Technical Luncheon

Mark Sales & Malcolm Altmann (Beach Energy)

Subtle Oil Fields Along the Western Flank of the Cooper-Eromanga Petroleum System

Thursday 18th June 2015, 12-2pm
Mercure Grosvenor Hotel, 125 North Terrace, Adelaide

Members: $45  Non-Members: $55  Students: $20

Book and pay online

Bookings close at 5pm on Monday 15th June 2015
(Contact Adam Davey at adam.davey@sa.gov.au for enquiries)

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Abstract

Oil production from the Cooper/Eromanga commenced in 1983, peaked in the late 1980’s and began a steady decline. Oil production from the Western Flank commenced in 2002 and has steadily increased. In the year to July 2014, a total of 8.6 million barrels of oil was produced from 16 active fields along the Western Flank bringing the cumulative total to 24 million barrels. Western Flank oil has underpinned a twenty-fold growth in market capitalisation of four listed Australian companies; Beach Energy, Drillsearch Ltd, Senex Energy and Cooper Energy.

Two sandstone plays dominate the Western Flank petroleum geology; the Namur Sandstone low-relief structural play and the mid-Birkhead stratigraphic play. The use of 3D seismic has improved the definition of both plays, increased exploration success and optimised field appraisal and development drilling. Success rates have improved despite most Namur structural closures being close to the resolution margin for depth conversion (less than 8 metres). Seismic attribute mapping is being refined in the more difficult search for mid-Birkhead stratigraphic traps, with recent exploration discoveries indicating improved success.

Reservoir properties in the Namur are excellent, with multi-darcy permeability, unlimited aquifer strength, low GOR and low residual oil saturation. This combination leads to an oil recovery factor greater than 75%. Initial free-flow production rates commonly exceed 6000 barrels/day. The mid-Birkhead reservoir is also of high quality, but the lack of a strong aquifer drive reduces primary recovery.

New and re-processed 3D seismic and water-flood projects are expected to drive further discoveries, reserve and production growth.
Biographies
Mark Sales completed a BE(Chem)(1st Hons) and LLB(Hons) at the University of Adelaide graduating in 1999. He started his career at Santos Ltd working in subsurface and field operational roles. In 2003 he moved to the UK, working as a reservoir engineer for GdF Britain Ltd, BHP Billiton and RWE Dea (UK) Ltd, primarily on assets in the Southern North Sea and Algeria. Mark joined Beach Energy late 2007 as a reservoir engineer and currently holds the position of Team Leader, Exploration and Development in the Cooper/Eromanga Basin Oil Team. He is a member of SPE.

Malcolm Altmann obtained a BSc (Hons) in geology from Flinders University in 1976. After initial work in coal exploration, he moved to Delhi Petroleum in 1983 and Santos Ltd in 1987. He joined Beach Energy in early 2002 and currently holds the position of Geological Manager. Malcolm has broad exploration, development and production experience gained in working most of Australia’s onshore and offshore petroleum basins, including the Cooper/Eromanga, Amadeus, Gippsland and NorthWest Shelf regions. He is a member of PESA, the AAPG and SPE.