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Testimony
Before the Subcommittee on Energy and Mineral Resources
United States House of Representatives

Hearing on the Vast North American Resurce Potential of Oil Shale, Oil Sands, and Heavy Oils
Part 1
June 23, 2005

Overview of Canadian oil sands development and technology

The Canadian Association of Petroleum Producers appreciates the opportunity to submit this overview of the Canadian experience in oil sands development to the House Energy and Mineral Resources sub-committee.

While the issue that this committee is addressing has multiple aspects with much more detail than provided here, CAPP believes that many of the experiences, technologies, policies and research processes used in Canada to develop its oil sands resources would be beneficial to the committee on this subject.

The oil sands in Canada are a vast resource. From early discovery and use in the 1800's to first commercial production attempts in the early 1900's, and government directed pilot tests in the 1920's and again post WWII, they moved into early commercial production with the Great Canadian Oil Sands (now Suncor) in 1967. Technology has been the key to unlocking this resource and production now exceeds 1 million barrels per day. Forecasts see this growing rapidly to over 2.7 million barrels per day in the next 10 years.

While oil sands are significantly different from oil shale the government and industry research and development process could provide valuable and potentially transferable insights for oil shales.

The main difference between oil sands and oil shale is that the oil sands are particles of sand, surrounded by a microscopic layer of water that is then in turn surrounded by the heavy bitumen (thick oil), as shown in the diagram at the end of this submission. Separating the oil from the oil sands is much easier because of this water layer, since the oil is "suspended" in the water/sand layer not directly stuck on the sand.

In oil shales, this layer of water is not there and the oil is stuck directly onto the rock making it much more difficult to separate the oil from the rock (shale).

The key to unlocking the vast potential of the Alberta oil sands has been sustained and cooperative industry and government research and development. This includes research efforts under the Alberta Research Council, the Alberta Oil Sands Technology and Research Authority, the Canadian Oilsands Network for Research and Development and more recently the Alberta Chamber of Resources' Oil Sands Technology Roadmap and the research coordination of the Alberta Energy Research Institute.

The attached set of charts and pictures outlines the oil sands resource in Canada, the history and the technologies that have been key to unlocking this vast resource. The real key to the development has been a long and dedicated research and development program that has yielded technologies and advancements that have reduced costs and provided economic access to the oil contained in this resource.

In addition Canada's federal regulatory agency, the National Energy Board (NEB), has published two Energy Market Assessment reports on Canada's oil sands that provide detailed information on the Canada's oil sands resource, technology, research, supply costs, production, pipelines and markets. They are available from the NEB at www.neb.gc.ca under Publications, Oil Sands

CAPP would be pleased to respond to any questions the committee may have regarding the Canadian oil sands and we would be pleased to do this either in writing or when we will be in Washington at the end of June 2005. Please direct any questions to: