

APPENDIX A: OIL PIPELINE TIMELINE



Photo from the Trans Mountain oil pipeline company records - laying pipe in the early 1950s


This timeline began on November 20, 2005, when the writer began to research background information related to Terasen (Kinder Morgan) Pipeline's and Enbridge's separate proposed crude oil and condensate pipelines to stretch across British Columbia (BC) – the transport of oil from east to west and the transport of condensate from west to east.

It has since evolved from a merely personal to a public tool, released to interested parties on background and historical information. This “exploration” (to use an industry term) of chronological information includes the history and discovery of crude oil production in Alberta (AB) and BC by primarily American corporate interests, including the establishment of crude oil pipeline structures, and the grave concerns of British Columbians and Americans on proposed oil tanker traffic off the western Pacific coastline.

The information is borrowed from numerous sources – books, reports, Decisions, Hearing transcripts, internet websites, correspondence, newspapers, articles, etc. Its wording is infrequently stated verbatim from the referenced materials, and sometimes is so referenced in “quotations”. In this sense, as a distinct departure from what the writer normally practices, the material in the timeline should not necessarily be taken as “original”, and is sometimes plagiarized without indicating source references.

What is remarkable in the host of references is the writer's self-discovery of the extent to which Canadian lands have become dominated by foreign oil and gas interests. These interests were responsible for significantly reshaping and influencing Albertan politics (like none other), emanating outward into BC's northeastern political landscape, and the manner in which those political relationships have influenced provincial and federal policies in general. Considering the symbol and dominating power of oil throughout the world (black blood), they constitute a web of inescapable and complex intrigue.

Will Koop, B.C. Tap Water Alliance
July 10, 2006
Submission to National Energy Board

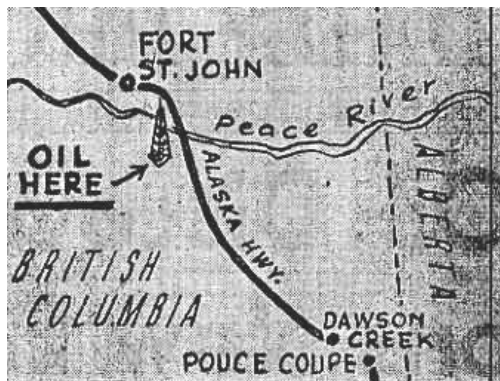
1857	The Canadian petroleum industry begins in Ontario, with James Miller Williams finding an oil well in Enniskillen Township, later re-named Oil Springs, the beginning of an oil exploration boom in southwestern Ontario.
1860-1865	Following the discovery of an oil well on Oil Creek in Pennsylvania in 1859, the 11 th edition of the Encyclopedia Britannica describes how the transportation of petroleum through a pipe-line system began, unsuccessfully, in West Virginia, US. In 1865 the problems related to leakage was finally overcome through the invention of carefully fitted screw joints. By 1891, Pennsylvania transit companies had a pipeline system of 25,000 miles of small diameter pipes. Following the 1859 discovery, by the year 1997, 138 years later, some 800 billion barrels of oil will have been tapped from the earth, something that would not have been possibly imagined by the early oil pioneers.
1903	U.S. inventor, Henry Ford, builds the first Model-A automobile.
1905	Vancouver City, BC, has its first gasoline service station, opened by Imperial Oil. In 1905 there were 565 automobiles registered in Canada; by 1915, automobiles registered are 60,688.
1907	Jasper National Park is established by the federal Department of the Interior. It was established when land was being set aside through the area where the proposed Grand Trunk Railway would cross the Rockies at the Yellowhead Pass.
1914	The Calgary Petroleum Products Company discovers oil in the Turner Valley, AB, near Calgary. "Among those associated with this company were Robert Bennett, later to become prime minister of Canada, and Senator James Lougheed, the grandfather of Alberta's Premier Peter Lougheed."
1928	<p>Autumn – The heads of the three largest oil corporations, Royal Dutch/Shell, Jersey Standard (Exxon), and Anglo-Iranian (British Petroleum), meet secretly at Scotland's Achnacarry Castle to draft the beginnings of the international petroleum cartel.</p> <p>[Derricks above the Los Angeles Basin]</p> 
1930	The <i>Natural Resources Transfer Act</i> , transfers Dominion (Federal) ownership of public resources to Alberta for provincial ownership.
1936	Formation of the Petroleum Producers Association. It became the Alberta Petroleum Association in 1938, and then the Western Canada Petroleum Association in 1947.
1938	The Canadian Federal Board of Transport Commissioners begins its operations.
	First offshore producing oil well is in the Gulf of Mexico.

1947 <i>February</i>	Imperial Oil (its parent, Standard Oil, a US company) discovers a large oil deposit at Leduc, Alberta, just south of Edmonton, opening the oil rush in AB. Following this discovery was the Redwater discovery in September 1948, the Pembina discovery in 1953, and the Rainbow Valley discovery in 1965. From 1948 to 1956, Alberta Crude Oil annual production increased by almost 1,800 percent, or from 10.5 million barrels to 144 million barrels. The discovery starts a chain-reaction “takeover spree by foreign companies in the 1950s and 1960s,” leaving “virtually all of Canada’s integrated oil companies controlled by multinational majors. By the early 1970s over half of the Canadian oil business (whether measured by assets, revenues or retail sales) belonged to units of the 7 biggest multinationals, the “seven sisters”: Exxon, Royal Dutch Shell, British Petroleum, Mobil, Texaco, Gulf and Standard Oil of California. In 1973, foreign-controlled companies took in about 90% of petroleum revenues in Canada... The Foreign Investment Review Act of 1974 and the establishment of Petro-Canada in 1975 marked the first efforts to curb the domination of the multinationals.”
1948	First conception of an oil pipeline route from Alberta to the Pacific Coast near Vancouver City, BC, by oilmen.
1949 <i>February</i>	Debate in the House of Commons concerning the <i>Trans-Canada Pipe Lines Bill</i> .
<i>March 29</i>	Alberta government passes the <i>Mines and Minerals Act</i> , the consolidation of statutes and regulations, including oil and gas. Already in existence is the Petroleum and Natural Gas Conservation Board, a regulatory body, that later becomes the Energy and Resources Conservation Board.
<i>April</i>	The Canadian Parliament passes the <i>Pipelines Act of Canada</i> , whereby inter-provincial pipelines are now under federal jurisdiction, avoiding provincial regulation and obstructionist conflicts. Shortly thereafter is the incorporation of three major pipeline companies: Interprovincial Pipe Line Company, Westcoast Transmission Company, and the Western Pipe Lines. The legislation paved the way for Alberta oil to be marketed by foreign (mostly United States) companies via pipelines through Canadian provinces. U.S. Imperial Oil given the nod to construct the Interprovincial Pipe Line, primarily to feed its refinery at Sarnia, Ontario (completed in October 1950). By 1956 this line would extend 3,000 kilometers. This pipeline “subjected domestic Canadian oil to U.S. control” and “gave U.S. refineries access to Canadian crude reserves”. 1950 marks the beginning of a new “railway” system – pipelines – to transport oil across Canada. Prior to this point, railways and trucks were used to transport oil and gas across Canada.
<i>September</i>	The Royalite Oil Company Ltd. begins oil exploration drilling in the Queen Charlotte Islands.
<i>December</i>	On a Los Angeles City restaurant tablecloth, R.L. Minckler, president of the General Petroleum Corporation, Steve Bechtel of the Bechtel Corporation, and an oilman named Roach, draw out the route of the new Trans Mountain pipeline in pencil.
1950	The 1,127 mile-long Interprovincial crude oil pipeline begins to be built from the Redwater oil field in Alberta to Superior Wisconsin, from where it is shipped via oil tankers over the Great Lakes to the Ontario refinery in Sarnia. By 1954, Alberta’s conventional oil reserves are estimated at 2 billion barrels.
<i>February</i>	Stanolind Oil and Gas Co. (Standard Oil of Indiana) and McColl-Frontenac Oil Co. Ltd (Texaco subsidiary), two of the largest US oil companies, apply for oil exploration permits from the BC government on more than 1,500,000 acres in the Peace River area.

1950 March	The BC government grants oil companies larger lease areas and curbs previous regulations on crown reserves in proven oil areas, similar to the “checkerboard” system in Alberta. Amendments are made to the <i>Petroleum and Natural Gas Act</i> .
June	Following the start of the Korean war, the US military calls upon US oilmen to respond to the need for oil in the Pacific Northwest. Steve Bechtel, president of the Bechtel Corporation, suggests a new pipeline from Edmonton to the Strait of Juan de Fuca.
June 30	The federal government makes an amendment to Section 6 of the <i>National Parks Act</i> : “The Governor in Council may authorize the sale, lease or other disposition of public lands within a Park when such lands are required for (a) the right of way or station grounds of any railway; or (b) the right of way of an oil or gas pipe line or any tanks, reservoirs, pumps, racks, loading facilities connected with an oil or gas pipe line.”
September	The hunt for oil in northeastern BC Peace River area steps up with now 10,550,915 acres under permits for exploration.
	The Alberta government releases its commissioned Blair Report on Alberta’s tar sands, indicating that their development could be economically feasible. This paves the way for the government to provide long term leases on its public lands.
1951 March 21	<p>Incorporation of the Trans Mountain Oil Pipe Line Company through a Special Act of Parliament (Dominion Charter). On the very day of its incorporation, the new company applies to the Board of Transport Commissioners for Canada for permission to construct an oil pipeline, from Edmonton, Alberta, to Vancouver, British Columbia. The application was to be “heard” on April 23, 1951, but was adjourned on three further dates (May, June, September), and finally “heard” on December 10, 1951.</p> <p>Copies of the Company’s application and map were forwarded to: Canadian National Railways; Canadian Pacific Railway Company; Northern Alberta Railways; Great Northern Railway Company; Director of the National Parks Branch of the Department of Resources and Development; the Petroleum and Natural Gas Conservation Board, Alberta; the Alberta Board of Public Utility Commissioners; the BC Public Utilities Commission; the BC Coal and Petroleum Control Board; municipalities of Edmonton, Edson, Kamloops, Merritt, Chilliwack, Matsqui, Langley, Surrey, New Westminster, Burnaby, Vancouver.</p> <p>The original ownership of the new company was through Imperial Oil and Canadian Bechtel Limited. Both parent corporations, Standard Oil and Bechtel Corporation, “had close ties with the U.S. government”. Half of Trans Mountain’s new shares were purchased by “six oil companies with refinery facilities on the West Coast, namely Imperial Oil, Shell, Standard Oil of British Columbia, Gulf Oil, Union Oil, and Richfield Oil.” Originally, two pipeline routes were proposed by Trans Mountain’s owners. One, to Seattle City in Washington State,</p>



1951 (continued)	on a route directly south of Edmonton to the Crows Nest Pass in southeastern BC, and onward to Spokane. The other, directly west of Edmonton City through Jasper National Park and Mt. Robson provincial park, south along the Thompson River drainage, and then south from Kamloops over the Coquihalla mountain pass to Hope, and then westward along the Fraser River valley to Burnaby. The Burnaby route was later chosen because of lower costs, and political concessions were then made to make the route destination appear as a “Canadian” destination to Vancouver markets. The addition of the Sumas spur to refineries in northwest Washington State is “later” added, much to the disappointment of politicians in Canada’s House of Commons and in BC Legislature.
<i>March 22</i>	The Trans Mountain Oil Company’s solicitors notify Canada’s National Parks Director of its pipeline application, its implications for Jasper National Park.
<i>April</i>	Special Act of Canadian Parliament to “transport crude oil from Edmonton to Vancouver” was “built to serve the needs of U.S. armed forces”. The U.S. Petroleum Administration for Defense emphasizes the strategic need for a crude oil market in the Pacific Northwest, and the establishment of refineries in Puget Sound. The second federal Royal Commission on Energy (1959) noted that “the outbreak of the Korean War and defense considerations ... hastened the decision to build the pipe line.”
<i>May 3</i>	Second reading by the Canadian Senate of a second oil pipeline proposal from Edmonton to Vancouver by the Independent Pipeline Co., to be heard before the Board of Transport Commissioners.
<i>July 19</i>	Imperial Oil Ltd. (then owned more than 50 percent of Alberta’s oil), Socony-Vacuum Oil Company Ltd., Gulf Oil Corporation and Bechtel Corporation become stockholders in Trans Mountain. San Francisco-based Bechtel recently opened an office in Vancouver under the name Canadian Bechtel Limited. Bechtel recently completed an 854 mile oil pipeline for Trans-Arabian Pipeline Company, and was in the midst of another from Kirkuk in Iraq to Baniyas on the Mediterranean. Bechtel also worked on the Interprovincial Pipe Line from Alberta to eastern Canada and the U.S
<i>September 24</i>	The hearing date for the Board of Transport Commissioners with four applicants for an oil pipeline from Edmonton to Vancouver. Besides Trans Mountain, are: The Albertan Natural Gas Company, with plans to send a line south of Calgary down to the international boundary, and westward along the boundary to Aldergrove in the Fraser Valley, and then to Vancouver; the Independent Pipe Line Company, following almost the same route as Trans Mountain to Burnaby; the Westcoast Transmission Company Ltd., following the same route as Trans Mountain, with the following two exceptions – a line branching off at Kamloops, westward to the Fraser River, and then north to the Pine Pass and then to Dawson Creek, the other with a branch line south of Sumas over the international boundary. The hearing is adjourned until December. “I might say, however, that the matter of the pipeline has become complicated as we are now aware of three additional applications for pipelines” (J. Smart, National Parks Director, September 25, 1951.)
<i>November 1</i>	Pacific Petroleums Ltd. discovers the first oil well in BC history near Ft. St. John, starting stock market frenzy (Pacific Pete). It was discovered at a depth of 5,633 to 5,655 feet in the permo-Pennsylvania layer.



<p><i>December 10-13</i></p>	<p>Federal Board of Transport Commissioner's hearing for two applicants, Trans Mountain Oil Pipe Line Company, and the Champion Pipe Line Corporation – the other three applicants withdrew. The Vancouver Sun newspaper reports that federal Justice J.D. Kearney, chairman of the federal Board of Transport Commissioners, “rushed through” Trans Mountain’s 695 mile long oil pipeline hearing application in a record three and one half hours. 161,000 tons of steel is required for the 24 inch diameter pipeline, to be provided by special measures through the United States government. The Board provides a permit to Trans Mountain on December 13. On December 18, Department of Resources and Development Minister Robert H. Winters notified the Trans Mountain Oil Company that its approval of the right-of-way through Jasper National Park was “under consideration”.</p>
<p>1952</p>	<p>The U.S. Federal Trade Commission releases its extensively documented report, <i>The International Petroleum Cartel</i>. It details how seven giant Anglo-American companies – Jersey Standard, Gulf, Texaco, Mobil, Standard of California, Shell and British Petroleum – managed to work out and police the most elaborate and complex cartel agreements on pricing, markets, production, etc.</p>
<p><i>January 30</i></p>	<p>The BC Public Works Department and Trans Mountain deliberate on a future highway proposal north of Kamloops to Edmonton, via the Yellowhead Pass, in order not to overlap with Trans Mountain’s pipeline route.</p>
<p><i>February</i></p>	<p>Trans Mountain Oil Pipe Line Company begins construction of its 718 mile, 24 inch diameter pipeline. Except for a 55 mile section south of Kamloops to Merritt, the pipeline route parallels railway lines along its entire route: the Canadian National Railway from Edmonton to Kamloops; the Canadian Pacific Railway from Merritt to Hope; the Canadian National Railway from Hope westward. In all, the route travels through 50 miles of wheatfields, 200 miles of rolling timberlands, 398 miles of mountains, valleys, plateaus and canyons, and 70 miles of farmland.</p> <p>765 maps are needed to examine the 60 foot right-of-way. The line crosses highways 56 times, and railways 24 times. About 3,000 easements were obtained from private, municipal and government landowners.</p> <p>Through two federal Order-in-Councils (OICs), and a subsequent lease agreement (November 10, 1954), Trans Mountain is permitted to run its pipeline through Jasper National Park (pipeline distance of 50 miles), and a separate agreement for BC’s Mt. Robson Provincial Park. On February 4, 1952, was passage of P.C. (OIC) 664, and on March 21, 1952, P.C. 1606 (pursuant to the National Parks Act, Chapter 189 of the Statutes of Canada, 1952), concerning the federal government’s (Privy Council’s) recommended orders to allow for the right-of-way through Jasper National Park. The federal Minister of Resources and Development (in 1950, the National Parks Division was transferred to the Department of Resources and Development) filed a report to the Committee of the Privy Council on January 29, 1952 regarding the proposed right-of-way based on the Board of Transport Commissioners approval Order Number 77923 given on December 13, 1951. After considering this report, the Committee advised the</p>

