UNIVERSITY OF TORONTO

OPERATIONAL MANAGEMENT FRAMEWORK FOR THE CANADIAN OIL SANDS

APS 1028: OPERATIONS AND PRODUCTION MANAGEMENT

Executive Summary

The purpose of this project is to conduct an in-depth analysis of the Oil sands industry in Canada. This entails the operational management framework and best practices that Oil sands producers adopt from an efficiency, innovation and cost-effectiveness standpoint. The objective is to assess whether the Canadian Oil Sands industry is worth getting into from a foreign investor or multinational perspective. There are numerous players and key influencers in the market. For the scope of this project we will focus on three key companies: Suncor Energy, Cenovus and Nexen Energy (CNOOC). The first two aforementioned companies were chosen due to their strong presence in Canada, and operational excellence. The third company, Nexen, was chosen as it was recently acquired in 2013 by CNOOC, a major Chinese oil conglomerate. This acquisition was the first of its kind in the history of the Canadian Oil Sands.

Upon studying Suncor and Cenovus, one can conclude that Canadian companies tend to comply with the rules and regulations enforced by the government. In addition, both companies are always driving innovative means to reduce operating and capital costs. On the other hand, Nexen energy, an originally Canadian owned company that was acquired by the Chinese (CNOOC), committed various violations. CNOOC had promised the Harper government to replace Nexen's lost liquidity, keep Canadian senior management in their respective positions, and maintain the current employee headcount in Alberta [15]. These promises were not kept. To top it off, Nexen's major unit operation (the hydrocracker) exploded, leading to huge financial losses amounting to $1.2 Billion. In addition, the Alberta Energy Regulator ordered Nexen to shutdown 95 pipelines due to an oil spill, Alberta's largest ever, of more than 31,000 barrels.

The Political and Socioeconomic relevancy of the oil industry on a global scale, as well as the transportation and logistics involved in transporting the oil are also studied and discussed in this report. The cost of extraction of a single barrel of Canadian oil is $26.64 USD, in comparison to $23.35 USD per barrel and $8.98 USD per barrel, for the United States and Saudi Arabia, respectively. Furthermore, both methods of oil extraction in Canada, In-situ and Surface Mining, are significantly high in terms of OPEX (operating expenditure) due to steam usage and CAPEX (capital expenditure) ($80,000/barrel). Canadian oil sells in the price range of ($30.4 - $41.1)USD/barrel based on crude oil quality. However, this is significantly less than the selling prices of OPEC ($48.65 USD/ barrel), the United States WTI ($45.50 USD/ barrel), and Brent Crude ($48.65 USD/ barrel). This leads to significantly lower profit margins ($4 – 14/barrel) for Canadian oil producers in comparison to those of other countries ($21 – 40/barrel). Alberta has also been enforcing more stringent carbon tax regulations of $30 CAD/tonne of Carbon Dioxide. This further adds to the challenges for oil sands producers to realize and maximize margins. In terms of locational accessibility, most operational sites in Canada are in remote locations. Therefore, flying in/out man power is a significant cost.

Upon studying the Canadian Oil sands market from multiple angles, one can conclude that from a foreign investment standpoint, there are numerous bottlenecks and significantly lower margins to be realized in comparison to investing in other oil producing countries. In a market where the price of oil collapsed from $110 USD/barrel in 2014 to $33 USD in 2016, the oil sands are amongst the toughest and most expensive to extract. Additionally, the amount of Canadian environmental regulations enforced, coupled with the high cost of transportation and resource location, make it more challenging and unappealing to invest in the oil sands. With that being said, we do not recommend foreign investors to enter the Canadian Oil Sands market.