

The impact of horizontal drilling on the Canadian oil and gas industry, 2013 update

Dave Russum*, AJM Deloitte, Calgary, Canada
drussum@deloitte.ca

Summary

A recently published series of articles summarized the first 25 years of horizontal drilling in western Canada using data to the end of 2011. This paper will look at 2012 horizontal drilling to assess the recent focus of industry with respect to formations and products targeted, horizontal well length, completion techniques and other relevant observation. Environmental issues relating to this activity will also be discussed and how geoscientists have an obligation to ensure that any potential negative impacts are minimized.

Discussion

Canada celebrated twenty- five years of commercial horizontal drilling in 2012. The results of this activity have been covered in a series of articles in the CSPG Reservoir (September 2012 to February 2013). The data for the above study was generated in March 2012 so it is focused on wells rig released before the end of 2011.

Public data relevant to the end of 2012 will only begin to become available in March 2013 so this review is based on the most recent data available and conclusions from this analysis continue to be drawn.

Clearly the weak natural gas prices in 2012 are reflected in a very strong move away from dry gas plays to liquids-rich gas and oil plays; but it is less clear how wide differentials for lower quality oils and bitumen compared to light crude have affected recent activity. The Cardium, Viking, Amaranth, Montney, Bakken and Slave Point are all receiving considerable attention.

The substantial expenditure on land for the Duvernay play in 2011 is continuing to spur activity but it is still too early to judge how significant a play it might be. Plays like the Nordegg in Alberta; Exshaw

(Alberta Bakken); and the Canol in the Northwest Territories remain niche plays that are being pursued by determined exploration companies.

Until some clarity is available on LNG export opportunities, the dry gas plays such as the Horn River will be economically challenged.

Geoscientists have access to the critical pieces of information that can determine the environmental risks of many of these plays. There seems to be an opportunity in Canada for us to provide perspectives and show leadership on this issue.