

Vintage Crop-1: Continuous gas readings from coals and shales with the presence of liquids and heavy gases

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The Vintage Crop-1 exploration well in PEL 516 (Senex 100%) in the South Australian Cooper Basin has been a major success, with the discovery of a new oil field, and excellent preliminary results from coring and testing of the Toolachee Formation coals and Roseneath and Murteree shale sections.

Key Points

- The Vintage Crop-1 exploration well has discovered a new oil field, capable of producing at over 300 barrels of oil per day on test.
- Thicknesses in the target sections were as expected in both the Toolachee Formation coals and the Roseneath-Epsilon-Murteree (**REM**) shale formations, with gross sections totalling over 200 metres.
- Good gas shows encountered during drilling, with the Toolachee Formation coals and REM shale formations exhibiting continuous gas shows as well as the presence of liquids and heavy gases including methane, ethane, propane, butane, pentane and oil traces.
- Shale gas content is prognosed to be similar to successful US gas shale plays, including the Marcellus Shale and Antrim Shale.
- MHA Petroleum Consultants have previously estimated up to 99 Tcf Gas-in-Place in PEL 516 shales.

New oil field discovery

Vintage Crop-1 spudded on 24 May 2011 and discovered a new oil field in early June 2011. The well was tested at a rate equivalent to more than 300 barrels of oil per day from the McKinlay member.

Oil pay was also identified in the Namur Sandstone. This reservoir will be tested through production casing after completion of the well.

Excellent preliminary shale gas results

Coring operations have been completed at Vintage Crop-1, with over 200 metres of gross Toolachee Formation and REM shale formation penetrated. A total of five nine-metre cores were cut and samples have been placed in canisters for desorption analysis and measurement of gas content and saturation.

Good gas shows were encountered throughout all cored sections and importantly, liquids and heavy gases were also present – a significant enhancement to shale gas production economics. In all intervals the cores have begun desorbing gas with initial gas contents higher than expected with gas compositions ranging up to C₅ (pentane).

Previously, MHA Petroleum Consultants have estimated up to 99 Tcf Gas-in-Place in PEL 516 from the REM shales. The preliminary results of Vintage Crop-1 are in accordance with the assumptions used in this estimate. Gas recovery factors average between 10% and 20% in successful US shale plays.

Senex Managing Director Ian Davies said “This really has been a terrific result for Senex. Not only have we discovered a new oil field with production being tested at over 300 barrels of oil per day, we have significantly exceeded our own expectations of the quality of the coal and shale in PEL 516.”

“It is clear to me that shale gas will play an important role in Australia’s energy supply mix in coming years and Senex is superbly placed to play a major role in this. In an emerging Australian shale gas industry, the presence of liquids and heavy gases in the shale formations will significantly enhance production economics,” he said.

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Cooper Basin Shale Isopach with location of PEL 516

