

**March 2013** 

# **Compliance statements**



#### **Disclaimer**

- This presentation contains forward looking statements that are subject to risk factors associated with oil, gas, geothermal and related businesses. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including, but not limited to: price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions in various countries and regions, political risks, project delays or advancements, approvals and cost estimates.
- All references to dollars, cents or \$ in this presentation are to Australian currency, unless otherwise stated. References to "Beach" may be references to Beach Energy Limited or its applicable subsidiaries.
- Unless otherwise noted, all references to reserves and resources figures are as at 30 June
   2012 and represent Beach's share.

#### **Competent Persons Statement**

 This presentation contains information on Beach's Reserves and Resources which have been compiled by Mr Tony Lake, who is a full time employee of Beach, is qualified in accordance with ASX listing rule 5.11 and has consented to the inclusion of this information in the form and context in which it appears.





# **General overview**

# **Company overview**

farm-out of PEL 218 and ATP 855



- ASX 100 oil and gas explorer and producer, market capitalisation ~A\$1.8 billion
- Strong balance sheet cash of A\$343 million (at 31 December 2012) and undrawn debt facility of A\$150 million
- 1H FY13: underlying NPAT \$61 million, operating cash flow \$172 million.
- FY13 capex forecast \$400-450<sup>(1)</sup> million

FY13 production guidance of 8.1-8.5 MMboe **USA** Romania Egypt : **Key global** operations Bonaparte Basin Tanzania **Browse** Basin Cooper/Eromanga Basin Maryborough/Surat Basins Carnaryon Basin Gippsland Basin Conventional Otway Basin-New Zealand Unconventional (1) Excludes payments to Beach from Chevron

Fully funded capex program primarily focused on the Cooper Basin

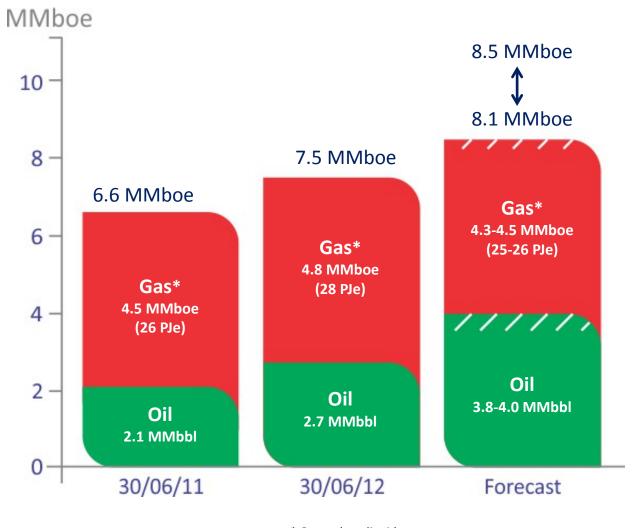
# **Key FY13 operational activities**



Project	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Outcomes	
Operated - Cooper Basin unconventional gas	1 vertical well, mobilise Ensign 965 drill rig	4 vertical wells, 1 horizontal well, stimulate 3 vertical wells		2 V wells, 1 H well, stimulate 3 V & 1 H well, EFT of V wells	Book significant 2C contingent resource	
SACB JV		evelopment drilling Preserves, and unco	Conversion of approximately 10 MMboe resource to reserves			
Operated Western Flank oil flowlines	Tie-in of Growl Lycium-Moon	er-Lycium and hba flowlines	Tie-in of Bauer-I	ycium flowline	Increased WF oil production of 9,000 to 10,000 bpd net to Beach	
Operated - Western Flank oil	1 exploration and 7 dev and app wells 3 exploration and 2 development/ appraisal wells		9 exploration and 2 development wells		Increased production and 2P reserves	
Operated - Western Flank gas and gas liquids	PEL 106B - 1 exploration well		PEL 106B - Up to 3 exploration wells and tie-in of Canunda		Increased production and 2P reserves, tie-in of two new discoveries	
Non-operated - Cooper Basin Western Flank	2 exploration and 3 development wells	1 exploration and 2 development/ appraisal wells	Up to 2 exp developm		Increased production and 2P reserves	
Egypt: Abu Sennan	3 exploration wells and EPT's on existing discoveries			Workover and assessment of discoveries	New and increased oil production, 2P reserve additions	
Tanzania: Lake Tanganyika	2D Seismic acquisition	Process and interpret 2D seismic data, identify prospects and leads		Assess farm-down options	Initial prospects and leads, potential farm-down	

# **Actual and forecast production**





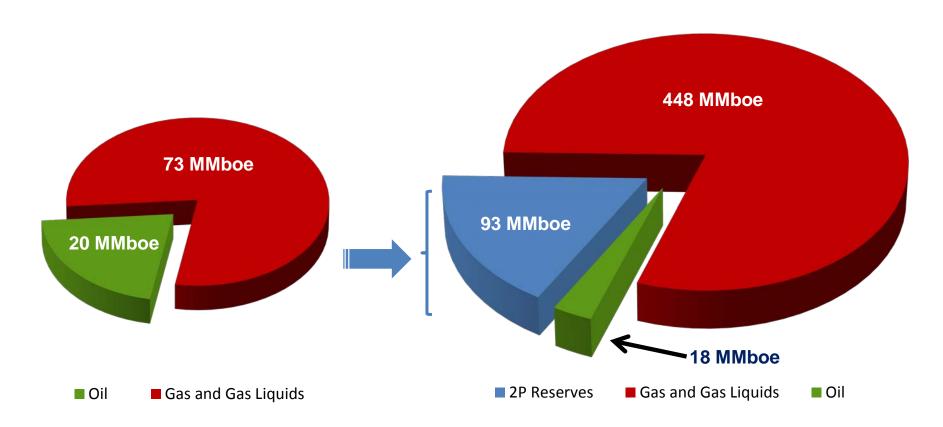
\* Gas and gas liquids

FY13 production guidance underpinned by Western Flank oil flowlines

# **2P** reserves and **2C** contingent resources







Large reserve and resource base driving production growth profile

# **FY13** Capital expenditure guidance



	1H FY13 Actuals	FY13 Forecast (\$M) <sup>(1)</sup>	FY13 Forecast Wells	FY13 Forecast Seismic		Forecast reserves additions
	(\$M)			2D – km	3D – km²	MMboe
DEVELOPMENT						
Cooper Basin – non-SACB JV	37	50 – 55	12 – 15	-	-	-
Cooper Basin – SACB/SWQ JV	79	140 – 145	45 – 55	-	-	10.0
International	2	5 – 10	2 – 4	-	_	-
<b>Total Development</b>	118	195 – 210	Up to 74	-	_	10.0
EXPLORATION						
Cooper Basin – non-SACB JV	20	30 – 40	16 – 21	250	1,500	3.3
Cooper Basin – SACB/SWQ JV	4	15 – 20	5 – 10	-	_	0.4
Other Australasia	3	5	2 – 3	-	-	1.7
Unconventional	71	135 – 145	10 – 15	670	-	-
International	10	15 – 25	3 – 5	2,100	-	1.3
New Ventures and Other	2	5	-	-	-	-
<b>Total Exploration</b>	110	205 – 240	Up to 54	3,020	1,500	6.7
TOTAL	228	400 – 450	Up to 128	3,020	1,500	16.7

