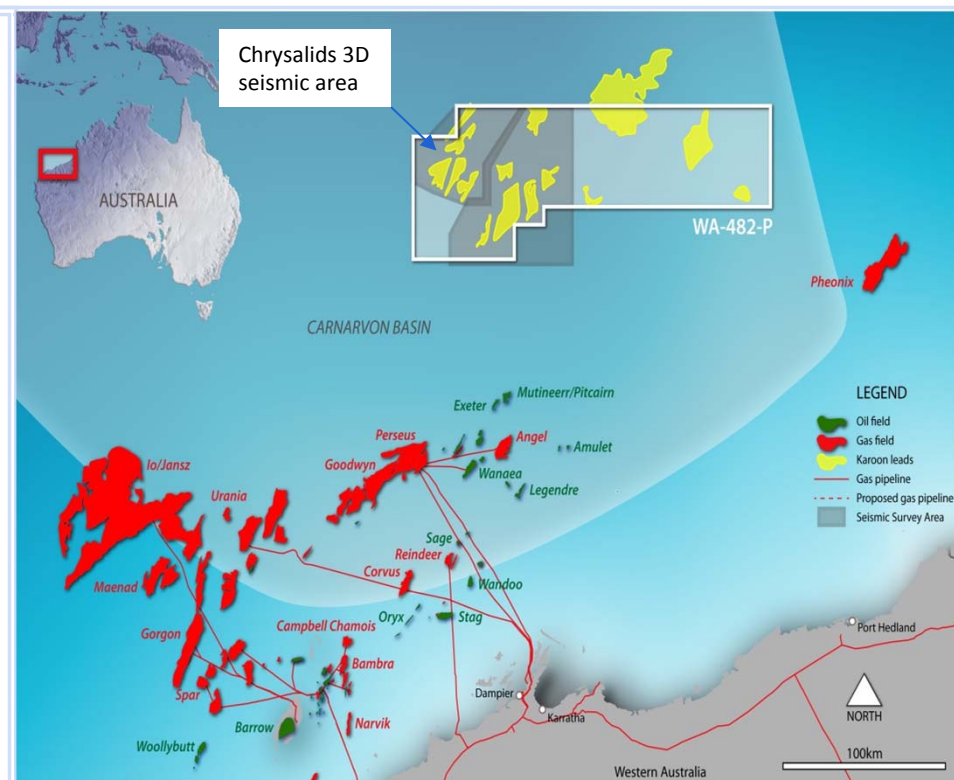
Acquired the Chrysalids marine 2,386 square Km 3D seismic survey, processing is underway.

Reprocessed existing 3D seismic data received and is currently being interpreted.

