

# Horizontal drilling is one of the keys of Tuscany's future growth

On April 30<sup>th</sup>, Tuscany Energy Ltd. ('Tuscany', TSXV: TUS) announced that it has acquired a 100% interest in nine horizontal and productive 567 acres of land next to its Macklin heavy oil pool, which includes a natural gas well and rights to the Sparky prospective lands. The



additions now give Tuscany 100% control over some 1,400 acres of property, which are believed to have similar potential to recently developed pools in the property zone and prompt an increased reserve and production estimate. Moreover, the new acreage has shown porosity and permeability characteristics that have exploited through horizontal drilling techniques such as those drilled by Surge Energy (NR: SGY). This is very important because Tuscany is a horizontal drilling specialist. Tuscany intends to start development of the newly acquired prospects because of their very promising potential around the middle of the summer thanks also to the fact that the area has a productive gas well that will be able to fuel generators reducing the operational costs of developing the new pools and those already underway at the Macklin site.

Tuscany had a good year in 2013. The generated record sales, more than doubling those of 2012, reaching the second highest quarterly result in the company's history with \$ 1.5 million in the third quarter – quite an increase when compared to the USD\$ 244,000 recorded in the same period of 2012. Production in 2013 also increased, moving from an average close to 300

barrels per day in 2012 reaching peaks of over 600 barrels a day (bopd) in 2013 thanks to the acquisition of Diaz Resources Ltd, in July 2013 in the Macklin area, making it easier for Tuscany to develop the property. Tuscany then drilled two horizontal oil wells, which went into production in August 201, delivering as of the end of February, some 32 bopd. A second well went into production in January 2014, averaging 125 bopd throughout February 2014. Tuscany has a 100% working interest in nine producing horizontal heavy oil wells and four other – closed – wells which will reopen when infrastructure is implemented to connect the wells to water facilities this year.

Horizontal drilling is one of the keys of Tuscany's future growth. The technique is relatively new in the oil sector and it allows producing reservoir rocks at greater length and thus producing a greater amount of oil at the same time. The Soviets had done extensive research in this technique and it was only until France's Elf Aquitaine and the French Petroleum Institute (IFP) created 'Horwell', which conducted the research and development of this technique in the early 1980's. The technique came to Canada, and specifically to Alberta, through a Canadian company in which IFP was a shareholder.



Horizontal drilling technique was first used to improve the performance of traditional pools and it has several advantages. It gives access to the "sweet spots", or the most productive of the various pools. It allows for the selective production of hydrocarbon reservoirs which have groundwater. It allows producers to extract more oil from heavy oil and low permeability bitumen deposits. It facilitates the rapid injection and withdrawal of gas storage tanks. Whereas, the

first horizontal wells had some issues due to artificial fracturing in low permeability formations because there was no way to control the location of the artificial fractures, the technique has evolved. Now producers have the ability to isolate individual portions of the horizontal wellbore and cause localized fractures, easing access to the reservoir. Since 1987, more than 40,000 horizontal wells have been drilled in Western Canada.