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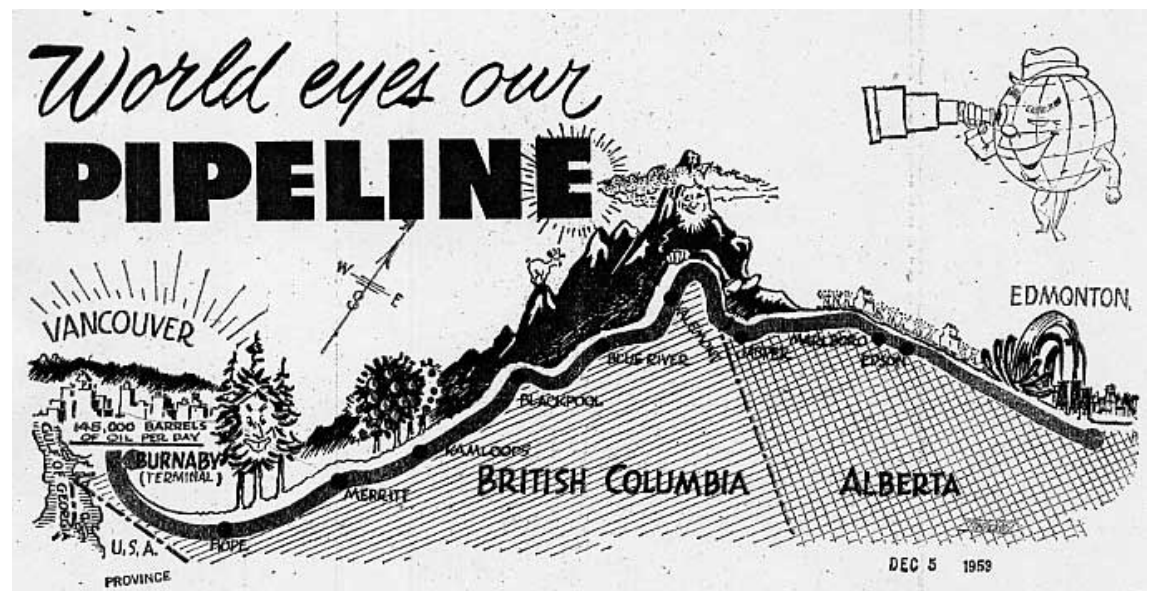
Governor General to approve its recommendations of Trans Mountain's application for a right-of-way through the western half of the National Park, "the construction of the said pipe line over public lands within the boundaries of Jasper National Park ... **is in the public interest.**" A second report, dated March 12, 1952, from the Minister of Resources and Development, was also considered by the Committee regarding the easement through the eastern half of the National Park through P.C. 1606.

"Special hydraulic problems" are encountered in two sections: between the Yellowhead pass and Kamloops, where pipeline elevation drops 2,600 feet over 300 miles; and between Coquihalla Pass and Hope, where elevation drops 3,600 feet over 30 miles. An additional 32 miles were laid south of Sumas across the US border into Washington State after a separate permit from the Board of Transport Commissioners.

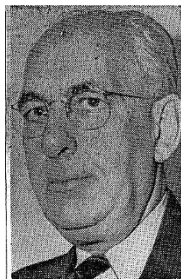
The pipe itself was crafted from 52,000 psi (pounds per square inch) yield strength open hearth steel, electric fusion welded, hydraulically expanded, and tested with API Specification 5LX. The (A.P.I. grade X52) pipe wall thickness varies from one quarter to one half inch according to terrain and stream crossing specification concerns, and is supplied from the Consolidated Western Steel Corp. (414 miles of pipe), the Kaiser Steel Corp. (274 miles of pipe), and the A.O. Smith Corp. (43 miles of pipe). The entire line is buried, anywhere from 24 to 30 inches, "to safeguard it against damage from landslides and snowslides" (see timeline, April 26, 1971, for a counter example), and to insulate the oil against low temperatures.

During the pre-operation water pressure testing of the pipeline, numerous small leaks were found.

The main line to Burnaby, when full of crude oil, will contain 2,100,000 barrels of oil, moving at a rate of four feet per second. "Construction across the mountainous Cordilleran Region, the pipeline was considered at that time one of the most difficult construction projects ever attempted in pipeline industry." A 160 acre oil tank farm, at East Edmonton, will be home to eight 150,000 barrel and four 80,000 barrel oil tanks.



February



A. J. DALRYMPLE.
He'll publicize oil pipeline.

Vancouver Province Daily newspaper agricultural editor A.J. Dalrymple resigns to take the position of Trans Mountain's public relations officer. "Mr. Dalrymple will tell the story of this major oil transportation development through the press, radio and other mediums, so that the public may be informed of the day-to-day progress of the work." His new office is down the hall from Bechtel's office. The Province Daily Magazine, December 5, 1953, reported that Canadian Bechtel Limited had "two staff photographers making sound-color motion pictures, color stills and black-and-white stills as progress reports from the time of the first surveys.... The Bechtel interim sound-color motion picture "Oil Across the Rockies" which showed construction up to the

1952 (continued)	<p>Port Mann crossing of the Fraser in March this year, has been shown 65 times in B.C. and Alberta. Copies of this movie have been shown elsewhere in Canada, the USA, and principal cities overseas. The potentials of these films, tourist-wise, are continuing. Bechtel Corporation is completing the final film which will give the whole story of construction.... But that is not all. There is the Bechtel advertising which gives favorable publicity to western Canada. It is the paid advertising in black-and-white that goes into local papers, the Canadians journals of national circulation, and the international magazines such as "Fortune" and other top-flight publications."</p> <p>"Thousands of copies of the illustrated booklet: "Oil Across the Rockies" have been mailed to interested persons in Japan, Australia and other countries."</p>
<i>February</i>	<p>Announcements on the location of Trans Mountain's tank farm and offshore loading facilities also include "problems" of moving 20,000 ton "super tankers" through the Second Narrows in Vancouver's Burrard Inlet.</p>



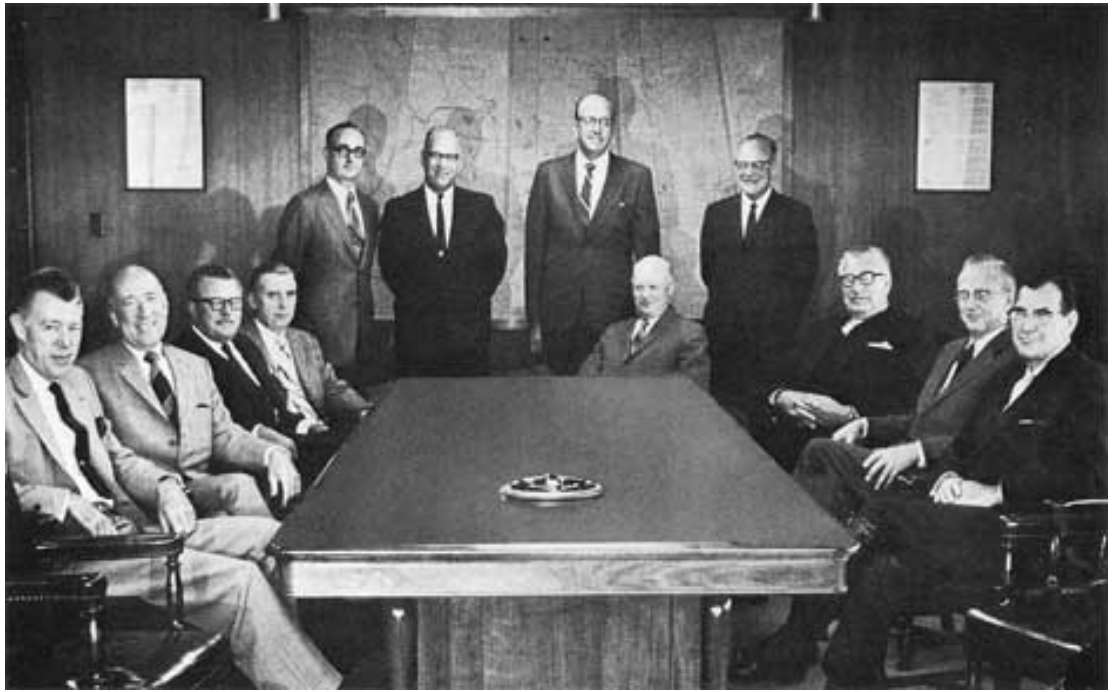
<i>February</i>	<p>The BC provincial Cabinet authorizes Land and Forests Minister E.T. Kenney for a draft agreement for Crown timber royalties and land clearing operations for Trans Mountain's right of way. C.D. Schultz & Company forestry consultants have the contract for the sixty foot wide right-of-way. A team of 2,400 men, with 26 firms, will lay the line, and bury it some 30 inches below surface. They include the "big-inchers", linemen from Texas, Oklahoma, Arabia, Iraq</p>
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1952 (continued)	and Sumatra, who must lay pipe across “21 navigable rivers”. There is, reportedly, a total of 76 stream and river crossings, 60 highway crossings, and 24 railway crossings. In total, some 1,200 easements are required in BC, and about 500 in Alberta. “Yet tough as it is, the pipeline people aren’t losing as much sleep over rights-of-way, the knottiest problem known to pipelining. Everybody wants the pipeline, so long as it doesn’t go through THEIR back pasture. You’d think it was going to carry atom bombs, the way some folks shy away.” Later statistics report that crude oil pipelines are 500 times safer than railway transport and 1,400 times safer than road transport.
<i>March</i>	The eastern terminus of Trans Mountain’s pipeline is built adjacent to the western terminus of the Interprovincial Pipe Line, the refinery at East Edmonton.
<i>March 13</i>	General Manager of Trans Mountain, H.H. Anderson, comes under public criticism following an address to the Society of Industrial and Cost Accountants at Hotel Vancouver, where he unveils the company’s new plan to branch the pipeline off at Sumas, and then south to General Petroleum’s proposed \$35 million refinery at Ferndale, Washington, which is later completed in September 1954. Liberal MP Tom Goode, for the Burnaby/Richmond riding, spoke out in Parliament against Trans Mountain’s plans. Goode related how the federal Board of Transport Commissioners voted on February 6 to approve the route. “He quoted at length from 1951 proceedings of the Commons railway and communications committee to show that the company pledged itself to build only to Vancouver when it applied for a bill of incorporation to parliament.” Anderson rebuts Goode calling his criticism “fuzzy economic thinking”. CCF Kootenay West MP, H.W. Herridge, states on Monday night, March 16, at the House of Commons Budget Debate that Trans Mountain had made a “mockery” of Parliament and a “mockery” of the committee which recommended the company’s charter be recommended.
<i>May 7</i>	Trans Mountain Oil Pipeline vice-president S.M. Blair (Toronto) and Canadian Bechtel Limited vice-president D.L. Roberts (Vancouver) present a seven page paper at the 66 th Annual General and Professional Meeting of the Engineering Institute of Canada, held in Vancouver. “With the rapidly increasing consumption of oil per capita in this country, the necessity of Canada having both a major supply of her own crude oil, and of having cheap transport, is obvious if the public and the industries are to obtain essential liquid fuels at competitive world prices.”
<i>July 24</i>	Trans Mountain announces that capacity for its line will increase from 70,000 to 120,000 barrels/day due to more oil discoveries in Alberta.
<i>September</i>	Through the Department of Public Works, the Trans Mountain Oil Company seeks Order-in-Councils for navigable river crossings (pursuant to Section 248 of the <i>Railway Act</i>).
<i>December 1</i>	325 miles of Trans Mountain’s pipeline laid.
<i>December 9</i>	The Western Canada Petroleum Association name is changed to the Canadian Petroleum Association, with the opening of a lobbying office in Ottawa, including a Pipeline Division.
1953	Incorporation of Great Canadian Oil Sands Limited. It is later controlled by Sun Oil Company which is controlled by the Pew family (“ultra-conservative Republicans”) in Philadelphia.
<i>March 23</i>	Shell Canada president W.M.V. Ash states to members at the annual meeting of the Canadian Manufacturers Association in Vancouver that Vancouver’s harbor should be improved to handle ocean-going oil tankers. “Oil men, said Mr. Ash, were free traders. We should use our own reserves to supply our needs where it is economically and geographically sound. Oil is on

1953 (continued)	the way to range itself beside wheat, lumber and iron as yet another of our great Canadian natural resources on the export list. Free enterprise has brought us thus far. Let its natural laws be allowed full play at this time of transformation of our industry both in oil and gas.”
<i>July 9</i>	Trans Mountain fills its pipeline with water and pressurizes it 25 percent higher than the oil that follows to check for leaks. As soon as the testing is completed, it will apply to the Board of Transport Commissioners for an order to operate the line.



<i>July 15</i>	Trans Mountain announces it will lay a special telephone circuit along its pipeline for patrol and maintenance personnel, and that helicopters will regularly patrol the line. High frequency transmitters to be built at Burnaby, Hope, Kamloops, Brookmere, Blue River, Edson, Jasper and Black Pool.
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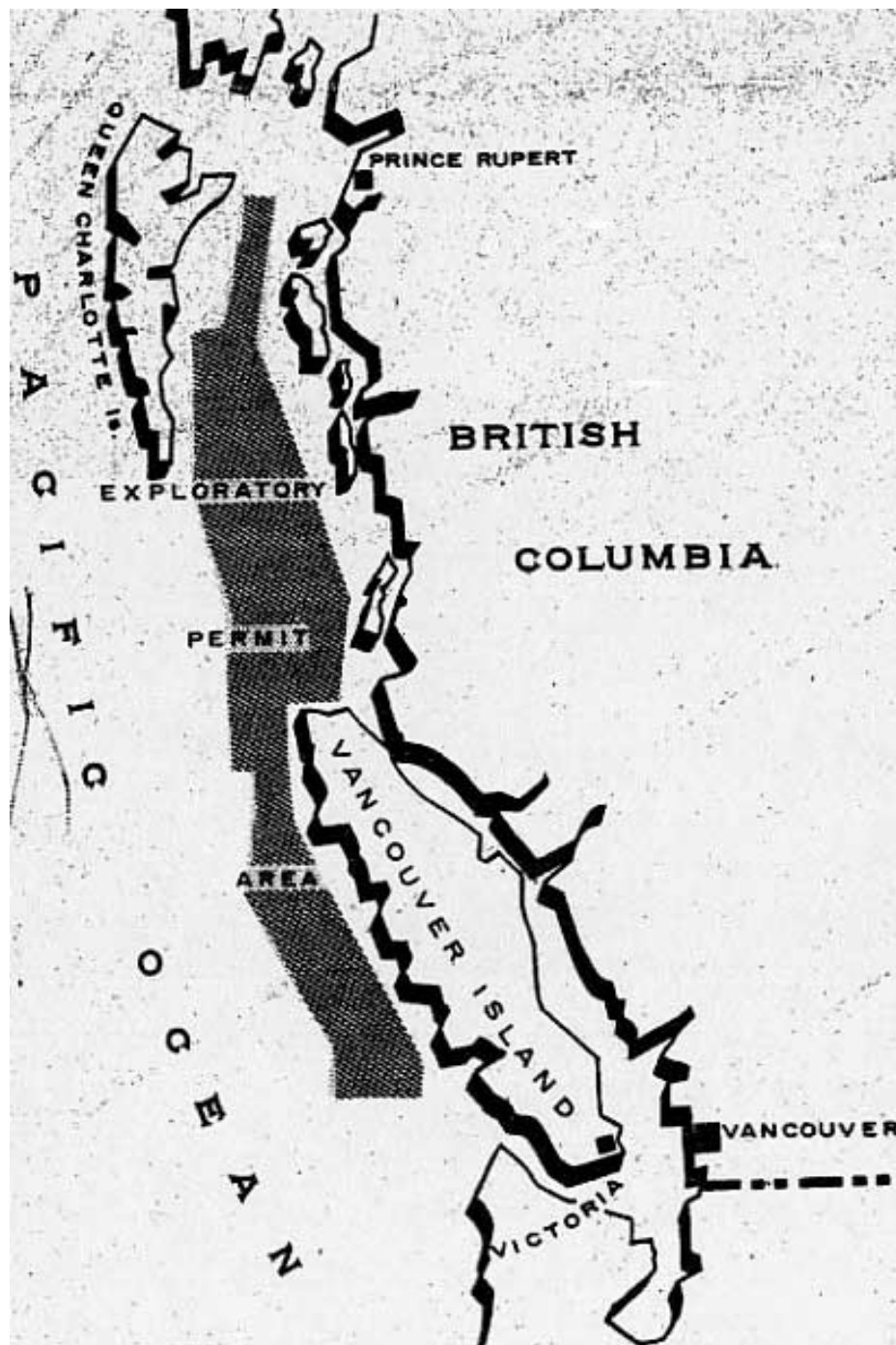