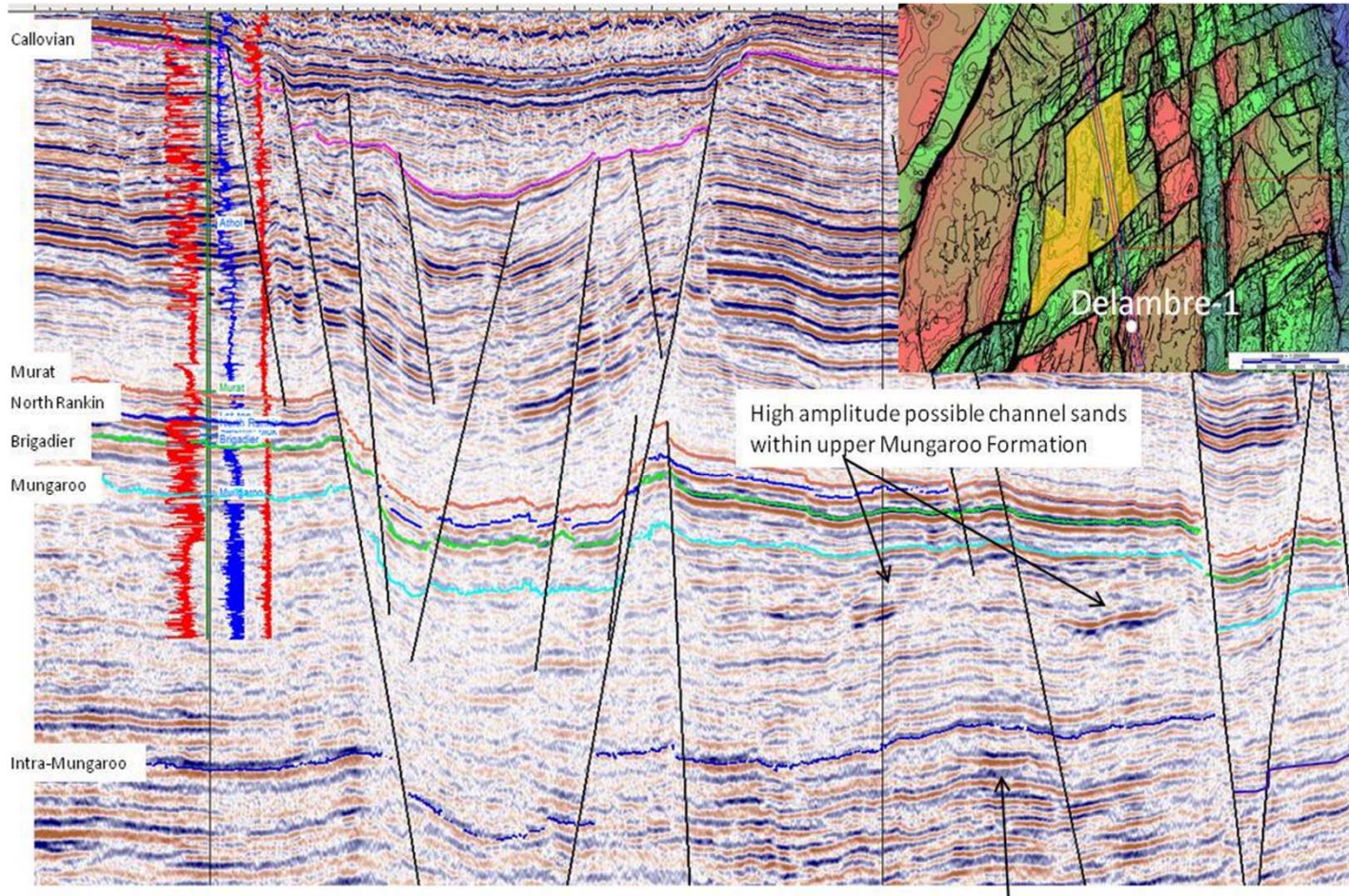
## Future Exploration Program

Complete 3D seismic processing and interpretation.

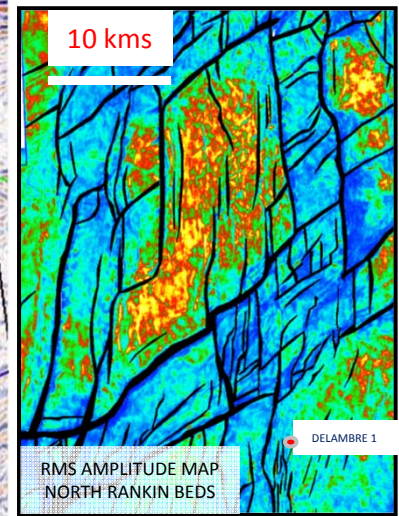
Farm-out an equity interest prior to exploration drilling, planned 2015.



# North Carnarvon Basin



**WA-482-P**  
**Prospect example**  
 Prospective at a number of levels from Lower Jurassic Nth Rankin beds to Triassic, Top and Intra-Mungaroo Formation levels.



High amplitudes within lower Mungaroo Formation

# Peru- Tumbes Basin

## Background

Tumbes Basin, 10 km offshore NW coast of Peru in water depths 300-1000m. Karoon's equity interest:

- 75% interest in Block Z-38, subject to completion of farm-in terms with Pitkin Petroleum Plc.

Block Z-38 is a high impact frontier early stage exploration opportunity. 16 prospects and leads with a net unrisks mean prospective resource 1.8 Bn bbls (certified)

The first 2 wells will test close to 40% of the total prospective resource.