<sup>(1)</sup> Excludes payments to Beach from Chevron farm-out of PEL 218 and ATP 855

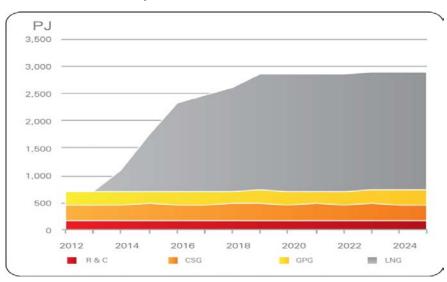
# Eastern Australian gas markets are growing



#### **Existing domestic east coast contracts**

# PJ 1,200 1,000 800 600 400 2012 2014 2016 2018 2020 2022 2024 Domestic Contracts Core Reference

#### Projected east coast total demand



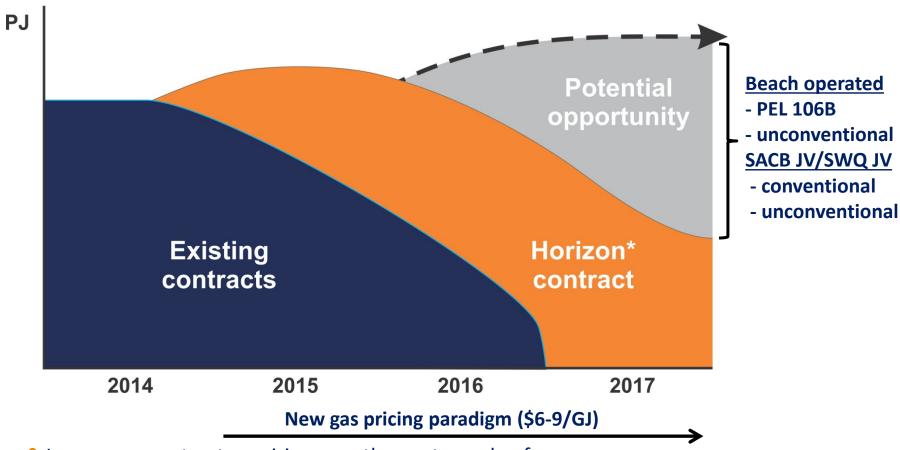
Source: Core Energy Group, July 2012

- The 'clean energy future' is likely to incorporate a larger role for natural gas
- By 2025 gas demand for domestic market and LNG projects expected to be almost 3,000 PJ
- 2015+ opens up various domestic and export linked opportunities

Industry commentators suggesting gas prices trending toward \$6-9/GJ

# Beach projected gas opportunities





- Legacy gas contracts expiring over the next couple of years
- Horizon\* contract relates to Beach's equity share of SACB JV and SWQ JV production

Note: The above schematic is for illustrative purposes only and is not to scale

\* Under negotiation

~240 PJ Horizon\* contract expected to underpin gas sales for 15 years

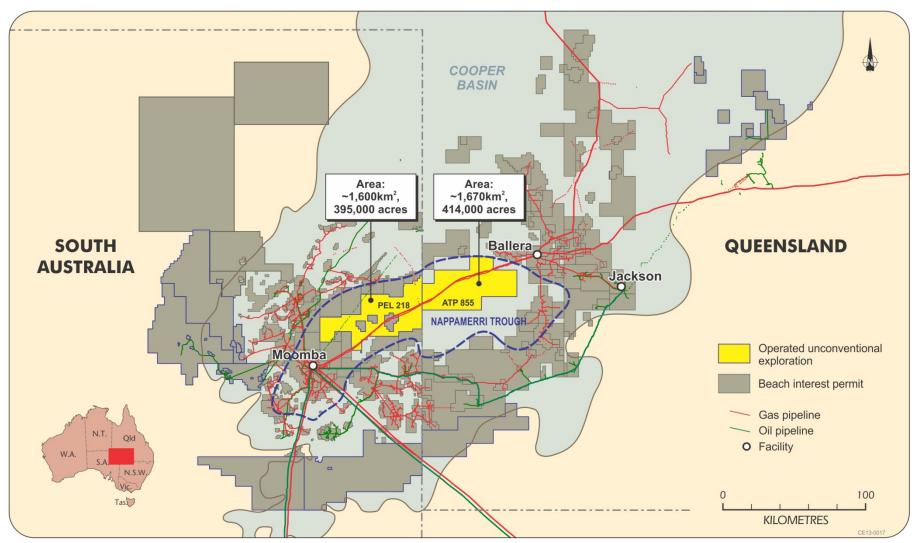




# PEL 218 and ATP 855 farm-out to Chevron

# PEL 218 and ATP 855 farm-out to Chevron





World class JV partner reinforces SA and Qld Cooper Basin gas potential

# **Background and rationale**



- Beach has led the way in Nappamerri Trough unconventional exploration
  - Early identification of the potential of PEL 218 and ATP 855
  - Initial success with off-structure exploration wells and flow tests
- Significant advancement in the program
  - PEL 218 activities:
    - Moonta-1, Streaky-1, Marble-1, Boston-1 and Nepean-1 vertical wells
    - Holdfast-2, the first horizontal well of this program, underway
  - ATP 855 activities:
    - Halifax-1, the first exploration well drilled and currently flow testing
- Commercialisation will require significant capital and additional technical expertise for a successful development
- Beach strategy is to participate in ultimate commercialisation and development

