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[PS]Current Resource Assessment of the Oil Sands of Alberta*

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See companion article, "Geology of Alberta's Oil Sands and Development Strategies" Search and Discovery article #10205.

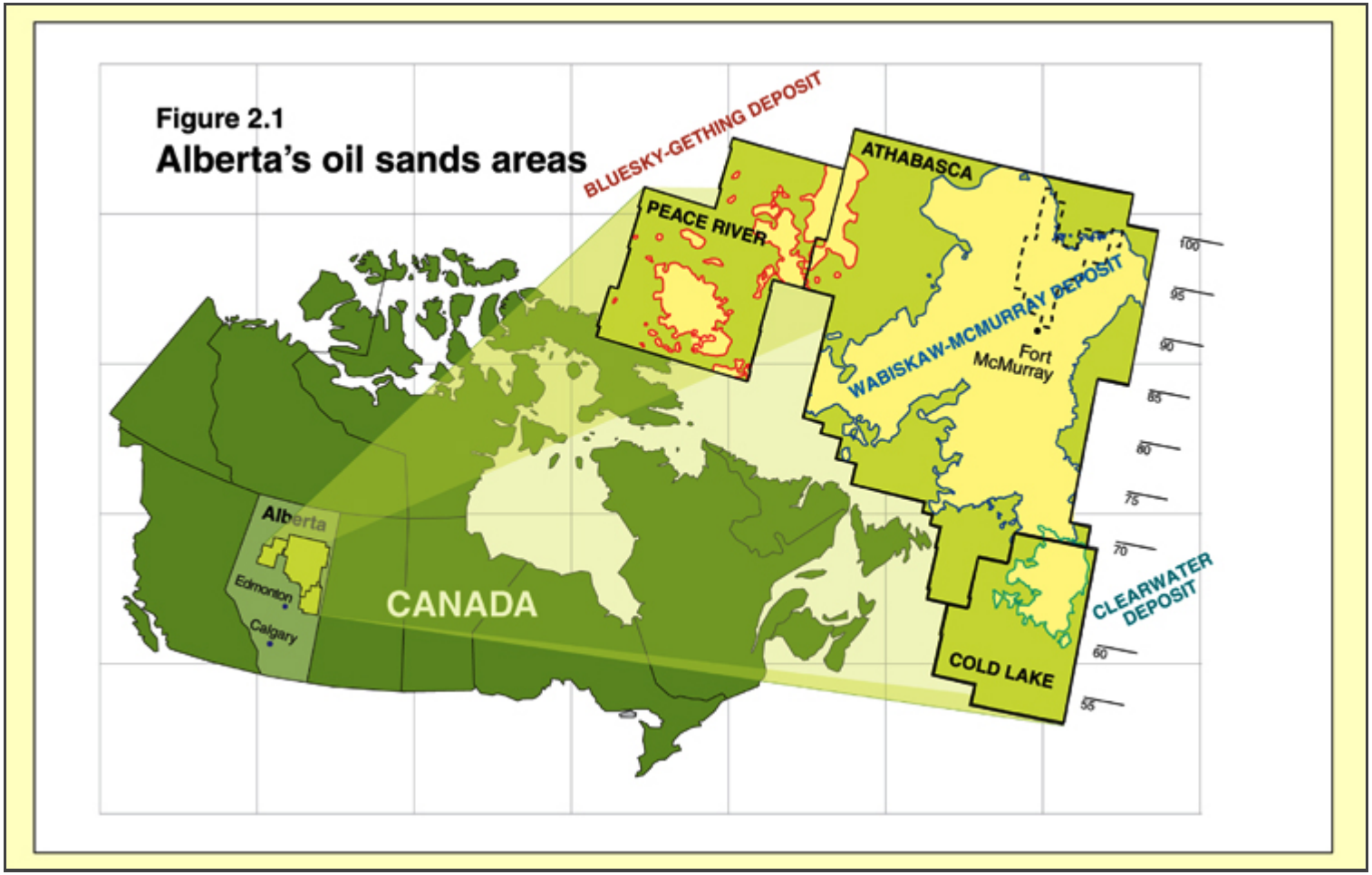
Abstract

In Alberta the Energy Resources Conservation Board (ERCB) has a legislated mandate to conduct resource appraisal of the province's energy resources, including bitumen. The ERCB has designated three Oil Sands Areas (OSAs) occupying an area of some 140 000 square kilometers (54 000 square miles). Major deposits within the OSAs include Athabasca Wabiskaw-McMurray, Cold Lake Clearwater, Peace River Bluesky-Gething, and Athabasca Grosmont. The OSAs contain an estimated initial in-place volume of crude bitumen of 272 billion cubic meters (1.7 trillion barrels). Of the remaining established reserves of 27.5 billion cubic meters (173 billion barrels), 82% is considered recoverable by in situ methods, and the remainder is recoverable by surface mining.