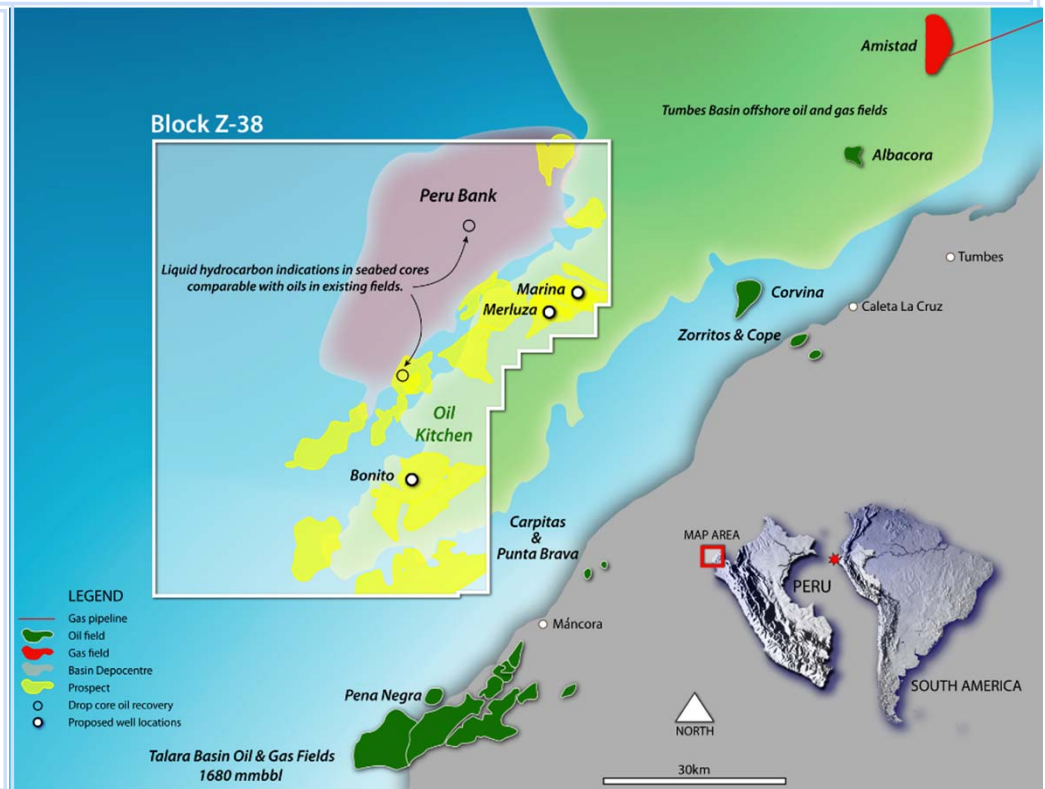
## Forward Plan

Phase 1 Exploration Drilling Campaign expected to commence mid 2014.