<p>1953 <i>October 14</i></p>	<p>"A special train [on the CPR line] left Vancouver today for Kamloops with [113] oil and pipeline executives and press and radio representatives who will take part in official opening ceremonies of the new pipeline from Edmonton to the West coast These oilmen, wearing cowboy hats and financiers' homburgs, talking oil-field and Canadian and Texas drawl, rode the CPR through the Coquihalla Pass and Coldwater Canyon. Here they looked upon the scenes of Trans Mountain's most difficult days."</p>
<p><i>October 15</i></p>	<p>At a reception and banquet at the Hotel Vancouver, Board of Transport Commissioners chairman Justice Kearney is the guest speaker on the celebration of Trans Mountain's new pipeline. BC Finance Minister Einar Gunderson is there on behalf of Premier W.A.C. Bennett. "Burnaby's Reeve W.R. Beamish unveiled the plaque at the tank farm in the afternoon. It was to coincide with arrival of the first crude from Alberta, but a leak in the line near Valemont on Tuesday held up the oil. The crude is now expected Saturday."</p>
<p><i>October 16</i></p>	<p>Trans Mountain chairman Steve Bechtel announces that a Canadian, J. Grant Spratt, head of the Anglo-Canadian Oil Company, will become Trans Mountain's next president on January 1.</p>
<p><i>October 17</i></p>	<p>First shipment of oil to Burnaby along Trans Mountain's new \$93 million pipe line, built "through 718 miles of rugged country from the oil fields of Edmonton to a big tank farm in Burnaby." Pumping begins at 15,000 barrels/day; by December at 28,300 barrels/day; by February 1954 at 35,000 barrels/day. By July 1955, 80,000 barrels/day. "Between 1950 and 1953" the Bechtel Corporation "managed the planning and construction of the Trans Mountain Oil Pipeline across the Canadian Rockies. The 718 mile artery traversed difficult terrain, but technological innovations were less significant than managerial ones. Trans Mountain was the first major engineering-construction project in which Bechtel was responsible for design, engineering, procurement, and construction management, as the owner's representative. This approach helped establish the turnkey concept of total project management, emulated by others in the building industry" (website: www.nbm.org). The pipeline had "110,000" joint-welds.</p>

<i>October 18</i>	7 a.m. Trans Mountain shuts down its pipeline to repair the leak near Mount Robson. Okanagan Helicopters is provided a full-time contract to patrol the right-of-way.
<i>December 16</i>	After an amendment to the <i>Pipe Lines Act</i> , the House of Commons grants the Board of Transport Commissioners “complete jurisdiction over location, construction and operation of interprovincial and international oil and gas pipelines in Canada.”
1954	Neill C. Wilson and Frank J. Taylor’s book, <i>The Building of Trans Mountain</i> , for Trans Mountain. “The building of the Trans Mountain oil pipeline ranks among the important industrial achievements of Canada.” “This [crude oil line] would not only strengthen the West Coast for defence against overseas attack but would enable the Canadian oil fields, with their constantly increasing productivity and steadily growing reserves, to take their rightful place as suppliers to the Northwest Coast and to the world markets for oil.”
	Mobil’s subsidiary, the General Petroleum Corporation, opens a refinery in Puget Sound
1955	Shell opens a refinery in Puget Sound.
	Political Science professor Robert Engler in the <i>New Republic</i> describes the close relationship between the U.S. State Department and Standard Oil, nicknamed “the fortress of Standard Oil”.
<i>May 19</i>	Federated Pipe Lines Ltd. is incorporated under Alberta provincial law, the company that would in 1994 take control of, own and operate the Taylor to Kamloops underground crude oil pipeline in BC.
<i>September</i>	J. Grant Spratt leaves Trans Mountain to become executive vice president and managing director of Triad Oil Company, replaced as president by D.W. Morrison, formerly with Shell Oil Company of Canada for 28 years.
1956	The Texas Company announces the building of a new refinery in Anacortes, Washington, to be supplied by crude from Trans Mountain’s pipeline.
	Arthur M. Johnson’s first book on the genesis and policy of American petroleum pipelines, <i>The Development of American Petroleum Pipelines: A Study in Private Enterprise and Public Policy, 1862-1906</i> . The struggle of pipeline power (“its uses and abuses”) dominated by the Standard Oil Company. At the turn of the 1900s, with new oil discoveries, the market shifts from illuminants to motor fuels and oils to feed the new industrial, automobile age. In 1900 there were 6,800 miles of crude oil, two to six inch diameter, “underground arteries” in the USA, 90 percent of which were owned and operated by Standard Oil. Pipelines were the cheapest form of overland oil transportation.
<i>November 27</i>	Fire destroys Trans Mountain’s pumping station four miles east of Jasper. The fire was caused by the pump’s drive shaft.
<i>December</i>	Trans Mountain announces plans to consider doubling its Trans Mountain pipeline, through looping programs. “One line would not be able to take the pressure required to move 300,000 barrels on grades; looping would overcome this engineering problem.”

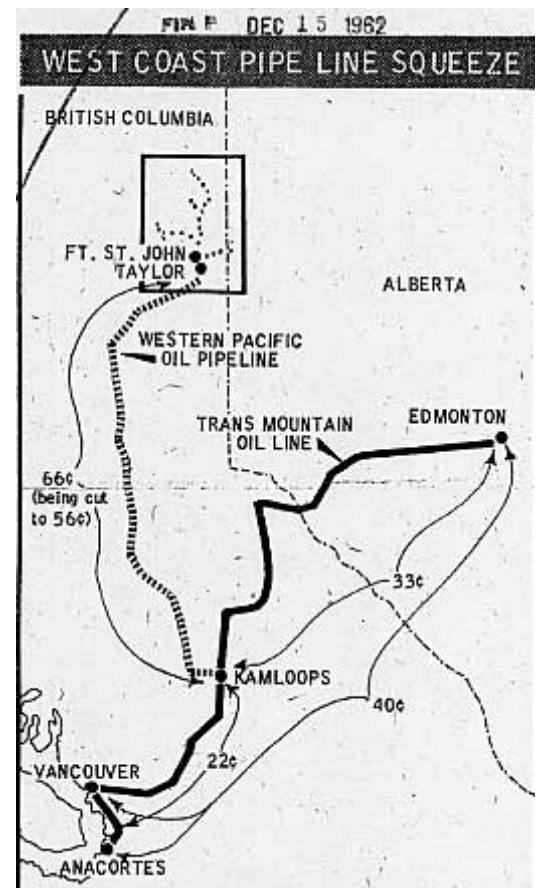
1957 <i>February</i>	During an ongoing debate concerning Trans Mountain's proposal to split its stock, increasing stock from 5 to 25 million shares, and reducing stock prices from \$50 to \$10, CCF MP for Burnaby/Coquitlam proposes to nationalize the Trans Mountain Pipe Line Company.
	Prime Minister Diefenbaker establishes a Royal Commission on Energy, with the proposal to establish a National Energy Board.
	Trans Mountain announces in its mid-year report the construction of a major deep-sea 60,000 ton crude oil supertanker dock in Burrard Inlet, scheduled for completion by April 1958 as well as two 50 mile pipeline loops for 1957. The two 30-inch loops parallel the main line from Edson to Hinton in Alberta, and from Darfield to Kamloops in BC.
<i>October</i>	The Westcoast Transmission Co. Ltd. natural gas pipeline from Ft. St. John to Vancouver begins operations.
	World consumption of oil is at 18 million barrels/day (6,570,000,000 barrels/year).
1958	Texaco opens a refinery in Puget Sound without supply from Alberta crude. Alberta supplies of crude oil drop significantly, as U.S. oil companies change the flow of market oil. Following the implementation of "voluntary" oil imports, and the end of the Korean war, the U.S. leaves Canada "high and dry".
	In Arthur M. Johnson's 555-page 1967 sequel, <i>Petroleum Pipelines and Public Policy 1906-1959</i> , Ralph W. Hidy, editor of Harvard University's Studies in Business History, explains in the Preface that between 1957 and 1958 is when the discipline of business history takes a significant turn by beginning to study the interactions between government and big business. In Appendix A, Johnson provides a long statistical list of principal large diameter crude oil pipeline construction by oil companies in the United States from 1946 to 1958. The combined 72 pipelines for the 12 years total a distance of 17,211 miles, or an average of 239 miles per line laid, the backbone arteries of the new oil age. Amidst post second world war pipeline technological improvements and inventions, it marks "an unparalleled expansion in pipeline mileage of large diameter construction". In 1950, there was a national total of 65,000 miles of crude oil trunk lines, with 48,000 miles of gathering lines. This amounted to 35,300,000 barrels of standing line fill.
<i>December</i>	Pan-American Oil Co. (Standard Oil of Indiana) applies for an oil exploration permit over 12,000,000 acres in northwest BC.
1959	The BC government places a moratorium on offshore exploration drilling through a Crown Reserve. On the BC government's Offshore Oil and Gas division of the Ministry of Energy, Mines and Petroleum Resources: "British Columbia declares a Crown reserve over oil and gas resources in the area east of a line running north-south three miles seaward of Queen Charlotte Islands and Vancouver Island. Under the Petroleum and Natural Gas Act, exploration permits over oil and gas in a Crown reserve can only be granted through public auction." The reserve is temporarily lifted from 1962-1966 for companies to apply for exploration permits.
<i>November</i>	The federal government establishes the National Energy Board , an "independent federal regulatory agency", replacing the Board of Transport Commissioners. Designated as a federal department, with nine Board members, it reports to the Minister of Energy, Mines and Resources. It administers the National Oil Policy (1961-1974), and later, the National Energy Policy. The Board regulates: "construction and operation of interprovincial and international pipelines; pipeline traffic, tolls and tariffs; construction and operation of international and designated interprovincial power lines; export and import of natural gas; the export of oil and electricity; and frontier oil and gas activities." Its responsibilities are defined under the

	<i>National Energy Board Act</i> , and later under the <i>Canada Oil and Gas Operations Act</i> , the <i>Canadian Environmental Assessment Act</i> , the <i>Northern Pipeline Act</i> , and provisions under the <i>Canada Petroleum Resources Act</i> . Though provincial governments retain jurisdiction over oil and gas production within their provincial boundaries, the federal government retains ultimate jurisdiction over domestic and export oil and gas pricing, transmission and sales.
1960	The BC Department of Mines becomes the Department of Mines and Petroleum Resources.
	The formation of the Organization of Petroleum Exporting Countries (OPEC).
1961	The federal government issues rights to Shell Oil Co. for offshore exploration on BC's Coastline, in what would later be permits by both federal and provincial governments over 13 million acres of continental shelf. An article in <i>Oilweek</i> , making a comparison of results from drilling off the coasts of California and Alaska, starts off the hunt.



1961

The BC government signs an agreement with Western Pacific Products and Crude Oil Pipelines Ltd. for the construction of an underground crude oil pipeline (the Westpac line) from Taylor, BC, to Kamloops, a distance of about 500 miles, to carry about 30,000 barrels/day. Plans are to tie into Trans Mountain's pipeline near Kamloops for delivery by the end of 1962. "Oil delivered into the Westpac system comes from 336 wells of which 244 are located in the Boundary Lake field. The others are Blueberry, Aitken Creek, West Beaton River, Beaton River, Milligan Creek, Wildmint, Peejay and West Peejay." The pipe for the Pipeline was manufactured in 1961 by Page Hershey of Welland, Ontario.



1961 <i>June 6</i>	The BC government issues a public utilities certificate to BC Oil Transmission Co. Ltd. for the construction of an 85-mile long feeder crude oil pipeline from the Blueberry field to the Western Pacific pipeline in Taylor. The pipeline diameter varies: 12 miles of 4-inch, 3 miles of 6-inch, and 70 miles of 8-inch pipe.
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<i>November</i>	<p>The 504.3 mile, 12 and three quarters inch diameter, Westpac crude oil pipeline from Taylor, BC to Kamloops, under the ownership of Western Pacific Products and Crude Oil Pipelines, is completed at a cost of \$31.5 million, and begins transporting oil in January 1962. The pipeline has a total of 219 water crossings: 29 river crossings, 91 named creeks and 99 unnamed creeks. However, the company fails to install an adequate amount of valves on its line on either side of river and creek crossings in order to limit damage from accidental discharge and to provide automatic blockage of the piping system in the event of a pipe rupture, an issue later identified on separate occasions following pipeline ruptures.</p> <p>Canadian Bechtel studied the right-of-way that parallels Westcoast Transmission's natural gas line. "Lands and Forests Minister Williston said the lawyers involved didn't want to put the oil line on the gas line right of way. But he insisted because in the public interest he felt that the limited land in some of the passes en route should not be alienated by yet another line when it could fit on the existing right of way if compensation could be agreed." An agreement is made between Trans Mountain and Western Pacific Products & Crude Oil Pipelines Ltd. on transporting Crude at the junction near Kamloops, south to the Coast.</p>
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1962 <i>October 1</i>	The Alberta government has leased a total 2,600,000 acres of Athabasca tar sands, at 25 cents an acre, to mostly foreign owned companies, eight of which own leases to 2 million acres.
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<i>October 2</i>	The Alberta government grants the first production permit of 31,500 barrels/day to Great Canadian Oil Sands Ltd. Production was scheduled for late 1966, with the crude to be piped to Ontario's Sarnia refinery. The "rape" of the oil sands begins.
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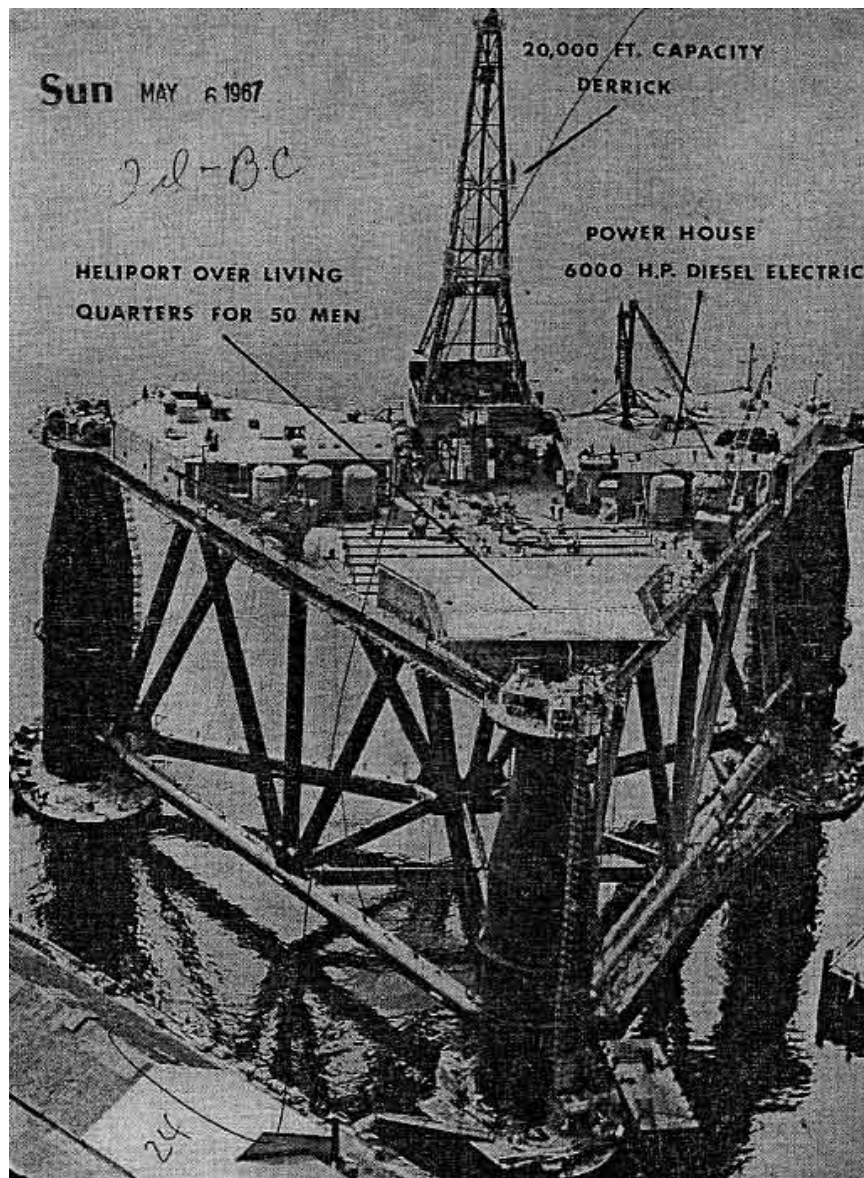
	The peak of BC gas and oil exploration, when 367 wells are drilled, and drilling activity starts to taper off.
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1963	New estimates are publicized how Alberta's oil/tar/bituminous sands contain recoverable crude oil deposits of 626 billion barrels within an area of 13,000 square miles (8,320,000 acres). Imperial Oil's tar sands president and general manager claims the averages for each acre of tar sands range from 100,000 barrels to 250,000 barrels. These estimates rank the oil sands some sixty times greater than all the existing combined Canadian oil reserves. At \$2.50 a barrel of oil at that time, the estimate is worth some \$750 billion of crude.
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	Permits are given for offshore oil exploration along BC's coast.
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1964 <i>February</i>	After breaking a tug-boat tow line, an American owned 200 foot long barge, carrying 300,000 gallons of Bunker C fuel oil, sinks down 300 feet in Howe Sound off Bowen Island, just northwest of Vancouver. About a third of the oil escapes from the barge polluting the shoreline of Bowen Island, causing widespread concern and publicity.
<i>June 12</i>	After waiting since July 1963 to negotiate offshore rights to BC's coastal waters with the federal government, BC and the federal government are on their way to the Supreme Court of Canada to settle the jurisdictional dispute on the constitutional battle. The Court Decision comes three years later. In lieu of the decision, Shell Oil has possession of offshore mineral rights from both governments, just in case.
<i>October</i>	Shell Oil bids \$3.18 million for the right to drill for oil in submerged lands off the coasts of Oregon and Washington States. Shell Canada concludes its second offshore seismic exploration program in September 1964 along BC's west coast with four ships, a program that began in the summer. "The flotilla of ships criss-crossed a wide expanse, trailing sonic gear to pick up the sound of explosions off the ocean floor. Explosive charges ranged up to 300 pounds." In 1963, during its first exploration program, Shell Oil used 50 tons of nitrone SM, an explosive used in marine exploration. "Some fish – mostly herring – have been spotted on the surface after the explosions", said a federal fisheries officer. "But I doubt if the exploration killed more than \$400 worth of fish all last year."
<i>October 4</i>	An argument begins between the federal government and BC over offshore oil exploration rights along BC's coast. The federal government gave leasing rights over 9 million acres for \$20 to Shell Oil Co., and Premier W.A.C. Bennett wants a fee of \$1,350,000 for the same rights.
	The Alberta Energy Resources Conservation Board approves construction of the first large scale tar sands development, the Great Canadian Oil Sands project (later called Suncor), scheduled to begin operations in 1967.
1965	The BC government introduces the <i>Petroleum and Natural Gas Act</i> . Oil and natural gas leases to last 21 years, later changed to 10 year leases.
<i>April</i>	Shell Oil begins its third seismic exploration off BC's coast.
1966 <i>May</i>	Trans Mountain's pipeline now delivers 241,000 barrels/day. In 1965, a total delivery of almost 80 million barrels.
	John Morgan Freeman's (Alberta New Democratic Party) 112-page investigative booklet on Alberta/Canadian oil, gas and tar sand developers, <i>Biggest Sellout in History: Foreign Ownership of Alberta's Oil and Gas Industry and the Oil Sands</i> . Freeman, a Presbyterian Minister and theologian, carefully examines the web of intrigue and details behind "the comic opera of Canadian sovereignty", how Canada's oil and gas energy deposits are now in the hands of foreign (primarily United States) multinational companies, and how the Albertan Social Credit government shamefully allowed that to happen. Most of these energy deposits are exported out of Canada through pipelines controlled by the same multinationals to refineries owned by the same companies. Also unveiled was the manner in which Alberta Premier Preston Manning (1943-1968) helped assist the takeover of Albertan energy deposits to foreign companies.