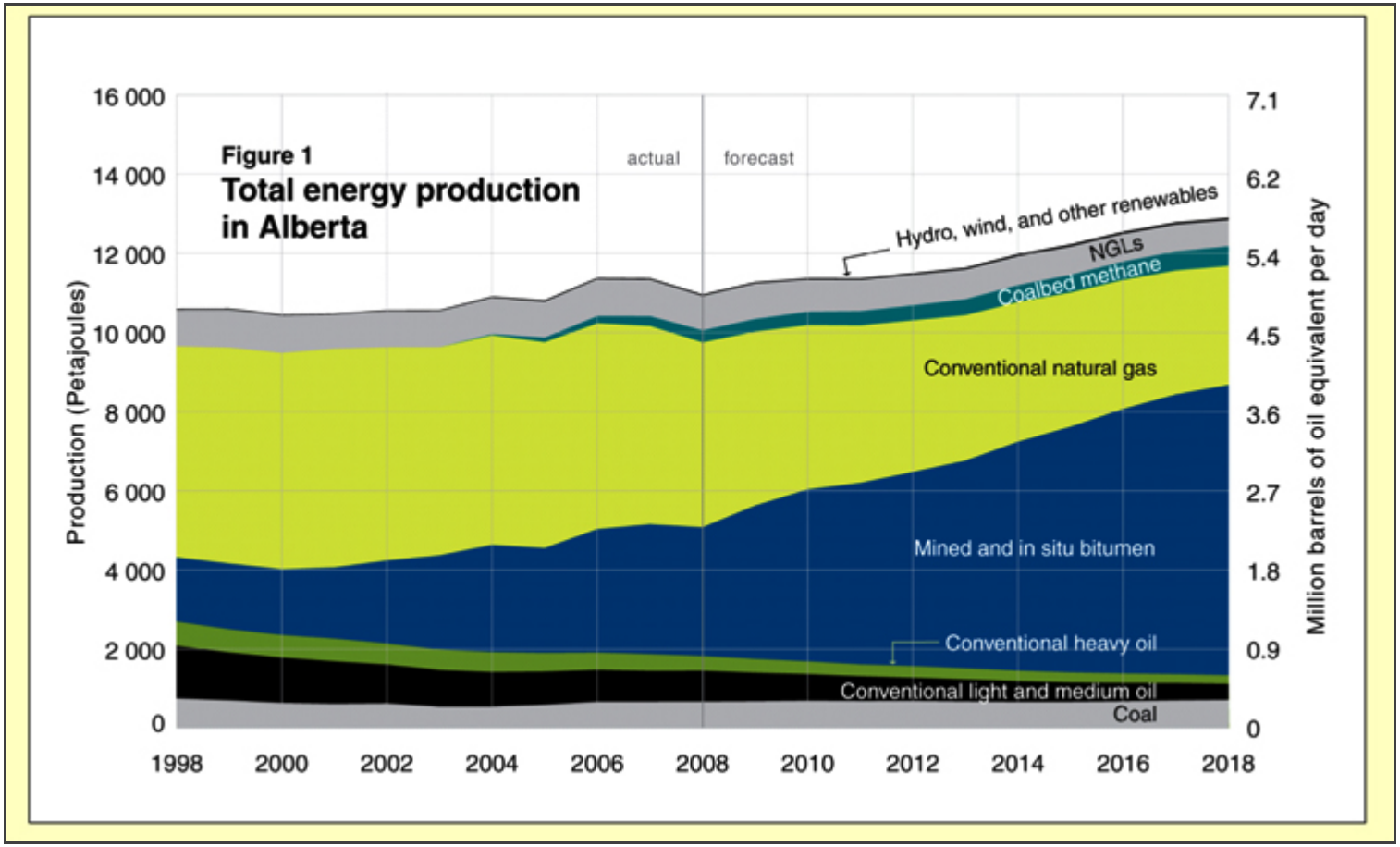
In evaluation of the oil sands, bitumen saturation is expressed as mass percent in sands. In recent ERCB assessments an oil sands quality cutoff of 6 mass percent has been used because it more accurately reflects the volumes from which bitumen can be reasonably expected to be recovered. Potential mineable areas within the designated surface mineable area (SMA) were identified using economic strip ratio criteria, a minimum saturation of 7 mass percent and a minimum zone thickness cutoff of 3.0m. Evaluations of bitumen within carbonates have previously been determined using a minimum bitumen saturation of 30 percent pore volume and a minimum porosity of 5 percent. These cutoffs are under review with current work.