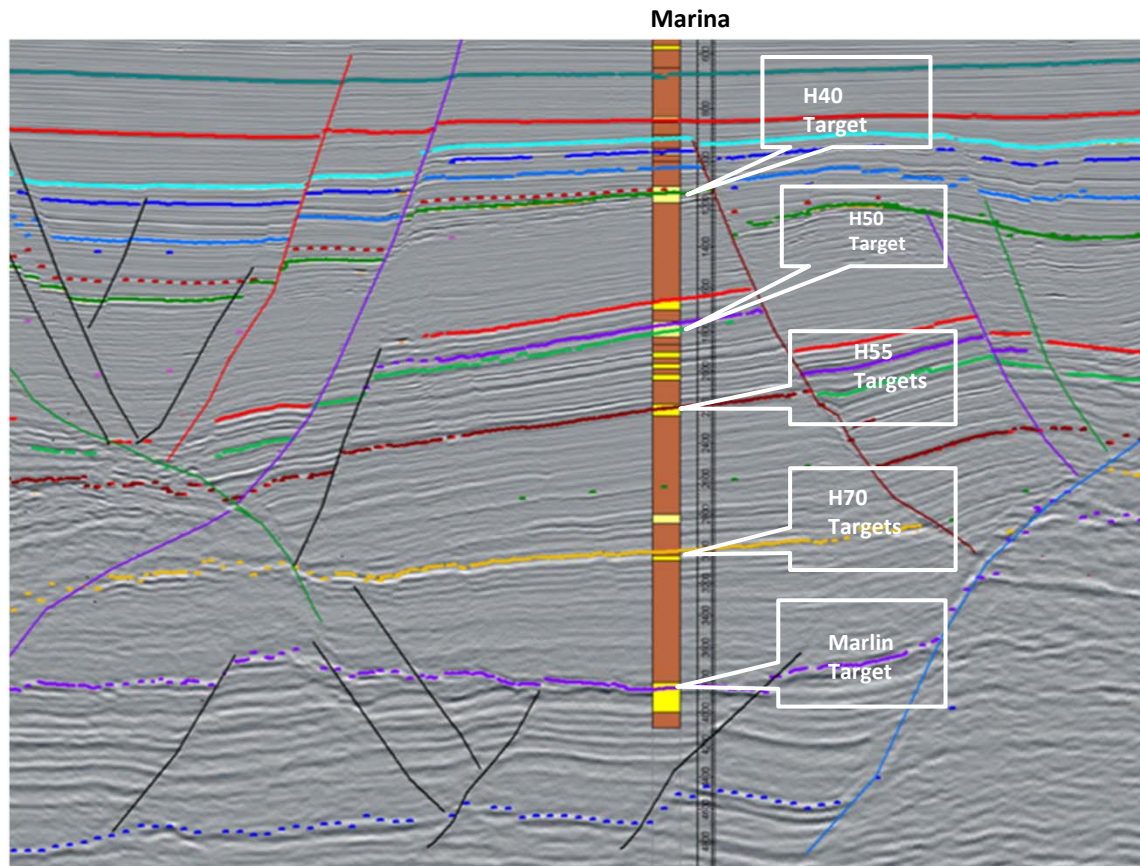
Prospect evaluation is complete and preliminary drill locations selected.

- Marina-1 targeting 516mmbbls (certified)
- Bonito-1 targeting 361mmbbls (certified)

Karoon committed to farming down approximately 30-35% equity interest ahead of Phase 1 exploration drilling campaign.

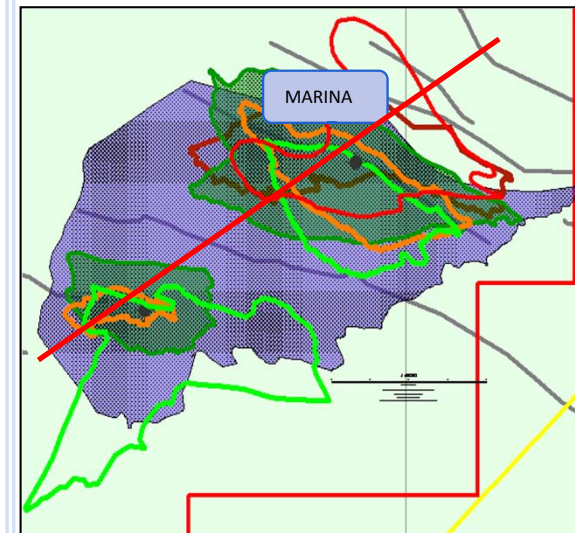


# Peru Assets – Tumbes Basin



## Marina and Marlin Prospects

Target sand intervals indicated in yellow



**Marina-1** will test five overlying prospect levels, H40, H50, H55, H70.

Mean Prospective Resource 516 mmbbl. Chance of success 21%

# Tumbes Basin – Operational Summary



## **Acreage and Permitting**

Block Z -38 is in good standing. 2 wells to be drilled within 18 months to meet permit requirements.

Environmental Plan (EIA) for drilling operations of up to 10 exploration wells and 10 appraisal wells approved in June 2013.

## **Operational Highlights**

Prospect evaluation is complete. The Marina and Bonito Prospects prioritised with a pre-drill potential gross unrisked mean prospective resource of 877mmbbls (certified).

Long lead items have been delivered.

## **Future Exploration and Appraisal Program**

Phase 1 exploration drilling expected to commence mid 2014. Final drill location decisions will be made post farm-out.

Marina Prospect is targeting a pre-drill prospective resource of 516mmbbls (certified). Can be tested with a 4,200 metre well.

Bonito Prospect targeting a pre-dill prospective resource of 361mmbbls (certified). Can be tested with a 3,550 metre well.