1967	Canada Supreme Court ruling: the federal government, through the 1867 <i>Constitution Act</i> , has legislative jurisdiction over seabed mineral rights along BC's coastline.
<i>May 6</i>	A ceremony is held in Victoria for Shell Canada's \$10 million off-shore drilling rig vessel, operated under contract by Southeastern Commonwealth Drilling Ltd. (Calgary and Dallas). Wife of Shell president Paul Kartzke names it Sedco 135-F. Construction of the 335 foot high structure took 300 men 16 months from 9,000 tons of steel. It is capable of drilling down to depths of 12,000 feet, and will begin drilling near Barkley Sound, the west side of Vancouver Island. After drilling 14 holes along the BC coastline up to the Queen Charlottes to collect sedimentary data over the next two years, the rig was to be sent to New Zealand under contract to Shell B.P. and Todd Oil Services Ltd. in late May 1969. Shell keeps its test results secret.

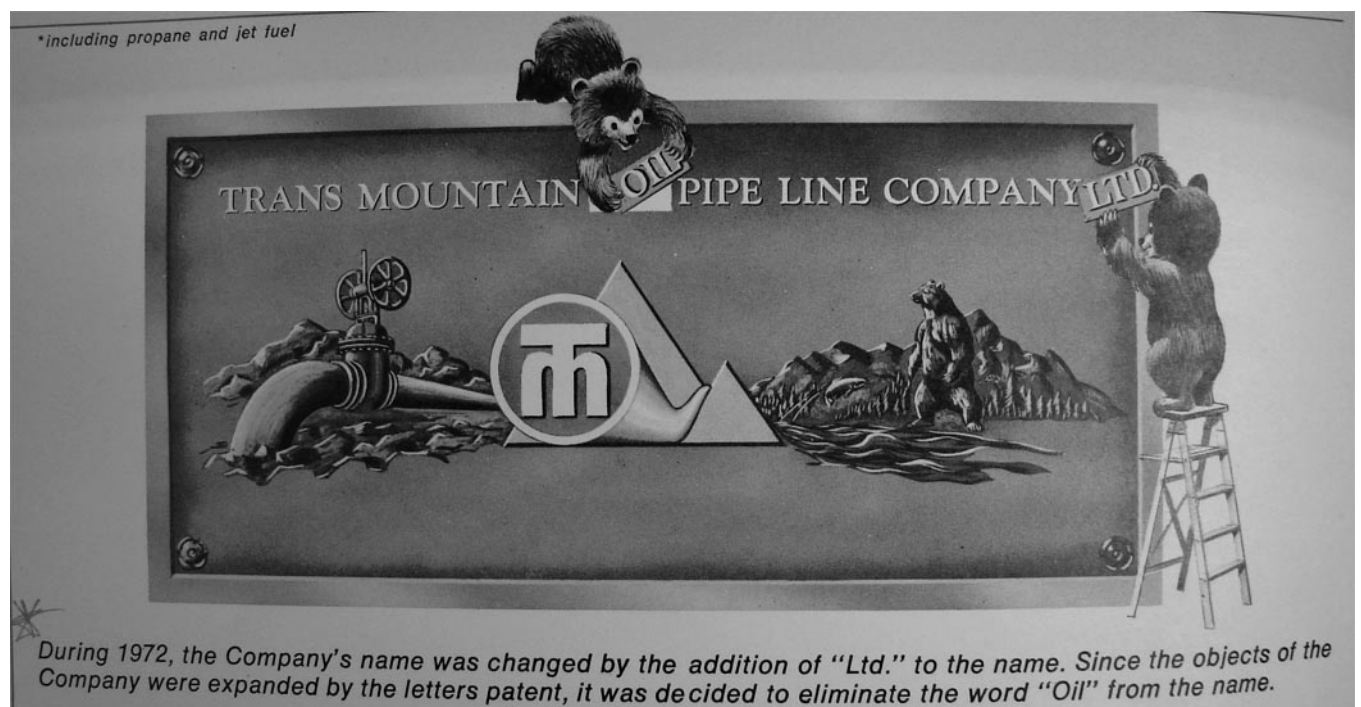
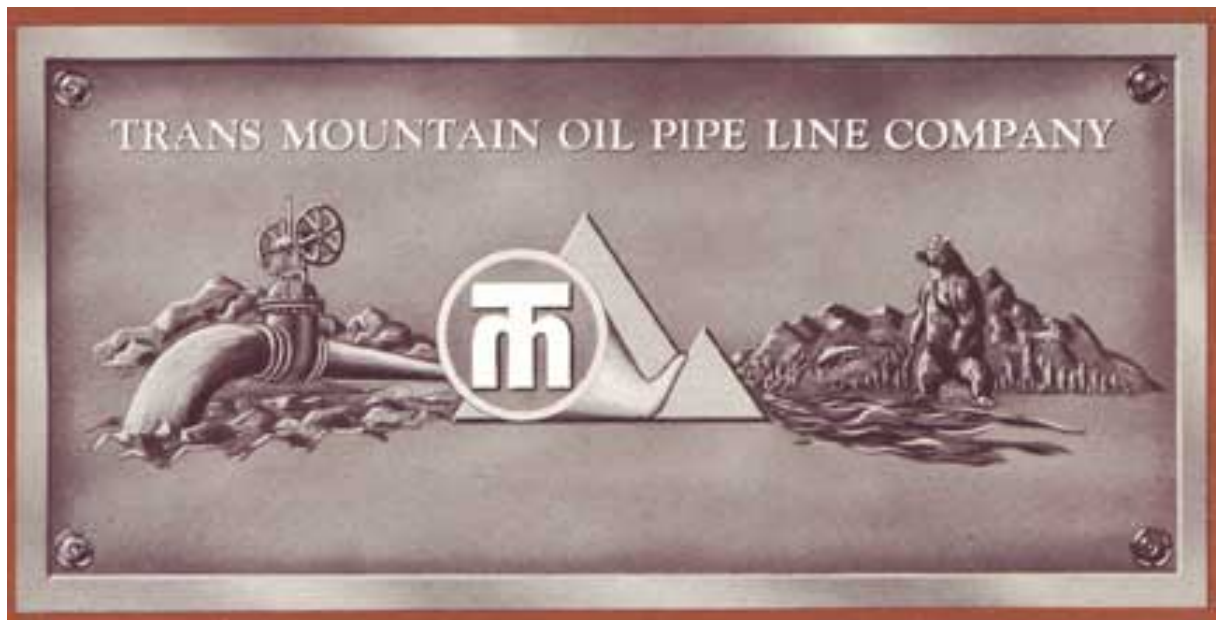


<i>September 25</i>	Great Canadian Oils Sands Company (later, Suncor) begins production in Alberta's oil sands. After three years of \$250 million construction site 20 miles northwest of Fort McMurray, on lease #86. About 500 government, industry and press representatives converge on the small town of Fort McMurray to witness the opening ceremony for the company's operations, "the world's first oil mine". The Company runs into operational problems and expenses, and by 1974 incurs a \$90 million debt.
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1969 <i>January 28</i>	Union Oil's drilling off the coast of California has an oil well blowout, spilling oil into the Santa Barbara Channel and Harbour. It would continue for over 100 days, leaking 3,250,000 gallons of crude over the next three and a half months. The spill is the prime mover catalyst, triggering enormous concerns for British Columbians and Canadians. A reporter states: "It was silent. No birds were visible and the coating, to a point five feet up the cliffs, was like a thick emulsion of car undercoating." Under protest, U.S. Interior Secretary Walter Hickel resumes oil drilling and production in federal waters.
<i>February 19</i>	BC NDP MLA Bill Hartley demands a provincial government disaster plan for possible oil pollution along BC's coastline. 350,000 ton supertankers are being built for the Alaska/Seattle crude oil run.
<i>April 27</i>	Prominent conservationists meet and announce the formation of a BC biological council, after warnings by Vancouver Aquarium director Dr. Murray Newman of an impending oil spill off Vancouver Island: Roderick Haig-Brown, Howard Paish, Dr. Ian McTaggart Cowan, Peter Larkin. Haig-Brown: "We must have some kind of control over the threat of oil and air pollution which is hovering over our heads."
<i>October 3</i>	<div> <p>Dr. Norman Sanders, who teaches environmental pollution at the University of California, is a guest lecturer for the Society for Pollution and Environmental Control (SPEC) at Simon Fraser University. "Five oil companies have 11 drilling sites just off Santa Barbara, and we've had 255 days of continuous oil spill which they can't stop. It's affecting about 100 miles of mainland coastline and maybe 60 miles of Channel Island coastline. Everything is covered with oil – including animal and fish life... He said Gulf Oil, given the go-ahead in September to begin seismic exploration to find gas and oil over more than 1 million acres of Georgia Strait, is one of five companies involved in the Santa Barbara problem. I guess Gulf Oil won't be too happy when the people here learn about that."</p> </div> <div>  <p>DR. NORMAN SANDERS</p> </div>
	Gulf Oil carries out a five week exploration in the Gulf of Georgia through provincial and federal permits.
<i>November 13</i>	A provincial Order-in-Council cancels a reserve on Graham Island, Queen Charlottes, to allow for oil and natural gas exploration to Union Oil of Canada Ltd. over 1.15 million acres. SPEC president Derrick Mallard condemns the decision and calls for a royal commission on offshore drilling.
	Formation of the secret National Advisory Committee on Petroleum. No minutes were ever taken of this committee of top oil men with federal Cabinet members. The Committee met from 1969 – 1980.
<i>December 5</i>	Federal Fisheries and Forestry Minister Jack Davis states to businessmen at a Kamloops Chamber of Commerce luncheon, "there will not be any drilling for oil in the Gulf of Georgia – not for a long time anyway ... there is an understanding [with the Department of Mines] that unless my department approves of the drilling they won't authorize a drilling permit."