In recent years the ERCB has been updating its resource assessments of the oil sands. Beginning in 2000, for yearend 1999, the ERCB significantly updated both mineable and in situ established reserves for the province. Since then, much work has been done to better

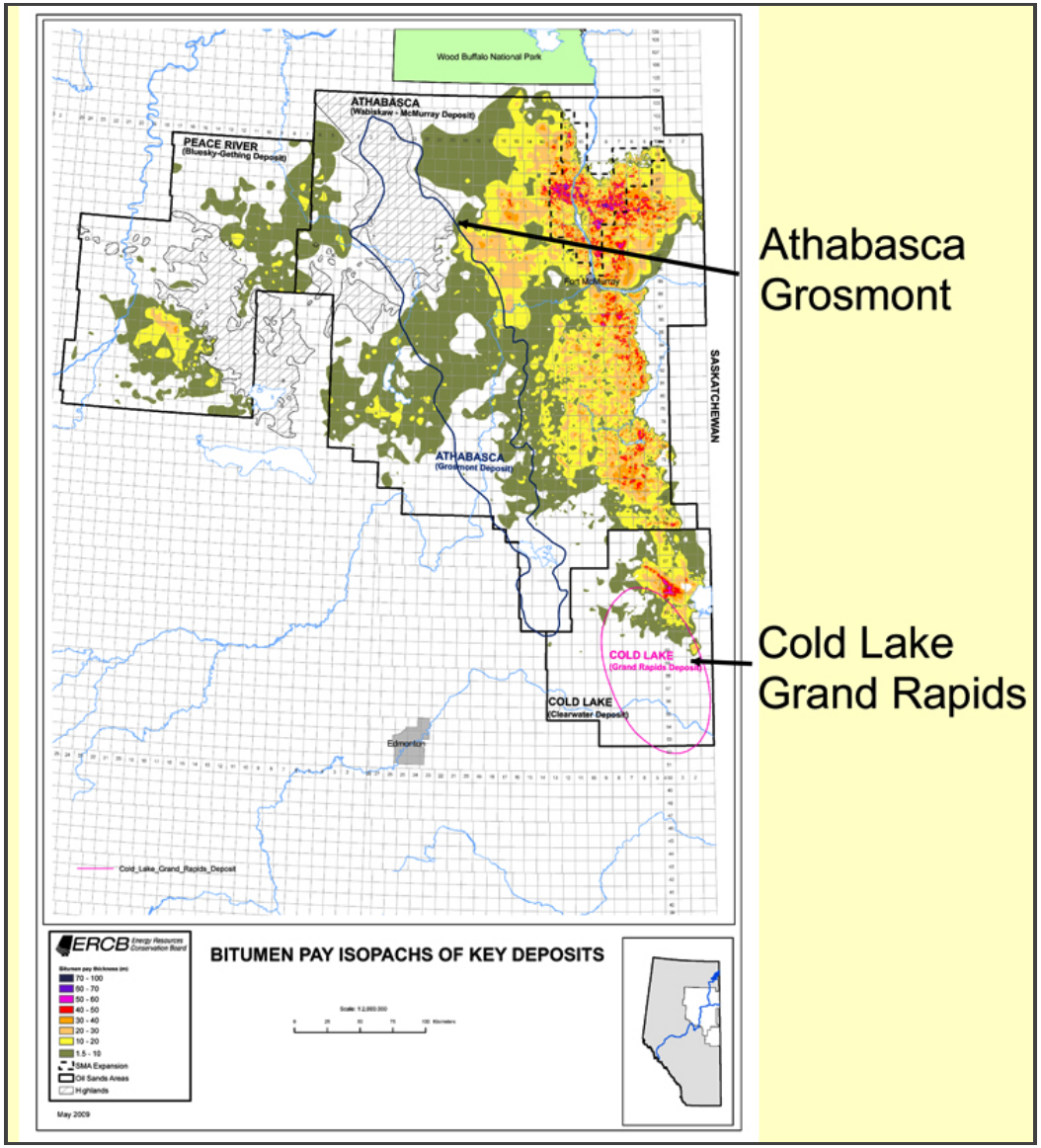
define the bitumen resource. This included new regional in-place resource updates to the Athabasca Wabiskaw-McMurray in 2004, 2005, 2007, and again for 2008. The Cold Lake Clearwater and Peace River Bluesky deposits were updated in 2005 and 2006, respectively. The carbonate Grosmont deposit is scheduled for update for 2008. New reserves estimates for these deposits are currently underway. New mineable resource and reserves numbers are scheduled for 2008 with an increase in reserves, mainly based on where new drilling has extended the SMA to the north. This new estimate now covers what is likely to be the full extent of surface mining in the province.



Alberta's oil sands areas.



Total energy production in Alberta.



Bitumen pay isopachs of key deposits.