Karoon will be utilising its existing South American drilling team. Drilling preparations have already commenced.

## **Farm-out Status**

Karoon seeking to farm down about 30-35% equity ahead of the Phase 1 drilling campaign.

Data room open with good interest from a number of prospective buyers.

# Maranon Basin

## Background

Maranon Basin, Peru. On trend with Situche Central oil field. Karoon's equity interest:

- 100% interest in Block 144.

Currently in Permit Term 2 and in force majeure from June 2012 pending environmental approval.

22 prospects and leads being evaluated.

Permit work program commitment of 300km seismic acquisition program will resume once force majeure is lifted.

## Forward Program

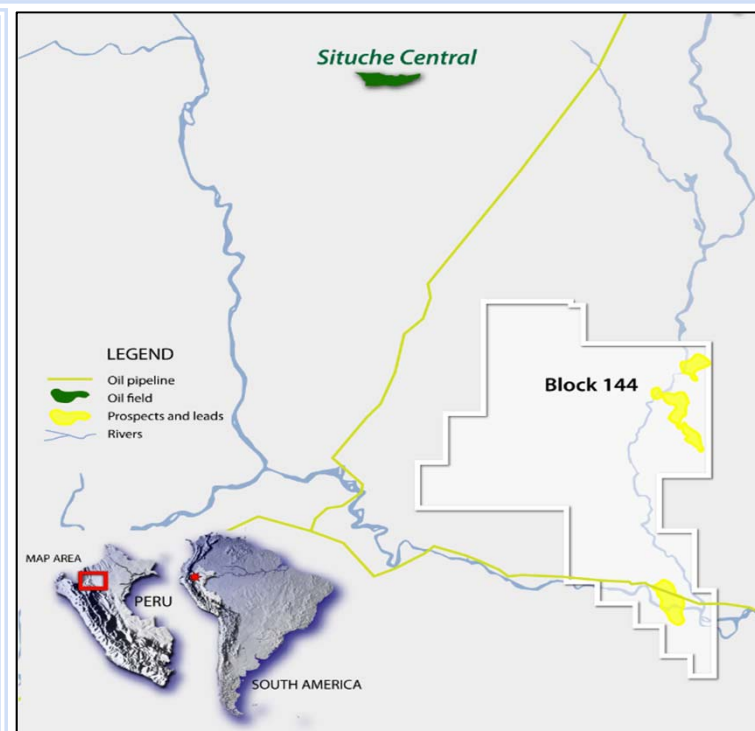
Acquire 2D seismic in the south and east to better define structure.

Preparing for 2D seismic acquisition program scheduled for 2014.

Define prospective resource size prior to drilling.

## Farm-out

Karoon seeking to farm down up to 40% equity ahead of drilling in 2014-15.



Prospective resource estimates represent current interpretations by Karoon of available exploration data and are subject to material change and re-interpretation as exploration and appraisal proceeds

# Forward Program

2H 2013

1H 2014

2H 2014

2015

## Planned drilling activity

- Drill Grace-1
- Enter new rig contract for Phase 2 appraisal and exploration drilling in Santos Basin. Targeting 2 firm wells + 4 options

- Grace-1 well result
- Drill Poseidon North-1
- Commence Phase 2 drilling in Santos Basin. Indicatively: Kangaroo-2, Kangaroo West-1
- Enter new rig contract for exploration drilling in the Tumbes Basin

- Kangaroo-2 well result
- Commence drilling Kangaroo West
- Kangaroo West well result.
- Commence drilling in the offshore Tumbes Basin

- Commence onshore drilling at Maranon Basin (2014 / 2015)
- Commence drilling in North Carnarvon Basin (2015)

# Forward Program (Cont.)



## Intended Farm-out Activity<sup>1</sup>

<ul style="list-style-type: none"> <li>Santos Basin farm-out (Target farm-out ~15% in 5 Blocks)</li> </ul>		
<ul style="list-style-type: none"> <li>Greater Poseidon Project farm-out (Target farm-out 5-10% in WA-315-P &amp; WA-398-P)</li> </ul>		<ul style="list-style-type: none"> <li>North Carnarvon Basin farm-out</li> <li>(Target farm-out 30-40% in WA-482-P)</li> </ul>
<ul style="list-style-type: none"> <li>Browse Basin, WA-314-P farm-out (Target farm-out 20-40%)</li> </ul>	<ul style="list-style-type: none"> <li>Tumbes Basin, Block Z-38 farm-out (Target farm-out 30-40%)</li> </ul>	<ul style="list-style-type: none"> <li>Maranon Basin, Block 144 farm-out</li> <li>(Target farm-out 30-40%)</li> </ul>

20 interested parties across the farm-out processes. Karoon remains committed to securing further farm-outs prior to commencing further exploration and appraisal drilling campaigns.