1970	The consulting firm National Economic Research Associates compiles data for the US Senate Anti-Trust Subcommittee, showing that 9 of the 25 largest US oil companies have interests in coal, gas, uranium (in 1968 oil companies did 44 percent of uranium drilling) and shale: Standard Oil (New Jersey), Texaco, Gulf, Shell, Atlantic Richfield, Continental, Sun, Standard (Ohio), and Ashland. “In short, the oil companies, themselves portraying their activities as efforts at diversification, are, in fact, systematically acquiring their competition.”
	<i>Canada Shipping Act</i> is amended to include oil spill liability following the grounding of the oil tanker Arrow in Chedabucto Bay, Nova Scotia. Liability for clean-up costs and a compensation fund for related damage claims.
	Earle Gray, the managing editor and editor of Oilweek, publishes his book, <i>The Great Canadian Oil Patch</i> . As an apologist for the oil industry, it heralds and describes the rise and extent of oil discoveries and infrastructures in Canada with accounts on the actors and with statistics. Though interesting and accurate, it fails to mention the impacts of the oil industry on the ecology, i.e., “Should we ever run out of conventional crude oil, we could turn to the enormous bitumen deposit in Alberta’s Athabasca tar sands.” Perhaps in reaction to John Morgan Freeman’s 1966 critical booklet on Alberta’s oilmen and politicians, he states: “It is difficult to see how increased oil and gas exports to the United States markets equates to a “sellout” of our resources to Americans,” without acknowledging the fact that primarily American companies are widely influencing provincial and federal politics.
<i>January 9</i>	BC Municipal Affairs Minister Dan Campbell states to a meeting of the Campbell River Pollution Control Society that the provincial Cabinet Committee on Land Use and Resource Management is opposed to offshore drilling for oil and gas in the Strait of Georgia.
<i>February 4</i>	The crude oil tanker Arrow strikes a rock in Nova Scotia’s Chedabucto Bay’s Canso Strait entrance fouling 300 kilometers of beaches. Cleanup continues for more than two decades.
<i>February 25</i>	Three Vancouver Island Regional Districts and the Greater Vancouver Regional District oppose oil explorations in the Georgia Strait in protest letters to Prime Minister Trudeau and Premier W.A.C. Bennett, endorsing Nanaimo Regional District’s resolution, the “strongest possible protest against this type of development.” Gulf Oil is conducting seismic tests in the Strait. Gulf Oil has permits on 54,332 acres, extending from the international border to Vancouver City, including part of Delta, Richmond, University of BC Endowment Lands, and up the Fraser River to New Westminster
<i>May</i>	the Standing Committee on Natural Resources and Public Works undertakes a study of Canada’s oil and gas industry
<i>August 13</i>	The federal government’s release of <i>Northern Oil and Gas Pipeline Guidelines</i> .
<i>August 26</i>	Deputy Mines Minister Ken Blakey sends a letter to the Independent Petroleum Association of Canada concerning bad image publicity from oil pollution and sloppy housekeeping. Reports have been trickling in about “damage to land and trees from the dumping of salt water and occasional spillage of crude oil or condensate... pollution has become a household word.” Reporters ask Blakey if the government should begin a public education program: “This should be done, but this department can’t handle that – we don’t run a public relations department.”
<i>September</i>	The Vancouver Sun newspaper publishes a series of articles on oil exploration, including interviews with Inuvik Eskimos and their dealings with oil hunters looking for “black gold”. “Somebody in Ottawa has granted some permits. But nobody has asked our permission and we have not been officially told the oil companies are coming ... The oil men scatter the game, drive it away. It happens everywhere they go. The seismic blasts scare the animals away for

1970 (continued)	many seasons, the bulldozers cut across our hunting trails. We will have to pull our traplines... This in a microcosm, is the conflict between the federal government and Canada's 250,000 aboriginals, the reason why militancy is on the rise everywhere, even north of the Arctic Circle." Gulf Oil is granted a large permit, which includes the village area of Paulatuk.
	World consumption of oil is at 40 million barrels/day (14,600,000,000 barrels). U.S. and Canada's combined consumption of oil is 37 percent of the world demand, or a staggering 5.4 billion barrels.
	Since 1947 with the discovery of natural gas in BC, the oil and gas industry sunk 2,808 exploratory wells, 739 strikes of oil, and 771 strikes of gas



1971	The BC legislature passes a resolution opposing tanker traffic off the west coast.
<i>January 12</i>	Federal Energy Minister J.J. Greene announces a halt to oil and gas exploration in the Strait of Georgia, and the relinquishment of all permits covering 675,000 acres. The permits were granted to Gulf Oil and partner Canadian Pacific Oil and Gas. Provincial Recreation Minister Kieran, the acting Mines Minister, said the BC government has not cancelled their permits in the Strait.
<i>March 24</i>	U.S. oil officials meet with top Canadian bureaucrats J.J. Greene and Jean Chretien, concerning the transportation of Alaskan oil reserves at Prudhoe Bay.
<i>April 26</i>	<p>Trans Mountain's crude oil pipeline, carrying 330,000 to 350,000 barrels/day, ruptures on Mile 581.3 on the east side of the Coldwater River, 30 miles due south of Merritt. Trans Mountain Regional operations manager Ken Hall said the 100,000 - 200,000 gallon spill was "the worst spill in 16 years for the company". The incident was the result of clearcut logging directly above the pipeline, followed by heavy rain causing erosion over the cleared land, and washing out soil underneath the pipeline and the railway line, causing them to collapse and break. According to a newspaper article, a local Indian rancher smelled oil on Monday night, and then called the pump station nearby.</p> <p>The later July 31, 1975 Supreme Court <i>Judgment</i> described that Trans Mountain's helicopter arrived at the scene at 10:05 am, where the pilot witnessed an area of more than 200 feet of the pipeline exposed by the landslide and continuing washout, and the oil mixing in with the rushing watery material. The oozing oil was about to enter the salmon-bearing Coldwater River, when two bulldozers were just able to contain the spill by building holding ponds "behind a half-mile sand dyke which was raised as high as 12 feet" about 150 yards from the river. Other bulldozers were called in from nearby logging operations to help out. "Hall said that even though the spill had been halted quickly the incident could end up costing the company \$1 million counting the repair bill and the delay in pumping of approximately 1 million barrels of oil... Hall said the spill seemed unfortunate at a time when Canada is bucking for an overland pipeline for Alaskan oil. But, he said, this spill has shown that pipeline companies can move quickly in such an emergency in difficult terrain. "Land pipelines will always be at the mercy of landslides – but there would be less landslides if valleys like this were not logged," he said."</p> <p>Trans Mountain then filed charges against Nicola Valley Sawmills Ltd for the soil washout during the Spring weather on Brodie Hill, and on July 31, 1975, Justice J. Verchere of the provincial Supreme Court awarded Trans Mountain \$339,366 for damages in his <i>Judgment</i> (Vancouver No. 1172/71). Verchere held that Nicola Valley Sawmills was "liable in nuisance".</p>
<i>June</i>	Alberta's Petroleum and Natural Gas Conservation Board goes through a name change to become the Energy Resources Conservation Board. Its responsibilities are increased beyond regulating oil, oil sands, and natural gas, to also include coal, pipelines, hydro and electric generation and transmission. The Board's staff is now about 370 people. By the mid-1970s, public interest groups and members of the public are finally provided intervener rights to make submissions regarding the Board's policies and practices.
<i>June 11</i>	The federal government establishes the Department of Environment, later to be called Environment Canada. It is created through the amalgamation of several branches, units and services from other departments responsible for activities relating to air, water, land, forests, wildlife, fish and meteorological services. The environmental policy was influenced by amendments to the <i>Fisheries Act</i> (1970), the creation of a new <i>Canada Water Act</i> (1971), and the <i>Clean Air Act</i> (1971).

<i>August 18</i>	Canada notifies the U.S. of its great concern regarding the proposed oil tanker traffic from Alaska to Puget Sound in its Aide-Memoire, accompanied by the study report, <i>The Environmental Consequences of the Proposed Oil Transport between Valdez and Cherry Point</i> .
<i>November 10</i>	Despite the ban on off-shore drilling, the federal government issues an oil exploration permit to Calgary-based Petrotar Development Ltd. for 1.4 million acres in Queen Charlotte Sound, and on December 10 for a further 1.3 million acres.
<i>December</i>	The average daily export of crude oil from Canada to the US amounted to 540,000 barrels, almost 200,000 b/day above the agreed upon quota. Oil at \$2.50/barrel (US).
1972 <i>March</i>	Nanaimo/Cowichan NDP MP, and former NDP national leader, demands a full debate in the House of Commons for the November 1971 issuance of federal offshore exploration permit to Petrotar.
<i>May 15</i>	The Canadian House of Commons unanimously supports a motion, that movement of tanker oil traffic along BC's coastline from Alaska to Puget Sound, was "inimical to Canadian interests". [In 1972, the federal government imposed a moratorium on crude oil tanker traffic through Dixon Entrance, Hecate Strait, and Queen Charlotte Sound due to concerns over potential environmental impacts. The decision to prohibit tanker traffic in these areas was based on recommendations from the Commons Special Committee on Environmental Pollution chaired by David Anderson. Shortly after the moratorium on tanker traffic was announced, the Government of Canada extended the prohibition to include all offshore oil and gas activities on the west coast.]
	The Trans Mountain Oil Pipe Line Co. is renamed as the Trans Mountain Pipe Line Company Ltd.
<i>July 17</i>	Vancouver Sun newspaper publishes Gary Gallon's (with the Scientific Pollution and Environmental Control Society – SPEC) long letter, rebuking claims by oil executives that "oil is harmless to man and ocean marine life." He quotes relevant scientific studies on the harmful and persistent nature of crude oil on the ecology.
<i>August</i>	<p>Alberta's Conservation and Utilization Committee (senior servants with some 20 government departments) releases its 80 page CONFIDENTIAL draft document, the <i>Fort McMurray Athabasca Tar Sands Development Strategy</i>. They advise the government to take control of "the historical trend of ever increasing foreign control of nonrenewable resources development in Canada."</p> <p>"On one hand we can continue the policies of the conventional crude oil developments creating tremendous and unregulated growth and developments resulting in short-term benefits accruing to the province as well as the long-term costs arising from exported energy, technology, job opportunities and environmental damages in addition to the depletion of nonrenewable resources. Conversely, we can regulate the orderly growth and development of the bituminous tar sands for the ultimate benefit of Alberta and Canada in order that Canadian technology will be expanded, Albertans will find beneficial and satisfying employment within its diversified economy, and our environment will be protected and enhanced for future use. But when the magnitude of the real, fiscal and manpower requirements and the environmental consequences are visualized, it becomes apparent that the latter course of action is imperative."</p> <p>"The basic impact on the environment will be partial total denudation of the surface vegetation, partially disrupted to totally obliterated surface hydrology, extensive changes to the ground water regime caused by increasing injections and recharge capability modified by a greatly increased permeability rate of bituminous depleted sands, altered topographical landforms caused by the deposition of spent tailings or the subsidence of depleted sands, massive</p>

	<p>withdrawals of surface water from streams and rivers causing physical changes to the receiving waters resulting in chemical and biological changes to the receiving waters and atmospheric changes such as ice fog during the winter, atmospheric gaseous emissions containing sulphur dioxide and other compounds, all of which have disruptive effects on the remaining flora and fauna because of the massive ecological changes.”</p> <p>Albertan politicians snub their noses against the report, which is later leaked to Mel Hurtig, the chairman of the Committee for an Independent Canada who makes the confidential report public.</p>
1973 <i>March</i>	<p>The first major environmental 110-page study report of Alberta tar sands conducted by Intercontinental Engineering of Alberta (“Integ”), <i>An Environmental Study of the Athabasca Tar Sands</i>. Unless preventative measures are discovered and implemented, “the environmental effects of eventual multi-plant operations over the extent of the Athabasca tar sands could be enormous.” The study began in March 1972. A terms of reference, to “identify the various methods that could be used for oil extraction and their comparative merits with respect to minimum adverse effects on the environment”, was ironed out with Alberta’s Department of Environment and the Conservation and Utilization Committee. Other working papers were submitted to the Environment Department.</p>
<i>March 1</i>	<p>National Energy Board Chairman appears before the House of Commons concerned about the lack of new oil discoveries, relating to Canada’s recent decision to “institute oil export control”.</p>
	<p>The Alberta government invests in the oil sands by forming the Alberta Energy Company (AEC), a 50/50 partnership between the government of Alberta and its citizens. The AEC becomes a direct equity investor in Syncrude’s original operations through an 80% ownership of the pipeline carrying oil from Syncrude to Edmonton, a 50% ownership in Syncrude’s power facility and a 50% ownership in the Syncrude plant. In 1978 Syncrude starts producing oil from the oil sands.</p>
<i>April 24</i>	<p>Trans Mountain president E.C. Hurd, at its annual meeting, “told shareholders that increasing efforts are being made by the company and the oil industry to protect the environment. An oil spill this year between the Laurel pump station and the Ferndale refineries had received public attention, but part of the story was untold, he said. “Our people responded quickly and effectively, containing the oil within a relatively small land area. None was allowed to escape into any running water system; cleanup was started immediately, the bulk of oil was picked up within a few days and final cleanup is under way now. No irreparable damage has been done and no land-owner will suffer other than some inconvenience as a result of the incident.”</p>
<i>June</i>	<p>The Minister of Energy, Mines and Resources releases two volume report, <i>An Energy Policy for Canada</i>. The report is a cooperative venture by the Ministries of Energy, Mines and Resources, Finance, Consumer and Corporate Affairs, National Revenue, the Privy Council Office, and the National Energy Board. It was the “first major energy policy analysis since the reports in the 1950s by the Royal Commission on Canada’s Economic Prospects and the Royal Commission on Energy</p>
	<p>At a press conference in Victoria, BC Premier Dave Barrett states that pipeline utilities should come under public ownership</p>
<i>August</i>	<p>The price of oil is now at \$4.00/barrel (US).</p>

1973 <i>August 17</i>	Liberal leader David Anderson states that intensified use of Trans Mountain's pipeline "would lessen the need for Americans to import oil by tanker through Juan de Fuca". Trans Mountain company vice president J.H. McQuarrie said "It would be no problem to increase our shipments. All we need is the oil to pump and the permits to export it. But the problem is that the National Energy Board has cut back exports to the U.S. He said Anderson's suggestion that federal Energy Minister Donald MacDonald direct the Energy Board to step up exports through Trans Mountain is "an excellent idea"."
<i>October</i>	The NDP BC government announces the creation of a new Crown corporation, the BC Petroleum Corporation under a new <i>Petroleum Corporation Act</i> . Social Credit, Liberal and Conservative critics argue the Bill is part of a pattern of government intrusion into private industry.
<i>November</i>	US government. and oil companies agree to transport crude oil from Prudhoe Bay, Alaska, along a new trans-Alaska pipeline, to Valdez, and then by tanker down the Pacific Coast to Puget Sound. The pipeline is scheduled for completion by late 1977
<i>November 2</i>	In Dinslaken, West Germany, a ruptured crude oil pipeline leaks oil into the Rohr River.
<i>November 21</i>	The Greek registered crude oil tanker Kimon arrives in Vancouver to begin one of 8 tanker shipments from Vancouver, through the Panama Canal, and around the eastern US seaboard to deliver oil to refineries in Montreal. The ship is chartered by Gulf Oil Canada Ltd. in response to oil rate hikes by Arab nations.
<i>November 26</i>	BC Premier Dave Barrett, addressing the 10 th annual convention of the Canadian Union of Public Employees in Montreal proposes a joint venture with Alberta Premier Lougheed to put the Alberta tar sands under public control for its crude oil development. He suggests that the federal government take the lead in this issue, basing it on "Venezuelen officials that they would prefer to do business with a Crown corporation."
<i>November 28</i>	Herman Kahn of the US think tank Hudson Institute, renowned for his grandiose solution schemes, pays a special visit to Prime Minister Pierre Trudeau and Energy Minister Donald MacDonald. The Financial Times reports his bizarre scheme to construct 20 tar sand plants by the late 1970s in northern Alberta, to be built by 30,000 to 40,000 specially imported Koreans (cheap labor). Kahn recommended that Alberta's tar sands oil was to be financed by Japan, Europe and US investors, and then exported out of Canada. Reportedly, environmental issues and consequences related to the tar sands were of little to no consequence to the Hudson Institute, "which believes the northern Alberta area to be a relatively undesirable area anyway. Its restoration would not be a matter of aesthetic quality." In contrast to environmentalist concerns against development of Colorado's oil shales, Kahn believes the tar sands development would occur without similar opposition. An economist who attended the November 28 meeting stated: "I suppose if one were at war, it's surprising the things one would do and things you would ignore ... If you were at war, you'd use up the Athabasca River and say the hell with it."
<i>November 28</i>	In a column article in the Vancouver Sun, Greenpeace activist Bob Hunter exposes the strategic flaw in recently begun oil supertanker exports, chartered by Gulf Oil of Canada, shipped from Trans Mountain's terminal in Burrard Inlet, down the western US coast, through the Panama Canal, and up the eastern US coast to refineries in eastern Canada, as a precedent to allow future oil tanker shipments to Cherry Point from Valdez in Alaska. "We can certainly expect the Americans to throw up their hands in mock surprise and say, what are you so upset about? After all, as far back as just before Christmas, 1973, you started shipping oil along both our coasts. And we didn't complain. What right have you got to complain?"

