

**Melonie Myszcyszyn  
Facilities Engineer (Thermal)  
Canadian Natural Resources Ltd.**

**ABSTRACT**

Wolf Lake Thermal Facility operated by Canadian Natural Resources Limited currently produces approximately 80,000 bopd with steam injection capacity of 60,000 CWE m<sup>3</sup>/day. Meeting the steam volume demands for the Wolf Lake, Primrose South, and Primrose North plants is key to ensuring future barrels of oil production. In order to minimize the fresh water usage for steam makeup supply, Canadian Natural has transitioned to treating brackish water over the past year and a half at the Wolf Lake Thermal Facility.

Current brackish water treating capacity is 16000 m<sup>3</sup>/day with a future expected rate of 25000 m<sup>3</sup>/day. The brackish water is obtained from deep water wells (580 m / 1902 ft) and have high TDS / chloride content. This presentation will provide an overview of the brackish water (SAC/SAC/WAC) ion exchanger systems in operation at the Canadian Natural Resources Limited, Wolf Lake Facility north of Bonnyville, Alberta.

In addition, the ease of integration and operational challenges of introducing the new brackish stream into the boiler feed water commingled stream and existing plant infrastructure will be discussed.

**BIOGRAPHY**

Melonie Myszcyszyn currently works as a site Facilities Engineer for Canadian Natural Resources Ltd for the Thermal Operations, Wolf Lake, Primrose, Burnt Lake, and Tangleflags sites. Melonie has been working as a facilities engineer for 7 years in the thermal operations group. She has had the opportunity to design, install, and commission various projects dealing with oil treating, water treating, utility steam, high pressure steam, and glycol system upgrades over the years.

As well, Melonie is the site Water Treating Technical Lead for the Thermal Operations. Melonie graduated from the University of Alberta with a Bachelor of Science, Chemical Engineering, degree in 2000 and with a Bachelor of Science, Biological Sciences – Major, degree in 1996.