# Transaction highlights and overview



- The introduction of a world class joint venture partner with:
  - Global experience and leading technical capability
  - A long and successful history in Australian exploration and gas development
- Beach to transfer up to 60% of its interests in PEL 218 (100%) and ATP 855 (60%) to Chevron
- Envisaged two stage work program in PEL 218 and ATP 855, with Beach to potentially receive payments totalling US\$349 million
- Chevron withdrawal rights at the end of each stage
- Post-completion of the staged farm-in, Beach will support Chevron to become operator<sup>(2)</sup>
- Deal completion at satisfaction of usual regulatory approvals

Note: (1) Final exploration budgets subject to joint venture approval of work programs

(2) At the election of respective joint ventures

Beach positioned for the next evolution of Cooper Basin gas development

# **Transaction consideration summary**



 Subject to joint venture approvals, the key work program elements envisaged across the two permits involve an initial exploration program to be followed by pilot production programs

#### PEL 218 – potential payments

#### Stage 1 (initial 30%) (1)

- US\$36 million cash
- US\$95 million carry

#### **Stage 2 (additional 30%)**

- US\$41 million cash
- US\$47 million carry
- Commitment bonus payment of US\$35 million

#### ATP 855 – potential payments

#### Stage 1 (initial 18%)

US\$59 million cash

#### **Stage 2 (additional 18%)**

US\$36 million cash

(1) Vertical wells exclude Holdfast-1 and Encounter-1 Note: Chevron has the option to continue or withdraw at the end of each stage

**Envisaged US\$349 million payment to Beach over several years** 

# Why Chevron?



- Unconventional resource experience
  - USA and Canada (Duvernay, Marcellus, Utica, Wolfcamp)
  - Poland, Romania, China, Lithuania and Argentina
  - Exposure to >7 million net acres
- Technical capability and gas development expertise.
- Outstanding exploration track record in Australia
- Largest Australian E&P investor
  - North-west shelf project
  - Gorgon project (operator)
  - Wheatstone project (operator)
- Gas commercialisation/financial capability
  - Natural gas production more than 4.9 Bcf/d
  - US\$225 billion market cap (as at 21 Feb 2013)
- 57,000 employees



Poland shale exploration (courtesy Chevron)

Chevron brings technical excellence, global capability to SA and Qld gas resources

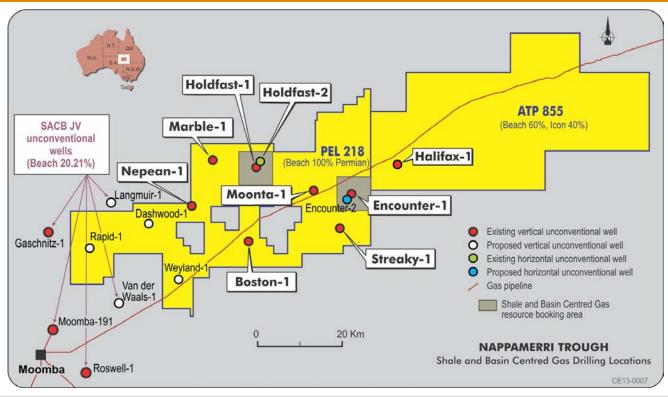




# Cooper Basin Unconventional exploration

# Unconventional acreage and timeline







# **Unconventional gas program**



#### PEL 218 ~1,600 km<sup>2</sup>

- Beach 100% (Permian)
- Six vertical wells drilled, two being drilled (one horizontal)
- Gas flow from first three wells in excess of 2 MMscfd per well

#### ATP 855 ~1,670 km<sup>2</sup>

- Beach 60% (operator), Icon Energy 40%
- Halifax-1 initial constrained rate of 2.2 MMscfd

#### **SACB JV ~7,100 km<sup>2</sup>**

- Beach 20.21%, Santos 66.6%(operator), Origin Energy 13.19%
- Moomba-191 flowed gas at in excess of 3 MMscfd and tied-in

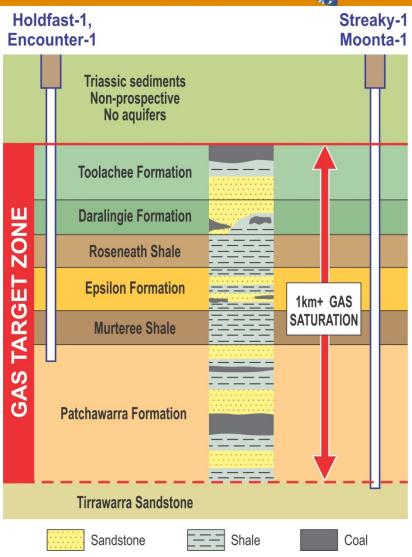


SACB JV's Moomba-191 shale well connected to Moomba infrastructure

# Program highlights to date

BEACH

- Holdfast-1, Encounter-1 proved up the shale play with flow rates at up to 2.1 MMscfd
- Moonta-1 proved up the basin centred gas concept throughout the Patchawarra, with gas flow rates at up to 2.6 MMscfd
- Holdfast-2 horizontal well drilling ahead laterally though the Murteree Shale
- March/April batch stimulation to include Streaky-1, Boston-1, Marble-1, Nepean-1 and Holdfast-2
- Halifax-1 vertical exploration well in ATP 855 reached total depth at ~4,300 metres
- Initial constrained gas flows from Halifax-1 at
   2.2 MMscfd through a 24/64" choke

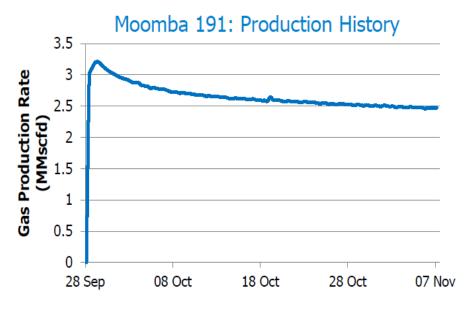


300+ Tcf of gas in place estimated for PEL 218

#### Moomba-191



- Initial flow rate > 3 MMscfd
- Average flow rate over first month
   ~2.7 MMscfd, and ~2.5 MMscfd at year end
- Early stage recovery estimates are > 1.5 bcf
- Indicates continuation of unconventional gas trending West of PEL 218 in the Nappamerri Trough