<i>December</i>	Federal Cabinet approves the establishment of the <i>Environmental Assessment and Review Process</i> . Its purpose is to ensure that environmental matters are not overlooked in the planning and implementation of projects, programs and activities originating from the federal government.
<i>December</i>	Canada proposes to the US government for a West Coast Environmental Protection Agreement for tanker traffic management, oil spill clean-up, compensation and liability, and research.
<i>December 11</i>	The California State Lands Commission votes on the offshore oil drilling moratorium.
	Phoenix Canada Oil Co. Ltd. proposes nuclear explosions beneath Alberta's oil sands "to explore heavy oil reserves". Company president Donald Moore states "there is no population in the remote areas involved and environmental concerns are nominal."
	The price of oil is now at \$5.00/barrel (US).
1974	The University of Alberta, Edmonton, creates the Hydrocarbon Research Centre, at which Alberta's oil sands receive special emphasis. Director of the Centre is chemistry professor Dr. Otto P. Strausz, and Dr. C.T. Steele is associate director.
<i>January 1</i>	The price of OPEC crude oil jumps to \$12.00/barrel (US).
	The Mackenzie Valley Pipeline Inquiry begins in the Northwest Territories.
<i>January 7</i>	After a year of reviews and hearings, the Washington State Select Committee on Energy, which also studied fuel movements across North America and data on the Vancouver refineries, co-chairman Robert Perry is interviewed about an upcoming meeting between Washington State and BC officials on oil talks, and on the proposal for an oil supertanker port at Cherry Point.
<i>March 1</i>	William Hope Ross of Placid Oil Corp., and outgoing president of the BC division of the Canadian Petroleum Association, presents a report to the annual meeting of the BC Division, voicing displeasure in the NDP provincial government under Premier Dave Barrett: "Our progress in getting to know Premier David Barrett and his cabinet has not been as good as we wished." Clem Duemett of Union Oil new chairman.
	A Port Moody Municipal Council resolution to remove oil refineries from Burrard Inlet.
<i>May 14</i>	Westcoast Petroleum Ltd.'s Western System pipeline spills 1,300,000 liters of oil into the Salmon River north of Prince George, eventually reaching the Fraser River. After investigations of the spill were made by federal and provincial regulatory agencies, the Associate Deputy Director of the British Columbia Department of Commercial Transport and Communications (DCTC), responsible for regulating the provincial pipeline, informs the company "that further preventative measures will have to be undertaken to ensure that damage to the environment will be kept to a minimum in the event of an oil spill from the 12-inch crude oil pipeline". As a result, the company conducts a survey of its pipeline which is submitted to the DCTC. The survey submission details the development of a \$1.3 million environmental control program, including a proposed \$970,000 installation of 16 additional valves and 57 remotely-operated actuators to ensure that damage to the environment would be kept to a minimum in the event of an oil spill. The submission notes that of the twenty-seven major river crossings, [only] five are protected by valves located on both sides", and recommends the company install an additional 16 valves to "provide reasonable protection for

1974 (continued)	<p>all sections of the pipeline. Seven of these valves would be located in the Pine River area to supplement the eight valves presently installed in this section” (19 of the pipelines total 27 river crossings are over the Pine River).</p> <p>The DCTC rejects the company’s request for an increase in tariffs to its clients in order to pay for the costs for upgrading the pipeline. As a result, Westcoast Petroleum only installs remotely operated valves at the Parsnip, Salmon, Fraser, Cottonwood, Quesnel, Okanagan and Thompson rivers. None of the seven additional valves at the Pine River crossings, nor any of 57 remotely-operated actuators, were installed. As the later investigation into the August 1, 2000 Pine River oil spill would uncover, had the 7 additional valves been installed it would have prevented much of the oil spilled into the Pine River.</p>
<i>June</i>	<p>The US Ford Foundation, through its Energy Policy Project, releases a 114-page report, <i>Oil Spills and the Marine Environment</i>. The authors, University of Virginia scientists Donald Boesch and Carl Hershner, state, “Because so many serious questions remain unanswered and because of the alarming implications of some the information available, we recommend great caution in making policy decisions involving oil and the marine environment. There are reasons to believe that the effects of spilled oil in polar regions might be serious and long lasting.”</p>
<i>Summer</i>	<p>Environment Canada releases a report extremely critical of Syncrude’s Environmental Impact Assessment of its tar sands development plan. In limited information obtained from Syncrude, Environment Minister Jeanne Sauve states that the company “has failed to appreciate the real scope of environmental concerns and has also failed to address the question of environmental protection in either a realistic or an adequate manner” ... (the company’s documentation is) “deficient in detailed information in many areas of environmental concern and we believe there is a likelihood for major environmental damage.” The Minister’s staff report they had “great difficulty” in obtaining certain information from the company. Her staff report, “The Syncrude Environmental Impact Assessment was found wanting in quantitative data relevant to the existing ecosystem components (biological and physical) on Lease 17 and the Athabasca tar sands in general. The functional relationships of ecosystem components lacked quantification and specific aspects of the Syncrude development proposal lacked adequate clarification to effectively predict the ecological consequences of the project. In view of these voids of information, statements presented by the proponent relating to the environmental effects forecast from the development must be considered as conjectural.”</p>
<i>September</i>	<p>Vancouver Sun newspaper article on the concerns of the new pipeline port in Valdez, Alaska, that the town that was decimated in 1964 by an earthquake. The town of 2,500 will be increased by 5,000 due to the pipeline, oil tank, and tanker port construction. The \$5 billion project will build a 798 mile crude oil pipeline, and the new Valdez port will handle several oil tankers simultaneously. City Manager Herb Lehfelt says: “Hell yes, we’d be better off without the pipeline.”</p>
<i>November 20</i>	<p>Trans Mountain finally pays off its long-term debt outstanding since the company was formed in 1951.</p>
<i>December</i>	<p>The price of oil is now at \$11.25/barrel (US).</p>

1975	One of the founders of the Organization of Petroleum-Exporting Countries (OPEC), Juan Pablo Pérez Alfonso, the Venezuelan energy minister, complains: “I call petroleum the devil’s excrement . It brings trouble... Look at this <i>locura</i> -waste, corruption, consumption, our public services falling apart. And debt, debt we shall have for years”.
<i>January 10</i>	Trans Mountain pipeline oil spill of 250,000 gallons on farmland just north of Bellingham, Washington. “The Department claimed employees failed to properly operated control valves while making an oil transfer at refineries in Ferndale and Cherry Point. Excessive pressure created in the pipeline caused a weld seam to break, inspectors found.” The Washington State Ecology Department charges the company for negligence and fines the company \$20,000, the maximum under the State law.
<i>January 30</i>	US oceanographer Dr. John Hunt of the Woods Hole oceanographic institute near Boston appears before the Senate Commerce Committee. From data collected on oil spills, he testifies that oil tankers, on a yearly world average, have spilled 2.13 million metric tons of crude oil. Spills into rivers and urban environments were at 2 million metric tons. Spills from coastal refineries and industries were at 800,000 metric tons. Spills from offshore operations were at 80,000 metric tons.



Dr. Mellon, as Deputy Minister of Mines and Minerals and later of Energy, had a key role in negotiations which ultimately allowed the Syncrude project to proceed. Despite an environment of uncertainty and change, including the first OPEC-related price jump, major changes in federal resource taxation,

also developed terms of reference which made smaller, non-integrated oil sands projects feasible. Dr. Mellon was respected by his federal and provincial counterparts for his professional reputation as a geologist and his solid technical background. These strengths added to his effectiveness in intergovernmental negotiations on Alberta's behalf.

Dr. Mellon was a strong advocate of an expanded and ongoing program of technology development and played a key administrative role in the establishment of AOSTRA.

<i>February</i>	In a hotel room in Winnipeg, Syncrude, a joint venture company controlled by four American companies (Imperial Oil, Gulf Oil, Atlantic Richfield, Cities Service), undergoes a metamorphosis. It emerges as a hybrid of 3 multinational corporations and 3 Canadian governments to finance and construct a \$2 billion tar sands project on Syncrude Canada Limited's lease 17. Following the involvement of the federal government's partnership in Syncrude, Ottawa and Alberta announce the commencement of a joint 10-year environmental research program with funds of \$40-\$50 million. The big question is will federal and provincial environmental staff report against both levels of government who are now partners in the development of the tar sands?
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1975

Maurice Carrigy assists in drafting the Alberta Oil Sands Technology and Research Authority (AOSTRA) Act and Regulations, the mandate behind the new Alberta government Crown corporation, to develop and



disseminate oil sand and heavy oil reservoir production technology. In 1957, Carrigy joined the Geology Division of the Alberta Research Council, and spent the next 16 years exploring and mapping the Alberta oil sands. In 1974, Carrigy was seconded to the Alberta Department of Mines and Minerals as its senior advisor on oil sands, where he drafted AOSTRA, and was appointed as one of three founding members. Dr. C.W. Bowman, named in January 1994 to the Order of Canada, was the founding Chairman from 1975 to 1984, after which he became president of the Alberta Research Council until 1991. Carrigy remained vice-chairman of AOSTRA from 1975 to end of 1987. In January 1989 Carrigy moves to New York to head UNITAR's oil sands international information centre. In June 1992, Carrigy was awarded the Karl A. Clark Distinguished Service Award at the Canadian Heavy Oil Association conference held in Calgary. In 2000, AOSTRA changes its name to become the Alberta Energy Research Institute.

AOSTRA is set up with an initial \$100 million to support technology development in the oil sands. Alberta government officials state the total sum of funds to AOSTRA over a 25 year period is near \$700 million. In 1976, the Alberta government established the Alberta Heritage Savings Trust Fund from its oil and gas revenues with an initial sum of \$1.5 billion. From 1976 to 1983, 30 percent of oil and gas revenues were transferred to the Fund, and from 1983 to 1987, 15 percent of these revenues were transferred to the Fund, after which time the transfers were suspended. In 1987 the fund was at \$12.7 billion. At times monies from the Fund went to support Alberta's capital projects and budgetary expenditures, where in 1992-1993 AOSTRA received \$419 million (this cash inflow was not mentioned in its historic funding graph generated by AOSTRA in 2000). From this Fund, the Alberta government also invested \$499 million in Syncrude's project in the oil sands.

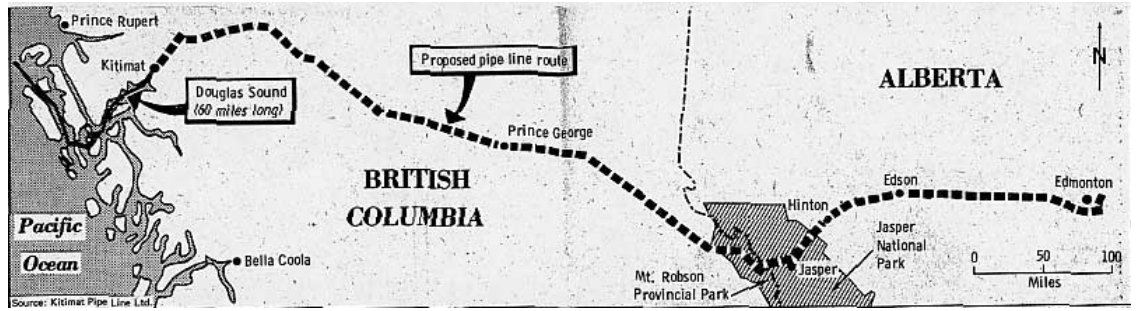
AOSTRA reports to the Minister of Energy. AOSTRA's expenditures make it one of the largest single-purpose research and development programs in Canada, with its head office in Edmonton.

There was also mention that the Alberta Chamber of Resources had a hand in the initiation of AOSTRA.

In addition to AOSTRA, was the formation of the Alberta Oil Sands Information Services (AOSIS), to acquire, organize and supply public information on Canadian and international developments in heavy oil, enhanced oil recovery and oil sands research, and the establishment of a database (called HERO). After 30 years, AOSIS collects more than 32,000 records.

1975	Three Days of the Condor hits movie screens. Robert Redford is up against the U.S. government and the big oil companies, after discovering the CIA within the CIA.
<i>May 10</i>	Trans Mountain makes public a feasibility study to Washington State to build a deep-water oil supertanker (325,000 dead weight tons) terminal near Anacortes in Burrows Bay. Shell and Mobil Oil have similar proposals. Glenn Ledbetter, executive director of the State Oceanographic Commission, said “If the companies Mobil, Shell, Arco and Texaco agree to a common-use terminal, perhaps the state will agree to allow the use of larger tankers.” The study comes in support of proposals for a new trans-Alaskan crude oil pipeline to Valdez.
<i>July</i>	Based on Canadian policy to discontinue oil exports by 1981, Trans Mountain, in alliance with a group of oil companies, proposes to “reverse” the flow of crude oil to be supplied from Alaska, to now flow from Washington State to Edmonton, to tie into the Interprovincial pipeline, and then southwards to additional points in the US.
<i>July 30</i>	The federal government creates Petro-Canada, a federal Crown corporation, given a broad legislative mandate to expedite petroleum exploration and development in Canada. Within 6 years it acquired the Canadian assets of four foreign-owned multinationals – Atlantic Richfield, Pacific Petroleums, Petrofina, BP Canada – and by 1983 had acquired assets of over \$8 billion. In 1979, the Conservative government of Joe Clark almost privatizes the Crown corporation. By 1984, following the defeat of the federal Liberal Party by Brian Mulroney’s Conservatives, the federal government revises Petro-Canada’s mandate as a public policy instrument, and in 1991 and 1995, through separate share offerings, 80% of Petro-Canada’s equity is sold to private investors. The company has major holdings in Alberta’s tar sands.
1976	<p>Alberta social scientist Larry Pratt’s book is published, <i>The Tar Sands: Syncrude and the Politics of Oil</i>. As stated in his preface: “The essential thesis is that Syncrude is likely to become the prototype for new energy ventures in Canada; and if this is correct, every Canadian should know something of Syncrude and of the remarkable power of the oil lobby in our political system. If power is the ability to realize one’s will and to achieve one’s objectives, then the oil lobby necessarily must be reckoned as one of Canada’s fundamental power blocs.” Built into the fabric and fine print of Albertan politics since the 1960s, is the development potential of the tar sands, an area of some 20,000 square miles.</p> <p>“The Great Canadian Oil Sands looks like it came boiling out of the imagination of some early surrealist painter with a fascination for monstrous earth-moving machines and smoke-belching factories – a celebration of the triumph of technology over wilderness.... The scale of the technologies employed, the mountains of materials handled every hour, the size of the mining pit, the sprawling lakes of polluted wastes – these are at once awesome and horrifying. After 8 years of intensive development, the Great Canadian Oil Sands lease is an ecological disaster – acres of black, scarred earth, hills of heaped soils, deep open pit mines, sulphurous stench – a kind of northern Appalachia, a biologically barren landscape... much of the destruction is simply the price we imply when we argue that we must exploit the tar sands to meet North America’s appetite for nonrenewable resources or to keep Canada self-sufficient in energy. Sacrifice of the environment may be inevitable if security of energy supplies is a national priority; clearly, there are policy trade-offs and dilemmas which admit no easy, instant solutions. But the present strategy of energy development in Canada entails some very heavy costs and highly questionable benefits, and nowhere are these more apparent than in the tar sands.”</p> <p>“It is the thesis of this study that Canadians are not receiving fair value for the exploitation of their resources; that it is the handful of multinational companies, holding almost exclusive leasing privileges in the tar sands, that are dictating the conditions for their development; and that the attendant social and environmental problems are threatening to get out of hand even in the very early stages. Many of the heaviest costs of what we are allowing to happen will be paid by our children and their children; and we will deserve their opprobrium if we do not soon demand some radical changes.”</p>

1976 (continued)	<p>“Since the environmental costs of this development are extremely high and since the current technology and economics of extraction are still in the operational infancy, the tendency will be for the corporate structures to externalize these costs for society to absorb.”</p> <p>“Where else but in Canada would an elected cabinet minister (William Yurko) responsible for the protection of the natural environment emerge as a public advocate of the strategy of rapid resource development?”</p>
	BC Court of Appeal decides the Strait of Georgia is owned by BC.
<i>April 2</i>	<p>A consortium of six companies – Interprovincial Pipe Line Ltd., Ashland Oil Inc., Koch Industries Inc., Hudson’s Bay Oil and Gas Co. Ltd. (in association with Continental Oil Co.), Farmers Union Central Exchange Inc., and Murphy Oil – announce their intention to support Trans Mountain’s proposal for a new Prince Rupert to Edmonton 750 mile long crude oil pipeline. Due to the Arab oil embargo of 1973, and Canada’s decision to phase out the export of crude oil to the US, US oil companies launch a proposal to supply oil demands from Alaska through a new Kitimat-Edmonton pipeline, which causes great concerns to British Columbians. The Alaskan fed oil is destined for U.S. refineries south of the Canadian border from Montana to Wisconsin. The Scientific Pollution and Environmental Control Society (SPEC) state to the press: “The port and pipeline pose too great a threat to the environment from oil spills.” The proposals come long after announcements from the federal government limiting Canadian oil exports to the U.S. In 1976, Trans Mountain’s petroleum deliveries, in contrast to 1975, were down 25 percent to 220,000 barrels/day. By July 1, 1976, total exports of Canadian crude to the U.S. was down to 450,000 barrels/day, the reason why Trans Mountain wants to import oil at Cherry Point and reverse the flow of oil to the east. A year later, Trans Mountain considers “yo-yoing” the pipeline, changing the flow of oil on a weekly basis. Some refineries only process “sweet” crude oil extracted from Alberta, others process “sour” crude oil.</p>
<i>April 21</i>	At Trans Mountain’s annual shareholder’s meeting, company president K.L. Hall announces plans for a new pipeline route from Prince Rupert to Edmonton for Alaskan and Middle East crude oil.
<i>July 14</i>	Trans Mountain announces its go-ahead for plans with a consortium of 9 other companies for a pipeline from Kitimat to Edmonton to carry Prudhoe Bay crude oil shipped from Valdez, and oil from the Middle East. The Fisheries Council of Canada opposes the bid.
<i>October 7</i>	The Vancouver Sun newspaper publishes details from a leaked document showing the BC government’s Environment and Land Use Secretariat and the federal Environment Ministry severely critical of the proposed Kitimat-Edmonton pipeline, “environmentally, economically, and socially.”
<i>December</i>	The Argo Merchant spills 8 million gallons of crude oil. There is a combined \$120 million in lawsuits from fishermen, with more from the State of Massachusetts.
<i>December 7</i>	Trans Mountain announces its reconsideration of a supertanker crude oil port in Washington State waters. It pulls out of a consortium planning for a pipeline bid from Kitimat to Edmonton, “because participating U.S. oil companies refused to allow Trans Mountain to build and operate a 300-mile section of the pipeline to Edmonton along the existing Trans Mountain right-of-way.” Trans Mountain put in the Kitimat bid after Washington law restricted tanker size in Puget Sound. “Trans Mountain would seek permission from Washington State authorities to have supertankers deliver oil from Alaska, the Persian Gulf and Indonesia.” Six companies are still in the bid for the 750 mile line from Kitimat to Edmonton, to file an application to the National Energy Board on December 8. Environmentalists and Indian Bands are opposed to the Kitimat proposal, “pointing to narrow twisting channels leading to Kitimat, fear a devastating oil spill wiping out local fisheries.”