The August 2013 capital raising provides financial flexibility to achieve the best possible outcome on current farm-out negotiations.

Note:

<sup>1</sup> The farm-out figures and dates shown are indicative and subject to change and the farm-outs may not occur as planned.

# What We Have Done



## Australia

### Browse Basin – WA-314-P, WA-315-P, WA398-P

- ❑ 2005 - Acquired WA-314-P and WA-315-P (100%)
- ❑ 2006 - Farm-out to ConocoPhillips
- ❑ 2007 - Acquired WA-398-P (40%)
- ❑ 2009 - Discovery of Poseidon
- ❑ 2010 - Discovery and production test at Kronos-1
- ❑ 2012 - Discovery and production test at Boreas-1
- ❑ 2012 - Farm-in to North Carnarvon Basin WA-482-P (100%)
- ❑ 2013 - Discovery at Zephyros-1
- ❑ 2013 - Discovery at Proteus-1

### North Carnarvon Basin – WA-482-P

- ❑ 2012 - Acquired WA-482-P (100%)
- ❑ 2013 - Acquired 3D seismic

## Brazil

### Santos Basin - S-M-1037, S-M-1101, S-M-1102, S-M-1165, S-M-1166

- ❑ 2007 - Awarded 5 Blocks in the Santos Basin Brazil
- ❑ 2010 - Acquired wide azimuth 3D seismic survey (first in Brazil)
- ❑ 2012 - Farm-out 3 wells -35% to Pacific Rubiales Energy Corp\*
- ❑ 2013 - Discovery at Kangaroo-1 (oil)
- ❑ 2013 - Emu-1 well drilled (oil & gas shows)
- ❑ 2013 - Discovery at Bilby-1 (oil)
- ❑ 2013 - Kangaroo initial contingent resource

