South Australian Otway Basin Update
Disclaimer

This presentation contains forward looking statements that are subject to risk factors associated with oil, gas 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.

EBITDA (earnings before interest, tax, depreciation, amortisation, evaluation and impairment adjustments) and underlying profit are non-IFRS measures that are presented to provide an understanding of the performance of Beach’s operations. They have not been subject to audit or review by Beach’s external auditors but have been extracted from audited or reviewed financial statements. Underlying profit excludes the impacts of asset disposals and impairments, as well as items that are subject to significant variability from one period to the next. The non-IFRS financial information is unaudited however the numbers have been extracted from the audited financial statements.

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 2017 and represent Beach’s share.

Certain FY18 planned activities are subject to joint venture approvals. References to planned activities beyond FY18 are subject to finalisation of work programs, joint venture approvals and Board approvals.

Notes on reserves statements

Beach prepares its petroleum reserves and contingent resources estimates in accordance with the Petroleum Resources Management System (PRMS) published by the Society of Petroleum Engineers. All estimates of petroleum reserves and contingent resources reported by Beach are prepared by, or under the supervision of, a qualified petroleum reserves and resources evaluator. To ensure the integrity and reliability of data used in the reserves estimation process, the raw data is reviewed and quality controlled by senior professional production, reservoir, petrophysical and geological staff at Beach. During each petroleum reserves review, this data is updated, analysed and checked against the previous year’s data.

Petroleum reserves and contingent resources are aggregated by arithmetic summation by category and as a result the 1P reserves estimates may be conservative and 3P estimates optimistic due to the portfolio effects of arithmetic summation. Petroleum reserves and contingent resources have been prepared using a combination of deterministic and probabilistic methods. Petroleum reserves replacement ratio is the ratio of the change in petroleum reserves (excluding production and divestments/acquisitions) divided by the last year’s annual production.

The reserves and resources information in this presentation is based on, and fairly represents, information and supporting documentation prepared by, or under the supervision of, Mr Tony Lake (Manager Gas Development). Mr Lake is an employee of Beach Energy Ltd and has a BE (Mech) degree from the University of Adelaide and is a member of the Society of Petroleum Engineers. The reserves and resources information in this presentation has been issued with the prior written consent of Mr Lake in the form and context in which it appears.

Beach engaged the services of RISC Advisory to independently audit Beach’s petroleum reserves estimates prior to Beach reporting any updated estimates. RISC Advisory provided their prior written consent to being named in the reserves announcement. Beach reviews and updates its oil and gas reserves position on an annual basis and reports the updated estimates as at 30 June each year. The estimates of petroleum reserves and contingent resources contained in the reserves statement are as at 30 June 2017.

Conversion factors used to evaluate oil equivalent quantities are sales gas and ethane: 5.816 TJ per kboe, LPG: 1.389 bbl per boe, condensate: 1.069 bbl per boe and oil: 1 bbl per boe. The reference point for reserves determination is the custody transfer point for the products. Reserves are stated net of fuel and third party royalties.
Overview of Beach Energy

- Founded in 1961 by the late Dr Reg Sprigg
- Early focus on Australian onshore areas including the Otway Basin
- Australia’s largest onshore oil producer, with a growing gas business
- Core operations in the Cooper and Eromanga basins
- Market capitalisation of ~$2.3 billion
The Otway Basin

- Otway Basin extends from SA to Victoria – onshore and offshore
- Formed when Australia pulled away from Antarctica around 150 million years ago
- Structural activity set up several different troughs
- Proven gas-producing basin with production from:
  - Early Cretaceous aged sediments in the Penola Trough, SA
  - Late Cretaceous aged sediments in the Port Campbell area, VIC
Exploration in the Otway is not new, with over 150 years of exploration in SA alone

- First well drilled in 1866 and over 80 wells drilled since 1961

- Beach has a long history of exploration in the Otway Basin

- First commercial discovery in 1987 at Katnook-1

- Katnook Gas Plant and pipelines constructed and commissioned in 1991

- Several gas discoveries followed at Haselgrove, Ladbrooke Grove, Redman, Limestone Ridge and Jacaranda Ridge