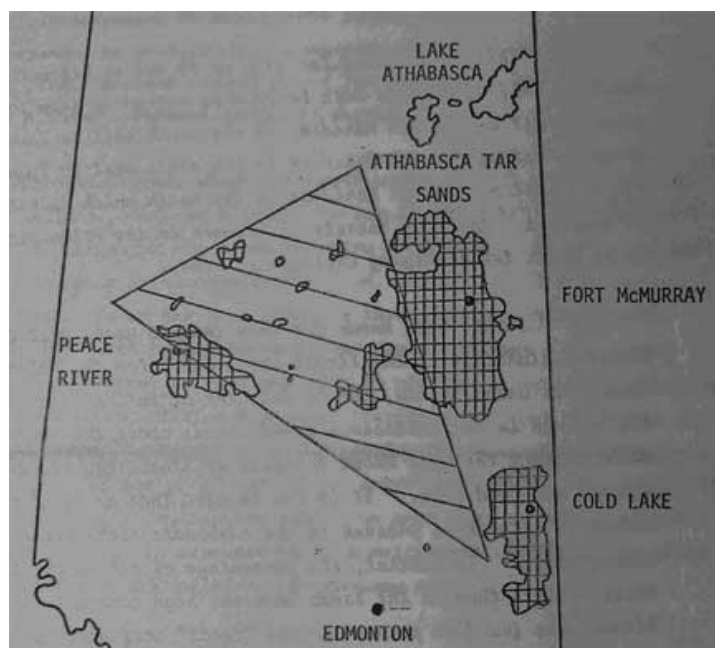
<i>December 6</i>	Vancouver Sun newspaper: "James Bond would love the intrigue that surrounds all the Alaska oil pipeline projects that have been put forward, rejected, rejuvenated, modified, abandoned, expanded, jettisoned, or otherwise diddled with. The news that another group of B.C. businessmen and former W.A.C. Bennett cabinet ministers have gathered to revive the thrice-killed Kitimat Oil Pipeline Ltd. project brings to light the degree of wheeling and dealing that is going on."
<i>December 8</i>	BC Transport Minister Jack Davis appears as an Intervener at the National Energy Board regarding the consortiums bid for a Kitimat-Edmonton pipeline. The consortiums file a six volume application that day before the NEB at a cost of \$2 million, which is withheld from being publicized until reviewed by the federal Ministry of Transport.
<i>December 12</i>	Kitimat Pipe Line Ltd. files its six volume TERMPOL submission to the Ministry of Transport, the first such voluntary review process submission. The TERMPOL Code is a code of "recommended standards for the prevention of pollution in marine terminal systems." A TERMPOL Coordinating Committee is established for a four and a half month assessment review.
	The federal government releases its report, <i>An Energy Strategy for Canada</i> .
1977	The Mackenzie Valley pipeline (Berger) report is released.
	With the proposal for a Kitimat supertanker port, Canadian Energy Minister Alastair Gillespie, who consulted with US President Jimmy Carter's special energy advisor James Schlesinger, suggests that Canada could import oil from Indonesia.
<i>February</i>	Establishment of the Termpole Coordinating Committee – seven federal government departments, and one BC government department.
<i>March</i>	Science reporter Philip Fradkin publishes a report in the Audubon magazine on the dangers of oil tanker traffic in southern Alaska. Concerns about the extreme weather near Valdez and concerns about why double hulls and other safety measures were not mandated by international law. The Exxon Valdez tanker, that spilled oil in March 1989, was a single hull tanker.
<i>March 10</i>	<p>Recommendations from Fisheries and Environment Minister Romeo LeBlanc and Transport Minister Otto Lang to hold a public inquiry under the federal Inquiries Act (Part 1, R.S.C., 1970, c.1-13). Under supervision of Justice Minister Ron Basford the federal government passes Order-in-Council P.C. 1977-597, the Terms of Reference for Andrew Thompson, Inquiry Commissioner for the proposed oil import pipeline from Kitimat to Edmonton, the Kitimat oil port and west coast oil tanker traffic terminus, otherwise known as the Canada West</p>  <p>Coast Oil Ports Inquiry (further amendments: P.C. 1890, June 30, 1977; P.C. 2149, July 28, 1977; P.C. 3687, December 22, 1977). Thompson is to report on "the social, environmental,</p>

1977 (continued)	<p>fisheries and navigational safety aspects.”</p> <p>Jack Cressey, manager of the Kitimat Pipe Line Company, states, “We sure stepped into a hornet’s nest”, and a “lengthy public inquiry into the proposed Kitimat oil port and tanker route could jeopardize plans for the Kitimat-Edmonton pipeline,” and that such a lengthy inquiry did not meet his proposal’s timeline. Gary Gallon, executive director of Scientific Pollution and Environmental Control Society (SPEC) states, “he’s fair, he won’t kowtow to the federal government, he has a mind of his own and we have observed his work.” Thompson, a member of the University of BC Law faculty, was the former chairman of the BC Energy Commission (1973-1975), and presently chairman of the Canadian Arctic Resources Committee.</p>
<i>March 15</i>	<p>Public charges by groups opposing the Kitimat pipeline proposal by Kitimat Pipe Line Ltd. contributing \$25,000 to the North Central Municipal Association convention to be held aboard CP cruise ship Princess Patricia making a round trip from Vancouver to Ketchikan May 10-15. Costs for the cruise ship for the five day event are \$90,000 (\$1,000 an hour). Said Jack Jahour, chairman of the Terrace Alliance Against Super-Tankers to Kitimat, it amounts to a “thinly-veiled bribe”, and that his group is “strongly opposed to our officials compromising themselves by accepting this oil company attempt to corrupt the democratic process.” Similar statements were made by Hank Lavertu, Prince Rupert spokesman for Save Our Shores, by Peter Burton of the Kitimat Coalition Against the Pipeline, and director Tony Pearse of the Telkwa Foundation. Kitimat mayor George Thom “said Kitimat Council has already approved of a submission to the National Energy Board outline 44 deficiencies in the Kitimat Pipe Line proposal, so Council members cannot be influenced by the company’s contribution now.”</p>
<i>April 1</i>	<p>West Port Oil Inquiry Commission Andrew Thompson advises federal financing for intervenor funding. “It is not only the native people, and the environment groups who require the assistance – even the district of Kitimat or the Regional District of the Queen Charlottes finds itself mismatched against the financial weight of the applicants.”</p>
<i>April 13</i>	<p>Douglas Robinson, the U.S. White House-appointed coordinator of the Alaskan oil and FEA consultant, states that Trans Mountain’s “yo-yo” pipeline scheme, to reverse the flow back to Edmonton, and vice-versa, that involves oil tanker traffic through the Juan de Fuca Strait, should not be supported by the Canadian federal government, as “the threat of oil spills would increase if more or bigger tankers used the strait.” University of BC economics professor John Helliwell comments that “It does look like a bit of a make-work project for Trans Mountain.” At the time there were already 21 oil tankers a month through the Strait, delivering oil from Nigeria, Indonesia and the Persian Gulf, at a average of 300,000 barrels/day, for the two refineries at Ferndale and the two refineries at Anacortes. The political question was to see another 600,000 barrels/day to pass through the Juan de Fuca Strait, and with larger supertankers.</p>
<i>May</i>	<p>Transport Canada and federal departments of Environment, Fisheries and Public Works Committee releases its review of oil tanker traffic TERMPOL report. The Committee finds numerous shortcomings with Kitimat Pipe Line Ltd.’s report. The review process findings are directed to the West Coast Oil Ports Inquiry Commissioner who later makes strong criticisms in his February 1978 about its “deficiencies” in his Inquiry recommendation report. In the report: “It is generally accepted that oil spills are inevitable as a result of the proposed oil terminal operation. The effect of such spills to the biological resources and the socio-economic effects could be serious.”</p>
<i>May 13</i>	<p>CPR cruise ship Princess Patricia, with 80 convention delegates of the North Central Municipal Association (interspersed with 135 other passenger guests, including oil executives), is intercepted at the mouth of the Douglas Channel by a small fleet of about 25 boats protesting oil supertankers. In the boats were members of the Tsimshian-Haisla Nation with a Super-8 movie camera, Prince Rupert fishermen, the United Church of Canada’s missionary boat, top</p>

	<p>executives of the United Fishermen and Allied Workers Union, Greenpeace with its 67 foot Meander. The Tsimshans from Hartley Bay had repeatedly radioed the Princess Patricia for her to stop and to be boarded by them for a peaceful meeting. The Patricia, instead, went full speed, intending to outrun the boats. After the small boats criss-cross its path, the cruise ship slows to six knots, and then Greenpeace's small rubber boat runs against its hull overturning its two passengers, who manage to live through the washout.</p> <p>Aboard the Princess Patricia, a Skeena-Queen Charlotte Regional District director releases a hand-written press release: "The North Coast Municipal Association has injured its credibility by permitting the host city of Kitimat to accept on its behalf what can only be called a \$25,000 bribe from the consortium of American-controlled companies making up the Kitimat Pipe Line Ltd." On board was Howard Mitchell, owner of Kitimat's Northern Sentinel newspaper and president of Mitchell Press of Vancouver, who circulated an eight page pro-pipeline tabloid.</p>
<i>June 1</i>	The Kitimat Oil Pipeline Company temporarily withdraws its application with the National Energy Board for a deep sea port and crude oil pipeline to Edmonton. BC Premier Bill Bennett: "From B.C.'s standpoint the proposal offered nothing positive. I think they made a realistic appraisal of their own proposal." The Kitimat Oil Pipeline Company refuses to participate in the West Coast Oil Ports Inquiry.
<i>July</i>	Oil starts to flow through the Trans-Alaskan Pipeline to the oil port terminal in Valdez.
<i>October</i>	United States Congress rules against the Cherry Point proposed oil terminal at Cherry Point, Washington State, for Trans Mountain's pipeline, and passes a wildlife refuge bill eliminating Trans Mountain's bid. The U.S. Bureau of Land Management begins an environmental impact statement assessment of the proposed 2,700 kilometer long Northern Tier Pipeline across the northern United States from Puget Sound to Minnesota. The Statement is due for completion by the end of April 1978.
<i>November 11</i>	The West Coast Oil Ports Inquiry is adjourned.
<i>November 13</i>	During a news conference, Federal Justice Minister Ron Basford accuses the Kitimat Pipe Line Ltd. of "trying to manipulate the Canadian processes" on the West Coast Oil Ports Inquiry. Just after the adjournment of the Inquiry Commission, Kitimat Pipe Line Ltd. suggests it will now renew its application interest before the National Energy Board. Basford: "It is strange that the company has not participated in the hearings, but met to object to the recess." The Thompson Inquiry was placed into dormancy due to the uncertainty of the application, and concerns about federal funds for the ongoing Inquiry.
	309 wells drilled in BC, compared to 175 in 1976, and \$484 million spent by oil and gas producers – average cost for drilling a well at \$370,000. A total of 13.8 million barrels of oil produced in 1977.
1978	Frenzy begins in drilling for oil in BC – by March there are 60 drilling rigs in BC's oil patch north of Dawson Creek, which is mostly "gas prone". The new oil fields near Ft. St. John are producing 4,000-6,000 barrels/day. In total, BC produces 40,000 barrels/day, but busily consumes 150,000 per day. In the fiscal year of 1977-1978, the BC government receives a record \$196 million in bids for Crown land oil and gas rights, the highest bid by Shell Canada Resources Ltd., for \$2,421,000.
<i>January</i>	The Kitimat Pipe Line Ltd. reapplies for a larger port and pipeline facility in Kitimat. It proposes to ship 700,000 barrels/day of crude oil into Kitimat, with the potential of doubling its capacity.

<p>1978 February 23</p>	<p>The West Coast Oil Ports Inquiry Commissioner files his report, <i>Statement of Proceedings</i>, to the federal departments of Environment, Fisheries and Transport, on his summaries and conclusions of the Kitimat oil proposal. The Ministers subsequently reject the proposal, doubting that “the benefits of establishing such a port would be sufficient to offset the danger of risking a major oil spill.” Commissioner Thompson was critical of the National Energy Board’s announcement for “hearings” scheduled to begin on May 24, with a final report for September, calling the Board a “quasi-judicial body” (in a 2002 NEB report on First Nations relations, it refers to itself as “an independent quasi-judicial tribunal”).</p>
<p>March 27</p>	<p>Washington State Energy Facility Site Evaluation Council votes unanimously for Trans Mountain to bow out of its application proposal for a supertanker site at Cherry Point. Senator Warren Magnuson and environmentalists opposed the application. Magnuson passed an amendment to the <i>Marine Mammals Protection Act</i> banning increased tanker traffic in Puget Sound.</p>
<p>May</p>	<p>The National Energy Board begins a major study on oil supply and demand with hearings to be held across Canada. “The Board does not anticipate that it will be in a position to proceed with the hearing of the Kitimat application prior to concluding the oil supply and demand inquiry.”</p>
<p>May</p>	<p>The government’s Alberta Oil Sands Technology and Research Authority (AOSTRA) publishes the first TAR Paper newsletter, “in response to requests for increased communication among members of the oil sands community.” AOSTRA is an Alberta government Crown corporation formed in 1975 to develop and disseminate oil sand and heavy oil reservoir production technology. The quarterly newsletter continues to be published until 1993, and provides</p> <div data-bbox="696 753 1507 1022" data-label="Image"> </div> <div data-bbox="441 1163 1433 1957" data-label="Image"> </div>

1978 (continued)	<p>interesting insights into the numerous activities of the “oil sands community”, the family of government, industry and academia. In association, funded through AOSTRA, the Alberta Research Council and the Oil Sands Research Centre operate the Alberta Oil Sands Information Center (established in 1975). The Information Centre’s objective is to collect and disseminate technical information about Alberta’s tar sands, a collection of articles, technical papers, reports and patents that accumulates yearly by about 1,000 documents. Large sums of funds were acquired for university researchers to experiment with new technologies for the removal of Alberta’s tar sands, in an area nicknamed as <i>The Carbonate Triangle</i> (three deposit zones, a triangular area of 70,000 square kilometers, where high concentrations of bitumen are found in porous ancient “coral” reef developments), the implementation of professorships, scholarships, and fellowships at Alberta’s three universities, Alberta, Calgary and Lethbridge.</p>
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The Carbonate Triangle

<i>September</i> <i>15</i>	<p>The Syncrude Canada Ltd. (incorporated in 1964) plant is officially opened north of Ft. McMurray in Alberta’s tar sands. Production begins immediately since the company has been mining and stockpiling the oil sands for more than a year. Production starts at 50,000 barrels of oil per day, which will soon rise to 100,000. Canadian Bechtel Ltd., the large engineering and construction firm, was the prime contractor for both the Syncrude and Suncor plants. Syndey Blair, author of the Blair Report to the Alberta government in 1950 on the feasibility of the oil sands development, was Chairman and President of Canadian Bechtel Ltd. The price of oil is at \$12.70, and will rise far higher by 1980.</p>
	<p>Implementation of federal legislation, the <i>Petroleum Corporations Monitoring Act</i>, to monitor foreign investments and earnings in the Canadian petroleum industry.</p>

