

West Central AB: Duvernay

Summary

The greater Cygnet area is located in the East Shale Basin between the Sylvan Lake–Rimbey–Morinville and the Bashaw–Clive Leduc reef trends. The first Duvernay horizontal at Cygnet came on-stream in 2012. Vesta is the main operator, and the company's wells have a median six-month cumulative production of 17 mboe.

Wells in the East Shale Basin produce oil, in contrast to the mainly liquids-rich gas of the West Shale Basin.

In the Cygnet area, the thicker, upper Duvernay C Shale is the main target.

Reservoir temperature and source rock maturity put the Cygnet area largely in the black oil window (CDL, 2013).

Cygnet is the most recent area to see Duvernay development.

Sweet spots in the Duvernay can be defined by the alignment of thick shale, high silica, high TOC content, overpressuring, favourable liquids yields and low effective stress. However, productivity is also clearly a function of completion technology.

Play Synopsis

Fluid	Oil, 42 to 44 API
Pay Thickness	40m to 80m
Rf(Primary)	Not Available
Fm. Temp.	60°C
Active operators	Chevron, Encana, Talisman, Vesta
Shell,	
Completions	Multi-stage Fracturing
Depth	2300m to 2550m
Lithology	Shale
Average Porosity	5 to 8%
Water Saturation	2%
Type Well EUR	385 mboe
Type Well IP90	169 boed

Capital Costs

DCE&(SWB): \$5,500M

With 20% Lessor Royalty

IRR BT: 65%
Payout: 1.7 years
F&D: \$14.28/boe
Netback (IP 90): \$51.66/boe
Recycle Ratio: 3.6

Offset Well Log 8-20-38-28W4

