



CSPG Heavy Oil / Oil Sands Technical Division

## **Optimized Well Production Using Flow Control Devices: A Case Study in Successful Subsurface Team Integration**

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Presenter: Marcus Hoehn, Senior Geologist, Athabasca Oil Corporation  
Location: Virtual

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### ABSTRACT

Efficient production of the McMurray formation with SAGD requires a deep understanding of the reservoir. Even with high well delineation, and a comprehensive interpretation of the data, understanding the drainage and steam conformance within the reservoir can only be achieved with full integration of the geology, geophysics, reservoir and production teams. Once this is done, the team can incorporate production enhancement projects that ensure a high rate of success as well as a high rate of return.

Within Athabasca Oil Corporation's (AOC) Leismer asset, Flow Control Devices (FCDs) have been used as a means to optimize well production rates from limited drainage areas.

The results indicate that production rates have increased post FCD install and have been successful in increasing drainage along the wellbore. These rate increases are supported from 4D seismic data, observation well monitoring such as reservoir saturation logging and thermocouple data as well as in-depth reviews of static well log data and facies interpretation.

The AOC subsurface team would like to present a case study displaying the production impact from FCDs. In 2017, a tubing conveyed FCD was installed in the producer well of pair four of pad three (L3P4). This case study will present the data used by the team to select the FCD candidate. It will then show how the reservoir reacted to the installation and the metrics used to gauge its success.

### BIOGRAPHY

Marcus Hoehn graduated from the university of Calgary in 2000 with a bachelor of science degree in geology. After graduation he joined Schlumberger as a wireline field engineer. After five years in the field logging open and cased hole wells in western Canada, he took the role of technical sales representative, servicing some of the largest Canadian oil companies until 2008 where he joined the borehole imaging group. From geologist to team lead, Marcus interpreted all forms of image logs from around the world. In 2010, Marcus joined Statoil to work on the



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Corner and Leismer thermal assets as a geologist and geomodeller. In 2017, Marcus joined Athabasca Oil Corporation after the aquisition of the Leismer asset in the role of senior production geologist.

In his spare time, Marcus enjoys spending time in nature with his family and a camera capturing beauty with a lens.