

The Slant on Hay - Part 2: Testing, Projecting and Planning

Doug Bearinger*

Nexen Petroleum Limited, 801 - 7th Ave SW, Calgary, AB, T2P 3P7
doug_bearinger@nexeninc.com

ABSTRACT

Discovered in 1984, the Hay Bluesky oil field only began production in 2000. Successful development of the Hay Bluesky field required detailed study of rock properties, fluid properties, fluid contacts and the application of horizontal well technology. Production was limited by seasonal access and a remote location, so accurate reservoir modelling was invaluable for project design.

Test production from the horizontal pilot in 1998 closely matched the reservoir model. Delineation wells successfully penetrated transition zones allowing the addition of capillary pressure data to the reservoir model. Both detailed segment and full field models were used to project future production.

In 1999 delineation and production testing continued and pump technologies were tested. Using the reservoir model, depletion plans and facility designs were finalized. In the winter of 2000 development drilling commenced, a facility and pipeline were constructed and the Hay Bluesky pool was placed on production in April 2000.

Since production start-up, advances in drilling and completion techniques further improved the economics of the project. Hay has become the largest oil producing field in British Columbia and in 2002 was awarded the Ziff Energy Award for low finding and development costs in a Northern Oil project.