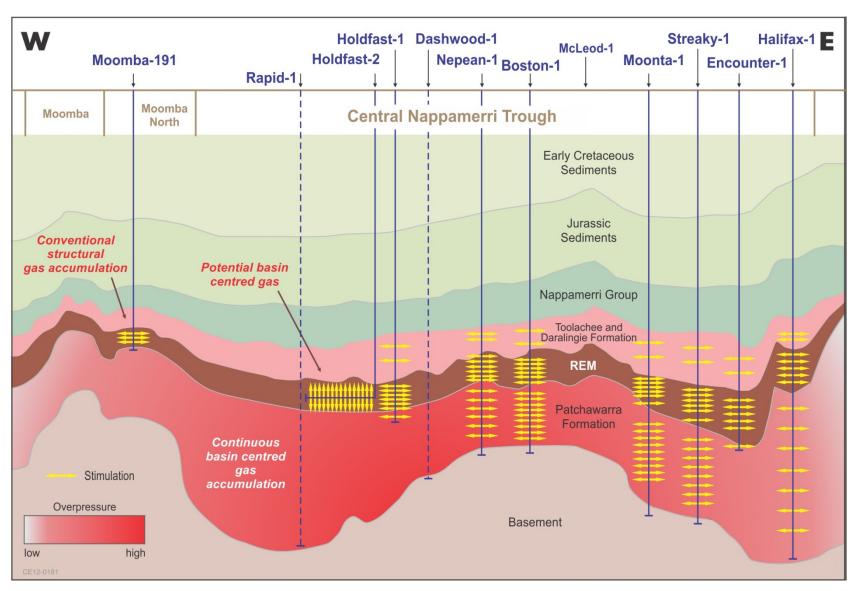


Moomba-191 gas flare

Source: Santos

# **Fracture stimulation stages**









**Cooper Basin Western Flank** 

#### **Western Flank oil**



# Western Flank oil is a core contributor to Beach due to:

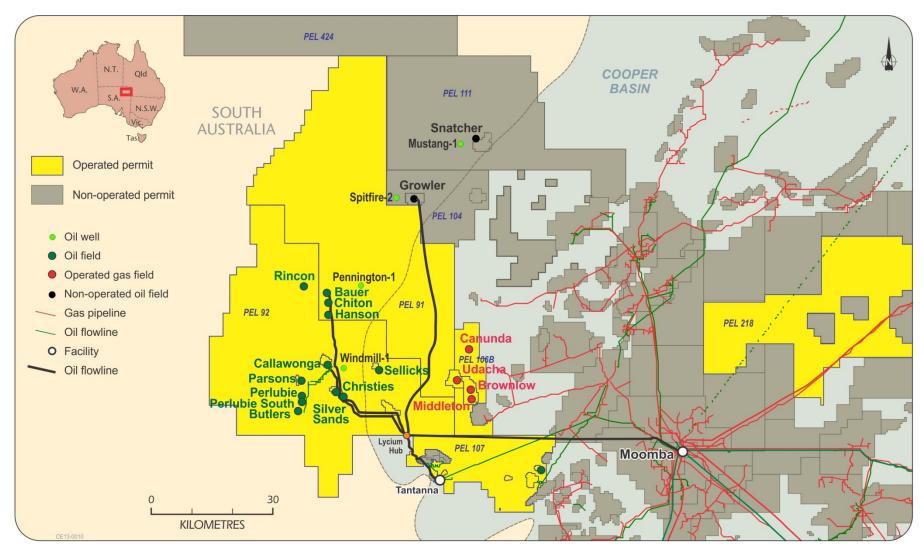
- Sales in Brent
- High net back per barrel of ~ A\$85\* (including opex, royalties and transportation costs)
- Strong equity positions in significant and prospective acreage
- Quick drill and tie-in periods
- Multiple play types with high flow rates
- Excellent understanding of the geology resulting in high success rates
- 11 operated wells drilled in FY13 to date,
   10 successful
- Established and proposed pipeline infrastructure to increase production rates

\*Assumes Brent oil price of A\$110 per barrel

# A highly prospective oil province

#### Investment in infrastructure

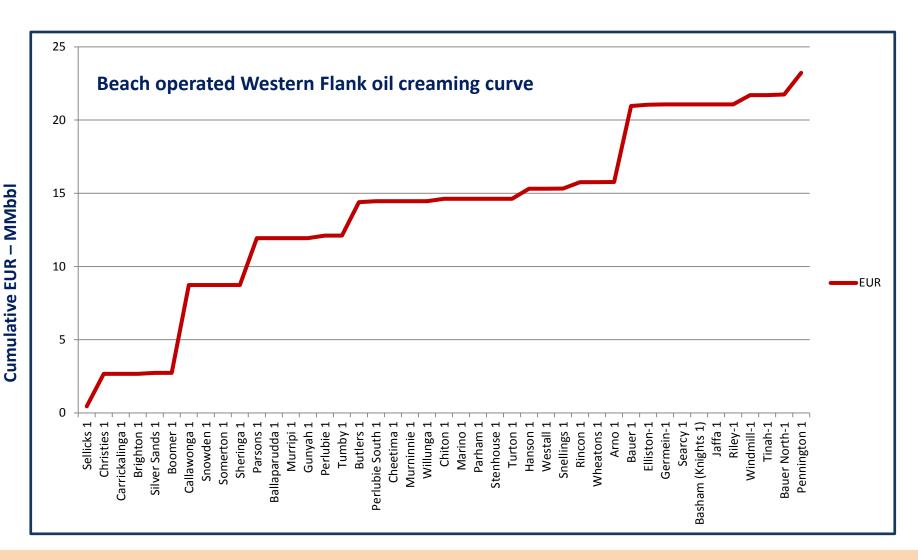




Net production of 9,000 to 10,000 bopd from the Western Flank expected in Q2 2013

# Western Flank exploration





Recent additions largest to date after 10 years of exploration

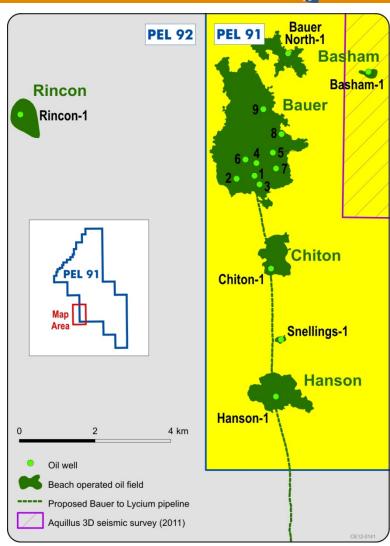
#### **PEL 91**



- Beach 40% (operator), Drillsearch 60%
- Bauer potential recoverable oil of 10+ MMbbls
- Current production of ~3,200 bopd (gross) from two wells
- Targeting ~10,000 bopd (gross) in Q2 2013 when Bauer-Lycium flowline operational
- Seven wells drilled in FY13 to date:
  - Pennington-1 exploration well encountered stacked targets; and
  - Six appraisal/development wells in and next to Bauer

