

Lecture on Remote & Harsh Field Development Offshore Newfoundland, Canada

Lesley James, PhD, P.Eng.

Associate Professor, Process Engineering
Chevron Chair in Petroleum Engineering
Memorial University of Newfoundland



Dr. Lesley James is an Associate professor and Chevron Chair in Petroleum Engineering in the Faculty of Engineering and Applied Science at Memorial University. Dr. James' research interests focus on sustainable oil production by increasing oil recovery rates through enhanced and improved oil recovery (EOR & IOR). Working closely with industry, Dr. James is currently working on the use of CO₂ for offshore oil recovery from complex reservoirs, integrated operations for maximising oil recovery in remote harsh locations, water-alternating-gas (WAG) using produced natural gas for Hibernia, and EOR screening and production optimisation for Hebron. Dr. James was awarded the 2016 Society of Petroleum Engineer's Distinguished Achievement Award for Petroleum Engineering Faculty in Canada. She is a Professional Engineer of Newfoundland and Labrador (PEGNL), President Elect of the Society of Core Analysts (SCA), and members of the Society of Petroleum Engineers (SPE) and the Canadian Society of Chemical Engineers (CSChE).

Tuesday February 21, 13:15-14:00 at room P10 at the Petroleum Technology Center (S.P Andersens v 15A)

Located on the very east coast of Canada, Newfoundland and Labrador is Canada's third largest oil producing province. Currently, light conventional oil is being produced from the Jeanne d'Arc Basin, located approximately 300+ kms southeast of St. John's, below 100 m of water on the Grand Banks fishing grounds. The North Atlantic Ocean is cold with high seas and the Labrador Current brings ice and icebergs leading to aptly describing the locations as both remote and harsh.

This presentation will set the geographic location and history of oil development of offshore Newfoundland. We will explore the basin geology from an engineer's perspective and delve into the 3+1 major oil field developments: Hibernia, Terra Nova, White Rose, and Hebron. We will discuss the reservoirs, oil production, and production systems. We will also talk about ongoing and upcoming exploration in two areas adjacent to Jeanne d'Arc: the Flemish Pass and Orphan Basin.