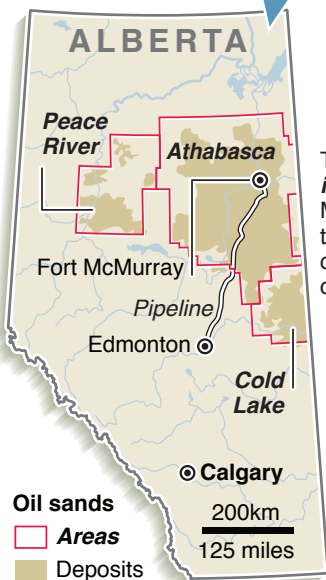


Canada's "dirty oil" tests Obama green goals

Conservationists in the U.S. and Canada are calling on President Obama to reject any bid to exempt tar-sands oil – also known as “dirty oil” – from proposed climate-protection rules. Officials in Canada say restrictions on exports would increase U.S. dependence on oil from unfriendly countries

Canadian province of Alberta has largest oil reserves outside Middle East, with estimated 173bn barrels of tar-like bitumen

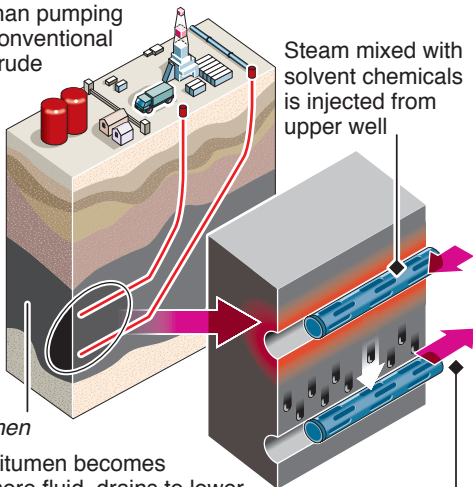
U.S. imported about 780,000 barrels a day of oil sands from Canada in 2008 – 60% of total production



Alberta's bitumen production: 1.2 million bpd (2007)

Bitumen

Tar extracted either by mining or **steam injection** – heating earth and pumping it out. Method releases more greenhouse gases than pumping conventional crude



Bitumen becomes more fluid, drains to lower well and is extracted and upgraded