#### FY13 capital program

- Five exploration and seven development wells, expected net cost \$20 million
- Bauer-Lycium flowline expected net cost of \$6 million



FY13 program to date of ~2 MMbbls reserve increase net to Beach

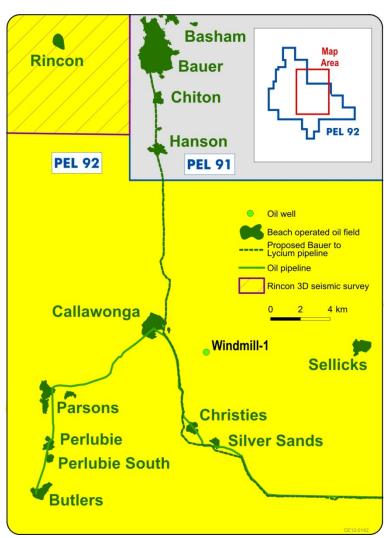
#### **PEL 92**



- Beach 75% (operator), Cooper Energy 25%
- Current gross production of ~5,200 bopd
- Gross production expected to reach ~7,000 bopd in Q2 2013
- Rincon 3D to delineate the Rincon discovery and evaluate additional exploration prospects
- Four wells drilled in FY13 to date:
  - Two Butlers development wells; and
  - New field oil discovery at Windmill-1, with Tinah-1 plugged and abandoned

#### FY13 capital program

- Seven exploration and three development wells, expected net cost (including seismic) \$31 million
- Acquisition of 295 km<sup>2</sup> of the Irus multi-permit 3D completed



FY13 program targeting a gross reserves addition of 1 MMbbl

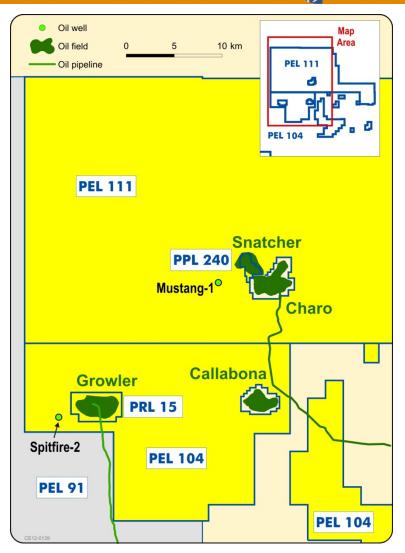
# PRL 15, PEL 104 and PEL 111

BEACH ENERGY

- Beach 40%, Senex Energy 60% (operator)
- Focus on the Birkhead formation
- Current gross production of ~3,500 bopd from Growler and ~600 bopd from Snatcher
- Eight wells drilled in FY13 to date:
  - Five appraisal development wells drilled in FY13,
     Snatcher-6 to -10, extending the Snatcher field to both the North and South;
  - Two exploration successes with Spitfire-2 (oil column up-dip of Spitfire-1) and Mustang-1; and
  - Tomcat-1 plugged and abandoned

#### FY13 capital program

- Five exploration and seven development wells, expected net cost (including flowline infrastructure) \$29 million
- Growler-Lycium and Lycium-Moomba flowlines completed at net cost of \$21 million (over FY12 and FY13)



FY13 program targeting a gross reserves addition of 2.5 MMbbl

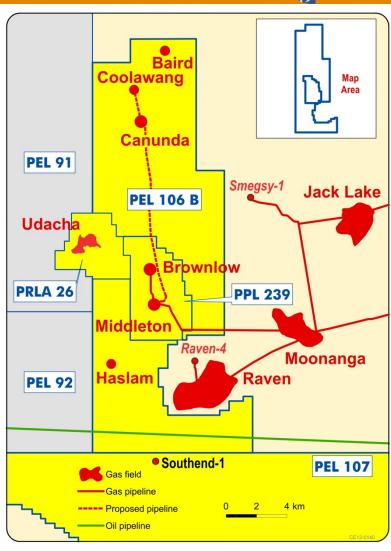
#### **PEL 106B and PEL 107**



- PEL 106B Beach 50% (operator), Drillsearch 50%
- First production in FY12 from the Middleton/Brownlow production licence
- Initial gross flow rates of 25 MMscfd (15 TJd sales gas and 325 bbld LPG and condensate)
- Production under current contract shut-in in accordance with customer's rights under interruptible GSA
- Commercial discussions underway for extended gas sales beyond April 2013

#### FY13 capital program

 PEL 106B – Up to four exploration wells, expected net cost \$7 million, net cost of development (incl. Canunda tie-in) expected at \$5 million



The first Beach operated gas and gas liquids production



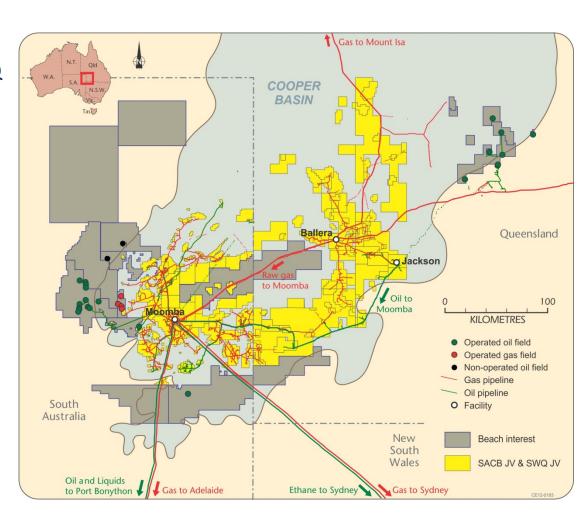


# SACB JV & SWQ JV's and Infrastructure

### **SACB JV and SWQ JV's**



- Significant equity interest in the SACB JV (Beach 20.21%) and SWQ JV's (Beach 20-40%)
- Area covered by JV's ~26,800 km²
- JV's equity interests include:
  - Moomba and Ballera processing facilities
  - All gathering systems within JV acreage
  - Ballera to Moomba raw gas pipeline (~180 kilometres)
  - Moomba to Port Bonython oil pipeline (659 kilometres)
  - Port Bonython oil facility
  - Jackson oil facility



