

The Perseus Field, North West Shelf – a Sleeping Beauty Awakes

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The Giant Perseus field is operated by Woodside on behalf of the North West Shelf venture partners and it is the largest single gas accumulation supplying the LNG plant in Karratha, Western Australia.

The first penetration in the Perseus accumulation in 1972 was the North Rankin-4 well, but the full size and potential of the field was only recognised after the start of production of the NRA22 deviated well, drilled in 1991 from the North Rankin facility and after drilling of 6 appraisal wells in 1995-1996. Two more production wells were added in 2001, increasing production four-fold and confirming the huge potential of the Perseus reservoir. The new high quality Demeter seismic survey acquired in 2003 has resulted in a new seismic interpretation that reveals the structural and stratigraphic complexity of the fluvio-deltaic reservoir and helping to improve mapping of the drainage pattern. The interpretation was integrated into static and dynamic models, which were calibrated with historical production and pressure data. The models have highlighted the need to drill wells across all compartments to achieve an optimal and uniform drainage across the whole field.

In order to access poorly drained compartments, 6 additional wells will be drilled in 2006, 3 wells from the North Rankin platform and 3 subsea wells tied back to the Goodwyn production facility. This latest phase of development and later compression over the North Rankin B facility (NRB) will allow the Perseus Field to produce the majority of the North West Shelf Venture gas post-2007.