

WISE

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FOR SUSTAINABLE ENERGY



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PRESENTED BY THE WATERLOO INSTITUTE
FOR SUSTAINABLE ENERGY
AND
THE FACULTY OF SCIENCE

Monday, April 15, 2013

Quantum Nano Centre 0101, 7 – 8 pm

HOW YOUR ENERGY WORLD HAS CHANGED ...AND WILL CONTINUE TO CHANGE...

Maurice B. Dusseault, Professor,
Earth & Environmental Sciences,
University of Waterloo

In the last decade, we learned that there are vast quantities of natural gas trapped in low permeability, fine-grained rocks that we call shale. Horizontal drilling and hydraulic fracturing at many locations along the well length were developed to unlock this gas. This technology is unlocking conventional oil trapped in fine-grained rock, called “shale oil” resources. Now there is a glut of gas in North America, likely to last for over a decade. These vast new resources have radically changed the energy picture.

Reduced USA oil consumption, concerns over pipelines and ocean shipping of viscous crude oil, the higher carbon impact of bitumen, and a focus on land disturbance issues in the Fort McMurray open pit mining region, all have effects on Canada’s energy future. Where should pipelines go?

Maurice will introduce you to fossil energy issues in Canada, explaining what is happening because of these processes. Canada’s future is changing; it is better to be informed than unprepared.

Register: <http://uwenergyworldlecture.eventbrite.ca/>



After flunking out of university in 1965, Maurice started in the oil industry as a roughneck for a year, then as a drilling fluids specialist for two years. On orders from his future wife, he returned to university and obtained a BSc then a PhD in Civil Engineering (University of Alberta). In 1977, he was awarded a research chair at the University of Alberta. Since 1982, H has been a Professor off Geological Engineering in the Earth and Environmental Sciences Department.

Maurice carries out research in petroleum geomechanics, new heavy oil production methods, salt mechanics, and deep waste disposal. He has co-authored two textbooks and over 500 articles in conferences and journals and works with industry as an advisor and instructor. He developed a number of short courses in Petroleum Geomechanics and related areas and gives these courses to companies, government agencies and professional groups in countries around the world.

In 2010 Maurice started a new International Society for Rock Mechanics Commission on Petroleum Geomechanics to foster and promote this subject. He hopes that this area of rock mechanics becomes as important as mining and civil rock mechanics.

Maurice also works as a senior scientific advisor to the Alberta government, and does some interesting stuff in carbon dioxide sequestration, shale gas geomechanics, and other arcane but fascinating areas.