Moomba facility cumulative gross production to date of ~6 Tcf

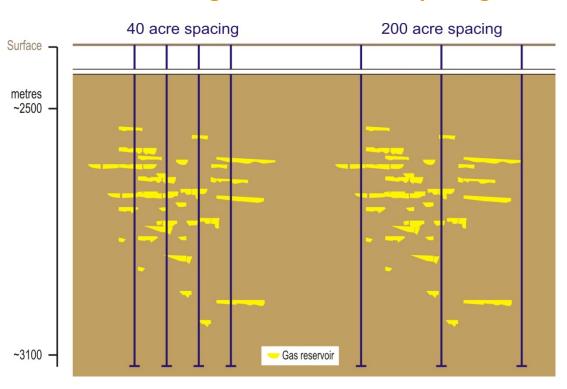
# SACB JV infill drilling program



# Resource to reserve conversion drivers:

- Infill drilling with denser well spacing moving towards 40 acres
- More focused fracture stimulation of individual zones
- More efficient wellbore hydraulics, resulting in lower abandonment pressures and improved recovery
- Shale and deep coals accessible via existing wellbores
- Beach anticipates ~10 MMboe (net) resource to reserve conversion per annum for coming years

#### Infill drilling - 40 vs 200 acre spacing



~20 MMboe (net) converted from resource to reserve in 2011





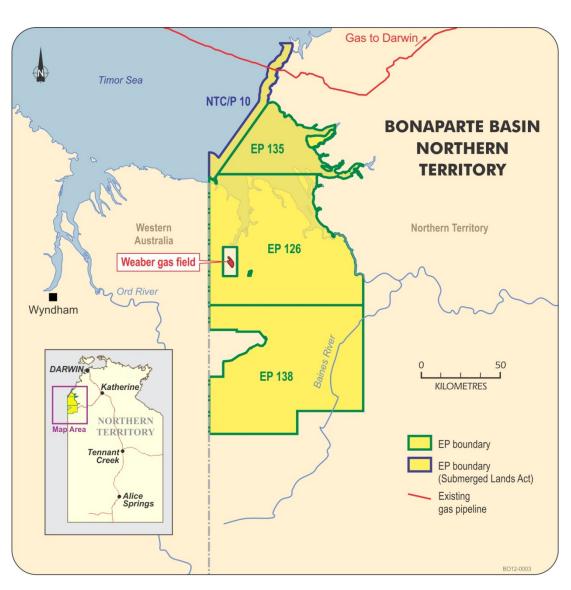
# **Other Australia**

Bonaparte Basin
Otway Basin

# **Bonaparte Basin**



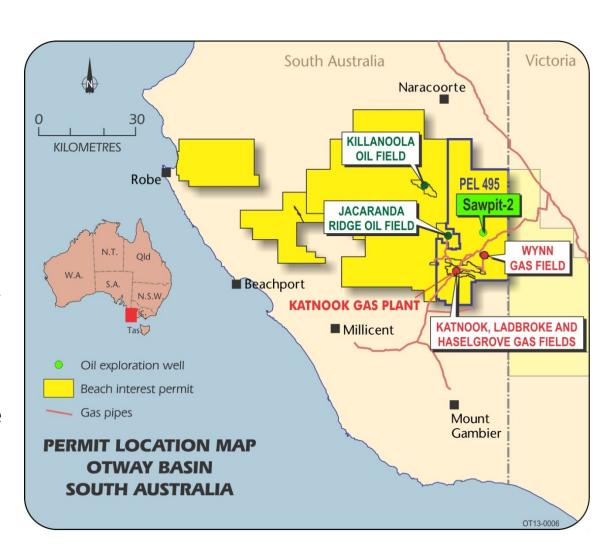
- Beach earning up to 90% of onshore and up to 50% of offshore areas
- Underexplored to date due to lack of quality modern seismic
- Conventional and deep unconventional targets
- Highly prospective as a result of:
  - Working petroleum systems identified
  - Oil seeps at surface
  - Oil staining in mineral cores
  - Weaber gas field adjacent to acreage
- Beach commitment of \$5 \$36 million dependent on options
- 15,000 line kilometre aeromag and gravity survey 50% complete



# Otway Basin - PEL 495



- Beach paying 70% of Sawpit-2 well costs to earn 35%
- Spudded 19 February 2013
- Located in the Penola Trough/Otway Basin
- Two main targets:
  - Oil in the Sawpit Sandstone
  - Unconventional potential of the Lower Sawpit Shale and Casterton Formation
- Jacaranda Ridge and Killanoola flowed oil from the Sawpit Sandstone
- Unrisked mean oil potential of Sawpit-2 is 1.0 MMbbls







