



30 June 2020

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BPH Energy Ltd investee Advent Energy- PEP 11 Review –Santos and Ampolex Studies

Background

A literature review resulted in a number of key studies being identified which were produced by prior tenement joint holders, Santos and Ampolex.

Santos reported that

- the offshore Sydney Basin was prospective for ... gas and
- “Ten structural leads ...(were) identified in four structural provinces ...with a total potential gas- in- place of 1 TCF” .

The material below is extracted from the Santos study released in 1990 on the Offshore Sydney Basin. “Geological and Geophysical Interpretation report for activities in Permit Year 1” Santos 1989-1990 Offshore Sydney Basin of NSW (including the initial seismic survey conducted in 1981)

PEP11 – An active Petroleum System

The PEP 11 area NSW (formerly NSW P10) extends across most of the shallow (<200m), offshore Sydney basin covering 4,576 sq km. Whilst the Basin is considered gas-prone, numerous significant petroleum shows have been reported, supporting the assessment that the Basin contains an active petroleum system.

Structural Leads

Santos (1991) identified a total of 10 structural lead in the PEP 11 offshore area and these were associated with four distinct structural provinces. Two leads were associated with the flanks of the Newcastle Syncline... four leads were identified associated with the central high...three leads were identified associated with fault and dip closures on the south eastern flank of the volcanic pile and one lead was identified on an easterly trending structural nose, south of the volcanic pile.

Other

An active hydrocarbon system has been demonstrated that is analogous to major discoveries in Queensland’s Surat/Bowen Basin.

In the offshore Sydney Basin, offshore oil and gas seeps have been recorded from Long Reef to Catherine Hill Bay, giving rise to periodic oil slick occurrences along the coast, especially in

the Cape Three Points, Terrigal area, supporting the assessment that the Basin contains an active petroleum system.

One of the reasons why the Early Permian, with a stronger marine influence, is considered to have the better reservoir potential and why reservoir potential should increase to the east, in the offshore, where palaeo-despositional environments had greater marine influence.

PEP 11 represents a unique opportunity to explore a frontier Permo-Triassic basin complex containing mature source rocks and active petroleum systems, adjacent to Australia's most strategic gas market.

Onshore discoveries and shows.

ESP Exploration (1982) reported that of the 68 wells drilled in the onshore Sydney Basin since 1910 almost all had gas flows with 41% flowing gas on test, mostly from the Triassic Narrabeen Formation

Further Seismic Surveys and Resource Reports-PEP11.

Further seismic was conducted in the PEP11 permit area in 1991, 2004, and 2017. All early seismic acquired in PEP11 has been reprocessed.

A report completed by Pangean Resources in 2010 following a review of prior seismic concluded **“Undiscovered gross prospective recoverable gas resources for structural targets within the PEP11 offshore permit have been estimated at 5.7 Tcf (at the Best Estimate level).”**

Gas prices and Supply

With major gas supply issues developing in eastern Australia Advent has identified a new target at Baleen. A high resolution 2D seismic survey has been conducted to assist in the drilling of the Baleen target approximately 30 km south of Newcastle.

PEP 11 is immediately adjacent to the largest domestic gas market in Australia and is a high impact exploration project. PEP 11 remains one of the most significant untested gas plays in Australia. The PEP11 JV has demonstrated considerable gas generation and migration in the offshore Sydney Basin, with the previously observed mapped prospects and leads being highly prospective for gas.

The gas supply crisis on the east coast of Australia has created a significant market opportunity to raise the funding to drill with the objective of developing the PEP11 project

The Australian Competition and Consumer Commission (ACCC) report released in January 2020 concluded

- The long-term supply outlook for the East Coast Gas Market from 2021–2031 remains uncertain.
- The Southern States risk facing a shortfall in the medium-term
- The improvements in the 2020 supply outlook have not translated into any material improvements in prices faced by C&me users.
- Prices offered in the East Coast Gas Market have remained relatively steady, mostly within a range of around \$9–12/GJ.

In its latest Gas Statement of Opportunities (GSOO), the Australian Energy market Operator (AEMO) has warned about potential supply shortages emerging on the east coast within five years, particularly in the southern states. The 2020 GSOO projects that:

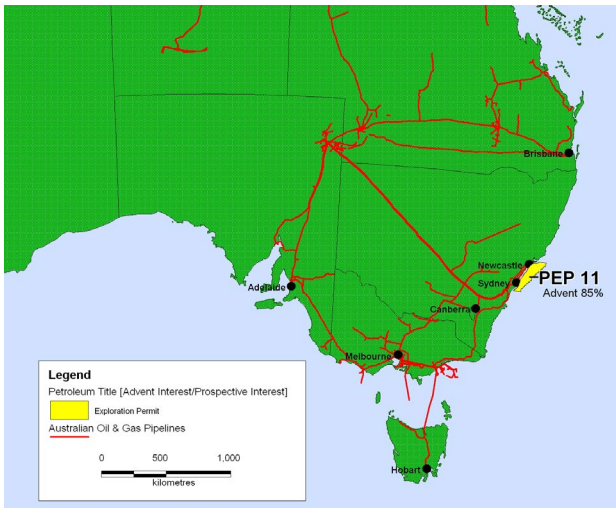
- Supply from existing and committed gas developments will be sufficient to meet forecast gas demand across eastern and south-eastern Australia until at least 2023, provided that liquefied natural gas (LNG) export spot cargoes are redirected to meet domestic demand, if required.
- Southern supply from existing and committed gas developments will reduce by more than 35% (163 petajoules [PJ]) over the next five years, despite an increase in committed gas developments in the past year

David Breeze (Director) authorised the release of this announcement to the market. BPH has an interest of 22.7% in Advent Energy Ltd. Advent holds an 85% interest in the PEP11 permit.

Authorised by



David Breeze
Executive Director



Location of Block PEP 11 offshore Australia (above) and location of Baleen well site (DM below)