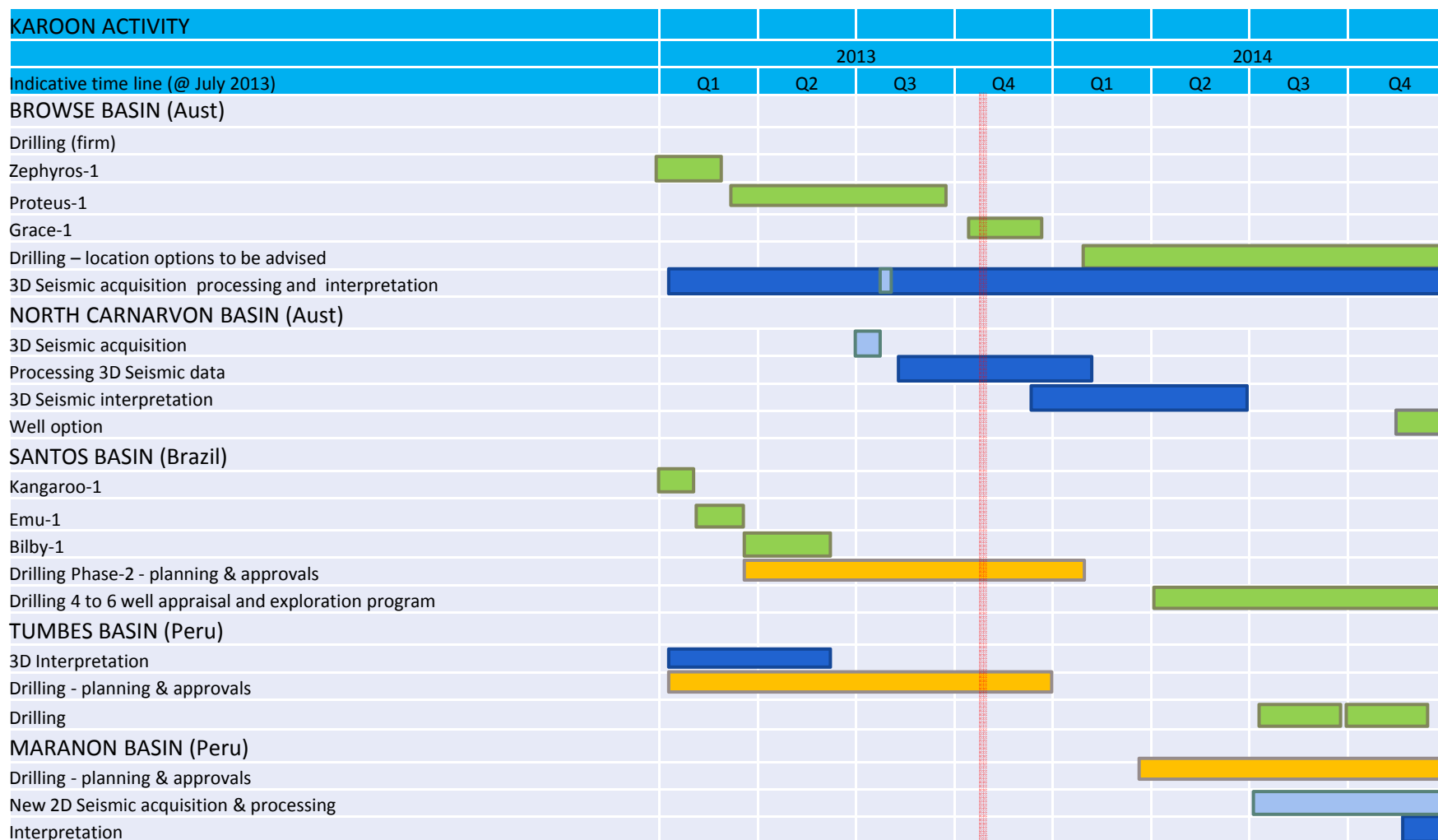
## Peru

### Tumbes Basin – Z-38, Block 144

- ❑ 2008 - Farm-in to Z-38
- ❑ 2009 - Acquired 2D seismic
- ❑ 2010 - Acquired 3D seismic

\*Subject to regulatory approval

# Activity Summary



# DeGolyer & MacNaughton Summary



Summary of DeGolyer and MacNaughton assessments of Karoon's Prospective and Contingent Resource Base as of 30th September 2009 and September 2012			Low Estimate	Best Estimate	High Estimate	Mean Estimate	Risked Mean Estimate	Number of Prospects and Leads
<b>GAS</b>	<b>Net Contingent Gas Resource</b>							
	<b>Assessment date</b>							
	September 2009	Poseidon Wet Gas (Tcf)			7.60			1
	<b>Net Prospective Oil Resources</b>							
	September 2009	Total Net Australia Browse Basin Wet Gas (Tcf)	1.80	4.50	11.20	5.80	1.60	7
<b>OIL</b>	<b>Net Prospective Oil Resource</b>							
	September 2012	Brazil, South America Oil (billion barrels)	0.46	0.86	1.54	0.94	0.25	12
	September 2012	Peru, South America Oil (billion barrels)	0.59	1.59	3.71	1.92	0.32	19
		<b>Total Net Prospective Oil Resource (billion barrels)</b>	<b>1.04</b>	<b>2.45</b>	<b>5.25</b>	<b>2.86</b>	<b>0.56</b>	<b>31</b>

**Note:** Excludes North Carnarvon Basin Permit WA-482-P, Maruja and Pre-Salt Prospects in Brazil, and takes into account current interest in Z-38 and the Pacific Rubiales Energy Corp farm-out deal.

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- Petroleum exploration relies on the interpretation of complex and uncertain data and information which cannot be relied upon to lead to a successful outcome in any particular case. Petroleum exploration is inherently uncertain and involves significant risk of failure. All information regarding Prospective resource estimates and other information in relation to Karoon's assets is given in the light of this caution.
- 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. Estimates of prospective resources appear on slides 2, 7, 11, 12, 14, 16, 17 and 25.