## **International assets**

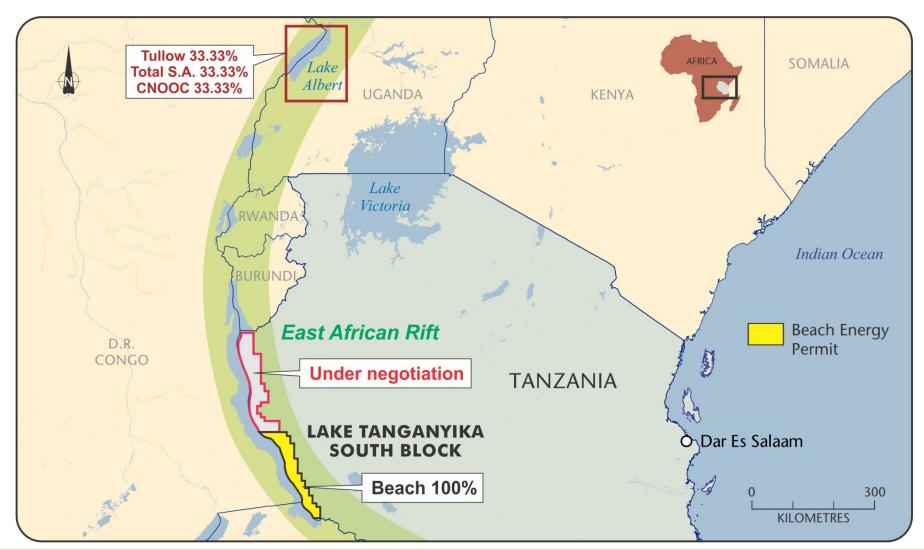
**T**anzania

**Egypt** 

Romania

## Tanzania – Lake Tanganyika South Block



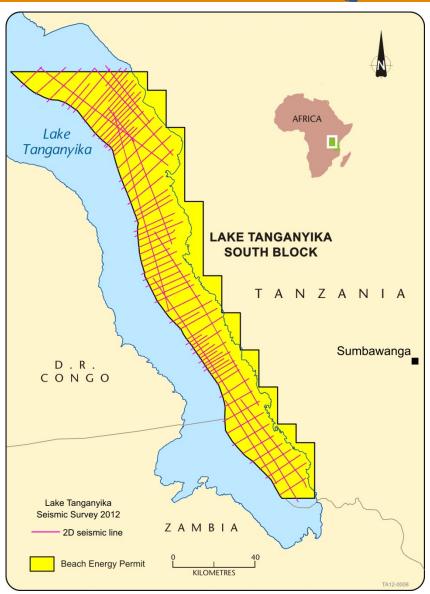


A significant acreage position in the prospective East African Rift

## 2D seismic survey

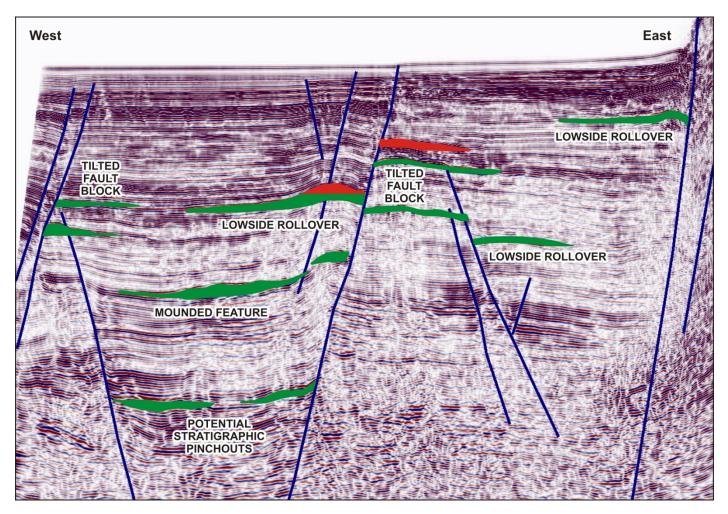


- Natural oil seeps in Lake Tanganyika indicate a working petroleum system
- South block area ~7,200 km²
- Potential for large discoveries (> 200 MMbbl)
- Airborne gravity and hi-resolution aeromag data acquired in 2010
- 2,080 kilometre 2D seismic survey completed in August 2012
- Preliminary results confirm extensive structuring, similar to Lake Albert in Uganda
- Indications of hydrocarbons over tilted fault blocks, low-side rollovers and mounded features



# Lake Tanganyika South Block potential play types





Potential targets from recently acquired 2D seismic, red = gas, green = oil

Direct hydrocarbon indicators consistent with an active petroleum system

## **Egypt**



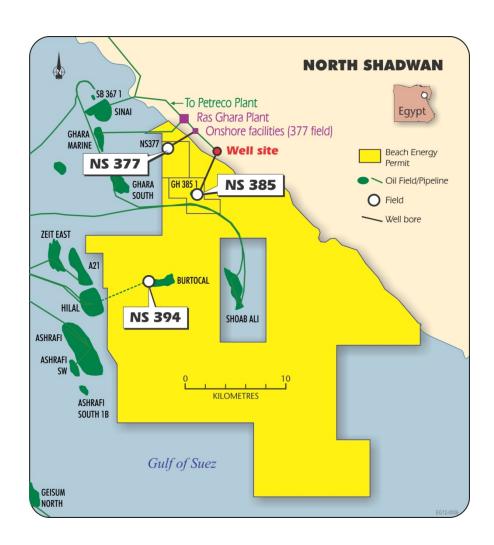


A balanced portfolio of assets with growing oil production

### **North Shadwan concession**



- Beach 20%, BP 50% (operator), Tri
   Ocean 30%
- On-shore to off-shore developments
- NS 377-3 intersected 145 metre oil column and cased as first production well for field
- NS 377-5 intersected 107 metre oil column in better quality reservoir and cased as a production well, artificial lift installed
- Trucking to replace pipeline export during 2013 with rate expected to increase to 2,500 bopd from both fields
- NS 385-1 field development well completed



Located in the prolific Gulf of Suez with near term development opportunities

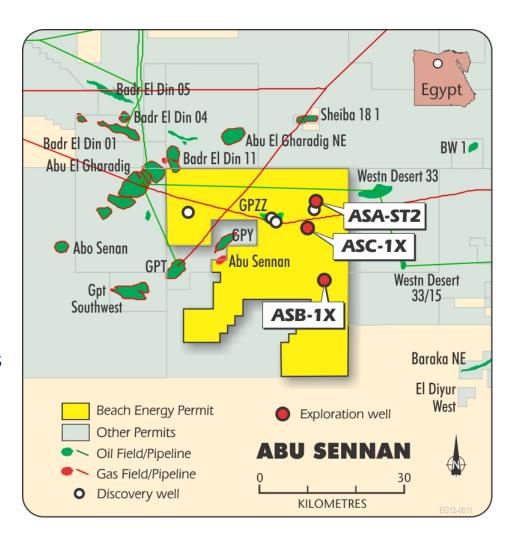
### **Abu Sennan concession**



- Beach 22%, Kuwait Energy 50% (operator), Dover Investments 28%
- Four exploration wells successful
- New three well exploration program approved:
  - First well, ASA-ST2, reached TD of 3,576 metres
  - Second well, ASC-1X drilling ahead at ~3,300 metres

#### **Extended production tests**

- EPTs on four discoveries over six months
- Initial test flows up to 2,400 bopd, with associated gas
- EPTs choked back and producing ~700 bopd, with associated gas