- 70,000 TJ of gas produced

- The Katnook gas plant inactive since late 2010
Beach Activity in the South Australian Otway Basin

- Beach has significant acreage over the Penola Trough and owns production infrastructure
- Well located with regards to prospectivity and potential to sell gas into local, South Australian and interstate gas markets
- Since 2013 Beach has drilled three wells, Sawpit-2, Bungaloo-1 and Jolly-1ST1
- Currently drilling Haselgrove-3ST1 which is a deep pool test of the Haselgrove fault trap
- Penola Trough is an asymmetric half graben reaching around 7km in depth

- Commercial gas discoveries in fault dependent structures near the centre of the Penola Trough

- Pretty Hill Sandstone is primary reservoir sealed by the Laira Formation

- Uncommercial oil & gas discoveries in the Sawpit Sandstone on the flanks of the trough sealed by the Upper Sawpit Shale

- Jolly-1 ST1 indicated the Sawpit Sandstone could have reservoir quality in the deeper parts of the trough beneath previously productive gas fields
Exploration Activity

- Reprocessing of the Haselgrove 3D seismic Survey undertaken following Jolly-1 ST1
- Regional mapping of the Sawpit Sandstone identified more than 20 leads
- Risk weighted basis Haselgrove Deep identified as having greatest potential
- PACE Grant of $6 million received from the SA Government towards cost of well
- Follow up potential in the surrounding acreage if successful

Sawpit Sandstone Depth Structure Map
Exploration Activity

- Haselgrove-3 is the first deep pool test of the Sawpit Sandstone
- Designed to be a directional well to maximise chance of intersecting gas filled sands at an optimal location
- Large trap with a pre-drill estimate of 34 BCF\(^1\) of mean recoverable gas in the lower Pretty Hill Sandstone and the Sawpit Sandstone
- The probability of success pre-drill estimated to be 34% 

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\(^1\) Best unrisked estimate of prospective resource using the probabilistic methodology; Beach assigns a ~32% probability of success. Refer competent persons statement for further disclosures. 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.
Haselgrove-3 Project Overview

Project Overview

- Construction of well lease and camp pad.
- Mobilisation of Ensign Rig 965 from Cooper Basin to the Haselgrove-3 site, near Penola, SA.
- Drill deviated exploration gas well to evaluate the sawpit sandstone and lower pretty hill sandstone
Earthworks

- Earthworks commenced in July 2017
- Rig pad and camp pad construction
- Cellar and conductor pre-installed by earthworks contractor
- Fencing installed around wellsite.
- Engaged local South East businesses for site construction and support services
Rig Move – Ensign 965

- Detailed rig move plans development to move rig from the Cooper Basin ~1500km
- Plan reviewed in detail with local SAPOL
- Route planned to minimise impact on local area.
- Traffic Management plans and speed restrictions in place when needed.
- Move completed in stages over a 3 week period.
- Rig Mast arriving on 1st September 2017
Haselgrove-3 Conventional Gas Exploration Well

- Haselgrove-3 spudded on 20th September 2017
- Haselgrove 3 conventional gas well targeting the Sawpit Sandstone and lower Pretty Hill Sandstone.
- 3 string casing design.
- Both surface and intermediate casing were installed and cemented to surface.
- Directionally drilled to ~50° inclination to optimise target intersection.
- During drilling of the production hole the BHA became stuck and sidetracking operations were conducted
- Well has reached TD (total depth) and further evaluation is underway.
Drilling Operations

Floorhands on Rig Floor – Ensign 965

Arial Shot of Haselgrove-3 location

Ensign 965 at Haselgrove-3
Community Engagement

- Regional Manager – Glenn Toogood
- Based in Penola
- Public Information Sessions prior to operations commencing
- Engagement with local EMS (Emergency Services – SAPOL/CFS)
- Updates to local media groups
- Engagement with industry
- Site Visits for local industry groups and local media during rig operations
- Regular communications with landholder
Contact Information

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