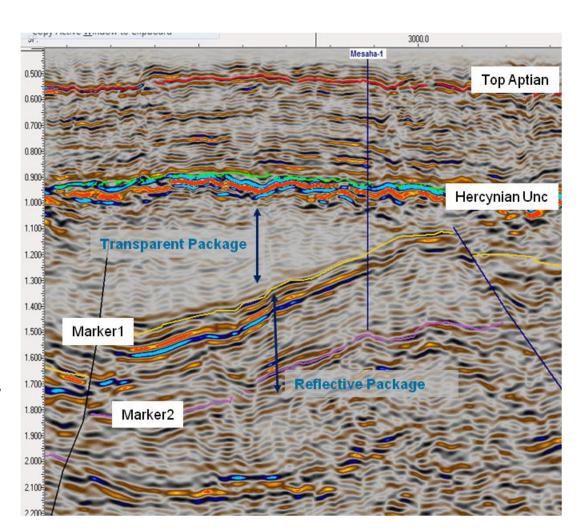


67% exploration success to date in the highly prospective Western Desert

### Mesaha concession



- Beach 15%, Melrose 40% (operator), Hellenic 30%, Kuwait Energy 15%
- The largest concession area in Egypt at 42,700 km<sup>2</sup>
- Potential for large oil fields (>100 MMbbl+)
- 2,885 kilometres of regional and infill 2D seismic acquired and interpreted
- First exploration well, Mesaha-1, plugged and abandoned
- Data assessment being undertaken to determine a forward plan

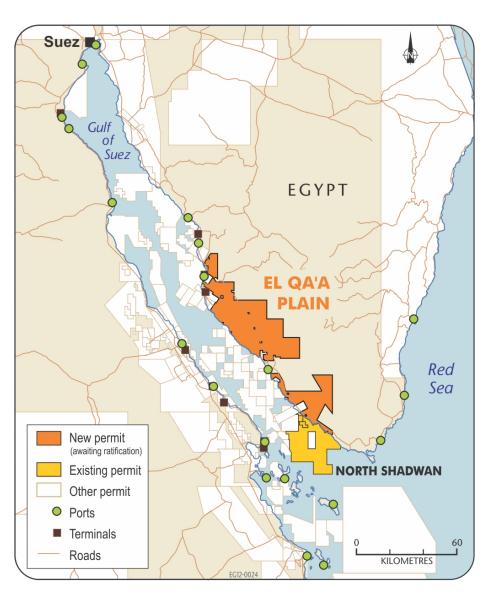


Wildcat acreage with rift graben potential

### **EGPC** international bid round 2011



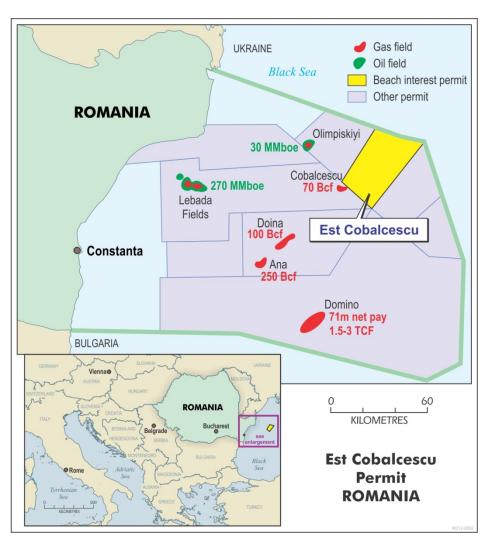
- El Qa'a Plain bidding group: Beach 25%,
   Dana Petroleum (operator) 37.5% and
   Petroceltic 37.5%
- Total area of 1,823 km²
- 1,519 kilometres of 2D seismic by BP and Conoco in early '80s
- 11 wells drilled between 1965 and 1984 (two with oil shows)
- Two prospects and 3 leads at Nubia level mapped on old data, largest up to 18 km<sup>2</sup> with potential for 50–100 MMbbls
- Deepest part of El Qa'a sub-basin is ~4,400 metres, mature source rock likely downdip from prospects and leads
- Exploration term four + two years, 3D seismic and one well commitment



### Romania – Est Cobalcesu block



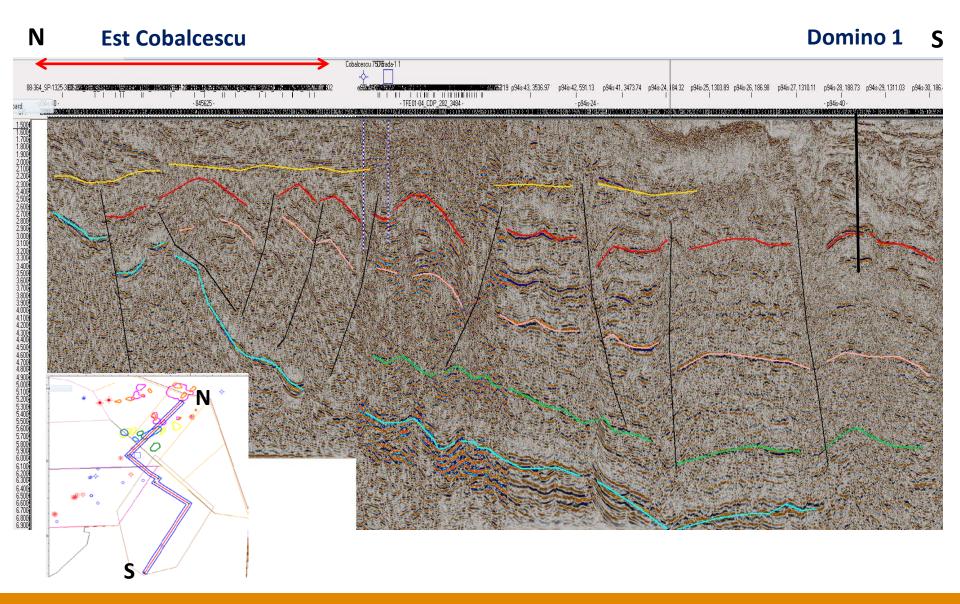
- Post Beach farm-in: Beach 30%,
   Melrose 40% (operator), Petromar 30%
- Est Cobalcescu block is 1,000 km², with
   3D seismic over block being processed
- Water depth <100 metres</li>
- Potential for both oil and gas plays
- Significant leads identified on available data
- Adjacent to Exxon-Mobil deepwater block with a 2012 discovery estimated at 3 Tcf
- Strategically aligned with local company Petromar
- Attractive royalty based fiscal regime and farm-in terms



Newly available acreage with proven petroleum systems and multiple targets

# **ExxonMobil Domino-1 discovery**





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