1979	<p>The Alberta Research Council publishes a handbook on the Oil Sands, providing information on existing oil sands researchers and projects. On page 158 ff., are a list of researcher affiliations: the Alberta Oil Sands Technology and Research Authority, the Alberta Research Council, the Amoco Canada Petroleum Co. Ltd., Amoco Oil Research and Development, BP Canada Ltd., the Canada National Research Council, Canada-Cities Service Ltd., CANMET, Chevron Standard Ltd., the Coal Technology Information Centre, Colt Engineering Corp., the Computer Modelling Group, Dynawest Projects Ltd., Energy Mines and Resources Canada, Esso Resources Canada Ltd., Great Canadian Oil Sands Ltd., Gulf Oil Canada Ltd., Hudsons Bay Oil and Gas Co. Ltd., Husky Oil Operations Ltd., the Hydrocarbon Research Center, Inpeluz, Japex Canada Ltd., Murphy Oil Co. Ltd., Norcen Energy Resources, Numac Oil and Gas Ltd., the Oil Sands Information Center, the Oil Sands Research Centre, the Ontario Research Foundation, Pennsylvania State University, Petro-Canada, Petrofina Canada Ltd., the Petroleum Recovery Institute, Shell Canada Resources Ltd., Syncrude Canada Ltd., Texaco Canada Inc., the Union Oil Company of Canada Ltd., Universidad Del Zulta, the University of Alberta, the University of Calgary.</p> <p>Not mentioned on the list is the Alberta Oil Sands Environmental Research Program (AOSERP). It was established in 1975 through an agreement between the Ministers of Alberta's Environment Department and Environment Canada, to direct and coordinate research projects concerned with the environmental effects on the development of the Athabasca Oil Sands. On March 31, 1979, Environment Canada withdrew from the agreement, and Alberta Environment then took over the complete fiscal support of the program. On April 1, 1980, AOSERP was amalgamated with Alberta Environment's new Research Management Division under the existing Research Secretariat (established in March 1973), which had been providing funds to consultants and academics for research on a wide range of environmental issues. According to the January 1979 TAR Paper newsletter, the AOSERP Program Management office in Edmonton, staffed by 11 professionals, conducts research "on minimizing the effects of development of the Athabasca Oil Sands" under Air, Human, Land and Water category systems. AOSERP has a field office in Ft. McMurray. In 1978, the province of Alberta and the federal government contributed \$4 million to AOSERP for 50 related "environmental" studies summarized in the TAR Paper. On April 12, 1979, AOSERP sponsored a workshop in Ft. McMurray on biophysical interactions in the oil sands area for representatives of government, industry and universities. Described were projected environmental impacts of oil sands developments and biophysical responses to these developments.</p>
	<p>Peter Foster's book, <i>The Blue-Eyed Sheiks – The Canadian Oil Establishment</i>. Foster was senior editor at the Financial Post. "Examining the power structure in Alberta is like peeling back the layers of an onion. Each layer fits, but comes away easily. There are no great conspiratorial connections." "For the majors, the tar sands always stood as "plan B" if the frontiers failed. They were the only potential source of major domestic oil supplies, but there were also giant technological and financial risks attached to the tar sands development."</p>
	<p>In the Volume 18 edition of <i>Environmental Pollution</i>, authors D.R. Barton and R.R. Wallace publish the results of an experiment, where oil sands tailing sludge was purposely dumped into a northern Alberta River, watching and tabulating the death of benthic invertebrates up to some 30 miles downstream. Many selective experimental and monitoring studies are underway on the impacts of the oil industry on Alberta's tar sands.</p>
	<p>AOSTRA's March 31, 1979 Annual Report states: "Both the industrial and university sectors have responded enthusiastically to Alberta's initiative in launching a massive R&D program in oil sands and heavy oil. However, to ensure that there is continued improvement in the energy efficiency and the environmental acceptability of the technology being developed, the Authority expects that many new programs will be required."</p>

1979 <i>May 16</i>	First meeting of the Alberta Committee on Oil Sands Analysis (previously called the Oil Sands Analytical Advisory Committee). Representatives from the Shell Research Centre, Laramie Energy Technology Center, Great Canadian Oil Sands, University of Alberta, Gulf Canada Resources, Petro-Canada, Alberta Research Council, Esso Resources Canada, and Syncrude Canada make up the Committee.
<i>May 28</i>	At a public meeting in Victoria, View Royal ratepayers oppose a proposal for oil tank containers in Plumper Bay in Esquimalt. Captain Rodney Trail, a former oil tanker master, states: "I can assure you that if you have oil tanks you are going to have an oil spill sooner or later – it will probably be sooner, because every new installation has a spill. The oil companies are cheap and nasty and they will put in the cheapest installation they can get away with."
<i>June 4-12</i>	<p>First UNITAR (United Nations Institute for Training and Research Centre for Heavy Crude and Tar Sands) international conference on Heavy Oil and Tar Sands, held in Edmonton, Alberta. UNITAR, the U.S. Department of Energy, the Alberta government, the U.S. Geological Society, the United Nations Development Program, Energy Mines and Resources Canada, and State of California's Department of Conservation organize the conference. About 300 international delegates, geologists, geophysicists, engineers, refinery experts, economists, environmental scientists, financial and marketing experts, from 34 countries, come to the forum to discuss the potential of the world's oil sands and heavy crude, with the presentation of 100 technical papers. Seven papers are presented under the theme of "Environmental Research", some of which include: <i>Environmental Considerations in the Cold Lake Project</i>; <i>Environmental Programs in the Athabasca Oil Sands of Alberta</i>; <i>Alberta Environmental Considerations - Alberta Oil Sands Development</i> (Alberta Environment Department). UNITAR maintains an Information Centre for Heavy Crude and Tar Sands in New York established in 1981, maintained by Dr. Joseph Barnea who was instrumental in organizing the first international conference on tar sands.</p> <p>Resulting from the first conference is a four partner agreement for joint research and development activities of Canadian and U.S. oil sands deposits: U.S. Department of Energy, Energy Mines and Resources Canada, the Alberta Oil Sands Technology and Research Authority, and the Saskatchewan Department of Mineral Resources. Other research agreements are made between Alberta universities and private industry and Venezuela, and with Madagascar oil sands.</p> <p>Six more conferences, organized by the International Centre for Heavy Hydrocarbons, were held until 1998: February 7 - 17, 1982 in Caracas Venezuela; July 22 - 31, 1985 in Long Beach, California, USA; August 7 - 12, 1988 in Edmonton, Alberta, Canada; August 4 - 9, 1991 in Caracas Venezuela; February 12 - 17, 1995 in Houston, Texas, USA; October 27-30, 1998 in Beijing, China. Its mission is "to promote responsible development of technologies to convert worldwide heavy oil, oil sands, bitumen, oil shale and residuum resources in an efficient, economical and environmentally sound way to high value clean products for the 21st century."</p>
<i>September 27</i>	Trans Mountain publicizes another proposal. It will not increase import oil tanker traffic but double and triple present oil tanker traffic capacities. There are currently about 250-300 tankers, ranging from sizes of 50,000 – 125,000 tons, entering the Strait of Juan de Fuca. Trans Mountain's application to be presented to the National Energy Board next week.
<i>October 31</i>	Organizers, the Alberta Chamber of Resources (an industry lobby group) and the Edmonton Chamber of Commerce, sponsor Oil Sands Seminar '79, where some 300 industry and government representatives attend. The theme of the conference is on the attitude of government and industry on the development of Alberta's oil sands.

<i>November 14</i>	George Lechner, former chairman and chief executive officer of the BC Petroleum Corporation, addresses the Vancouver Chapter of the North American Society for Corporate Planning, and suggests more off-shore oil exploration.
1980	The federal government announces the National Energy Program legislation. Its aim is to help reduce Canada's dependence on foreign oil. In late 1984, Brian Mulroney's newly elected Conservative government dismantles the National Energy Program, along with deregulating oil and gas prices.
<i>January 21</i>	The Globe and Mail newspaper reports how private petroleum consultants are on the rise in Canada, "more than 2,000 full-time consultants now work in Alberta alone. About two decades ago, it was practically unknown – if not altogether impossible – way of earning a living. Even 10 years ago, their numbers could have been counted on two hands."
<i>December</i>	Eight NDP MLAs from Vancouver Island file a submission to the National Energy Board against Trans Mountain's application to build another pipeline along its existing right-of-way back to Edmonton, supplied by oil tanker crude from Alaska, repeating the risk to BC coastal waters. The oil tankers would dock up at Low Point, 32 miles west of Port Angeles, and a pipeline would be built across the Olympic Peninsula, under Puget Sound, and then overland. Trans Mountain intends the line to hook into the big artery in Edmonton back down to the United States. The BC government files a submission to support Trans Mountain's proposal, "contrary to that stated frequently by Premier Bill Bennett." Since the recent dissolution of BC's Environment and Land Use Secretariat, and contrary to the provincial and national public's objections to oil tanker traffic, Socred Environment Minister Stephen Rogers gives the project proposal his "blessing and support". Trans Mountain invests \$5 million on the proposed project's applications to Canadian and US regulatory authorities.
	The price of oil is now at \$32.00/barrel (U.S.), an increase of \$27.50 in seven and a half years.
1981	The Canada Oil and Gas Lands Administration created to regulate oil and gas activities on Canada's Frontier lands. It is disbanded in 1991.
	The BC Ministry of Energy, Mines and Petroleum Resources creates a new division, the Offshore Administration Branch, to develop and coordinate policies concerning offshore oil and gas activities.
<i>January 5</i>	H.B. Scott, president of Syncrude Canada Ltd.: "Oil sands mining will have a major role to play in Canada's oil needs until at least the end of the next century. The basic resource is sufficient to support 10 to 15 plants the size of Syncrude, and to provide Canada with between 500,000 and 1.5 million barrels a day of production over a sustained period, depending on how we want to make the resource last ..."
<i>June 1</i>	BC Energy Minister Bob McClelland gives oil exploration companies approval for exploration in Hecate Strait, Dixon Entrance, Queen Charlotte Sound and Strait, defying the 10-year old federal moratorium. It is a message to Ottawa over BC's wrangling in the Supreme Court (1967) for jurisdiction over coastal water rights granted to BC in the BC Court of Appeal. McLelland dispatches a telegram to the federal Energy Ministers: "We are acting now because of the growing concern over oil security and a need to ensure that economic opportunities related to oil exploration and exploitation are maximized and possible detrimental environmental and social impacts minimized." BC Environment Minister Stephen Rogers states: "A two-phase BC Utilities Commission inquiry will commence immediately with public examination of the effects of exploration. No exploration will be allowed to start until the first hearing is complete and cabinet has acted on its recommendation... We need to indefinitely continue the suspension of exploration activities in Johnstone Strait south of Telegraph Cove

	and in the straits of Georgia and Juan de Fuca.”
<i>June 4</i>	The BC government passes Order-in-Council 1347, pursuant to section 87(g) of the <i>Petroleum and Natural Gas Act</i> , declaring Hecate Strait and Queen Charlotte Sound a provincial Inland Marine Zone. The BC government begins to institute its own jurisdiction over federal waters.
<i>July</i>	Trans Mountain shelves its application proposal for a crude oil pipeline route from Washington State to Edmonton, Alberta, withdrawing from the regulatory processes. It “has asked the Washington State Energy Facility Site Evaluation Council to postpone indefinitely hearings that had been scheduled for the pipeline project.” Lawyers with the Society for Pollution and Environmental Control (SPEC) argue against the proposal, based on the National Energy Board reopening (a new hearing) considerations on the marine environment. “Despite objections from west coast environmentalists, and the opposition of both the B.C. and federal governments, the National Energy Board granted Trans Mountain a permit only a few weeks ago.”
1982 <i>February 7-17</i>	The second International Conference on Heavy Crude and Tar Sands is held in Caracas, Venezuela. AOSTRA donates \$100,000 for delegates selected by UNITAR to attend the conference, and Alberta’s Acting Minister of Energy and Resources, Julian Koziak, presents a \$3 million gift to UNITAR’s Information Centre, a hard copy information package of more than 7,000 oil sands research documents that were collected, catalogued and abstracted over the last 15 years, including access to AOSTRA’s computer data base in Edmonton.
1983	Ed Shaffer’s book, <i>Canada’s Oil and the American Empire</i> , explains how U.S. oil companies gained control of Alberta’s oil and shafted Canadians. At its time, the University of Alberta professor presents a fascinating read setting the detailed backdrop at the great global policy level to help readers understand the contextual role behind the intrigue on policies regarding the Canadian oil front.
<i>June 6</i>	The Alberta government ascends legislation on the formation of The Advisory Committee on Heavy Oil and Oil Sands Development, established under the <i>Department of Energy and Natural Resources Amendment Act</i> , 1983. The Committee holds its first meeting on July 4, 1983, and publishes annual reports for 1984 to 1990. Its role, “in general, will establish and co-ordinate continuing communication among the organizations engaging in the business of the further development of heavy oil and oil sands resources, the residents of communities of Alberta directly affected by that development (socio-economic impacts), and the various departments and agencies concerned in its regulation.” On the original committee is MLA J.E. Miller and Chairman, Don McGladder from Ft. McMurray, Neil Gilliat from Slave Lake, Bill Slawuta from Bonnyville, Norm Strom from the Energy Resources Conservation Board, Dick Aberg from industry, Les Cook from Alberta Energy and Natural Resources, and Norm Gaelick the Executive Director. The 1985 annual report features an oil sands and heavy oil forecast, 1985 – 2010, predicting that by the year 2010 there will be about 1 million barrels of synthetic oil produced. Heavy oil deposits, separate from oil sands, are situated near Lloydminster, south of Cold Lake.

1984	Supreme Court of Canada decides Strait of Georgia is owned by BC
<i>June</i>	Federal and BC Ministers of Environment appoint a five member Environmental Assessment Panel to conduct a public review of the environmental and related socio-economic effects of a potential renewal program of petroleum exploration off BC's west coast. It is called the West Coast Offshore Exploration Environmental Assessment Panel. Public information meetings held in November 1984, and public hearings in September to November 1985. Chevron Canada Resources Ltd. and Petro-Canada Inc., the two companies with exploration rights north of Vancouver Island, acted as proponents for the purpose of the review, to reconsider lifting the offshore drilling moratorium.
1985 <i>March</i>	The governments of Canada and the oil and gas producing provinces of Saskatchewan, Alberta and British Columbia sign the <i>Western Accord</i> , which deregulates oil prices and eliminates export controls beginning on June 1, 1985. As a result, the National Energy Board is deregulated to no longer determine the price of exported oil. It now issues short-term export orders, with no restrictions on volume and price.
<i>September 6</i>	The oil sands public relations machine in Ft. McMurray. Alberta Premier Lougheed is at hand to open the Ft. McMurray Oil Sands Interpretive Centre. Advertising its opening celebration, AOSTRA's TAR Paper newsletter states: "People's lives, the oils sands industry, and the Ft. McMurray community are all portrayed vividly in our spectacular multi-media presentation "A Quest for Energy". The industrial equipment garden focuses on the heavy haulers, shovels and conveyor systems which Syncrude and Suncor use to mine oil sands... Two projects still in the development stages are a children's adventure playground and a joint project with Suncor Inc., involving the completion of a major viewing platform overlooking the Suncor mining pits and plant complex."
<i>December 21</i>	The Arco Anchorage Oil Tanker, built in 1973 in Maryland, runs aground off Port Angeles (south of Victoria, BC) spilling 715,000 liters of light Alaskan crude oil, causing widespread damage to marine life and beaches on the Olympic Peninsula.
1986	Advancements in research technology significantly reduces the price of producing synthetic oil from Alberta's oil sands by almost two thirds, from \$35 (Canadian) to \$13 a barrel.
<i>April</i>	The West Coast Offshore Exploration Environmental Assessment Panel releases its <i>Report and Recommendations of the West Coast Offshore Exploration Environmental Assessment Panel</i> , which supports oil and gas exploration. About 200 BC, Alaska, and Washington State First Nations conduct a follow-up conference on September 23-26, 1986 at Prince Rupert, members of the Offshore Alliance of Aboriginal Nations Coastal Zone Management Conference. A memorandum to the Chiefs was very critical of the Panel Report. The resultant Alliance resolution states that the offshore moratorium on oil and gas should remain in place.
1987	An oil spill in Cook Inlet, Alaska, releasing 750,000 liters.
<i>January</i>	A 335 meter long oil supertanker, headed for Panama, spills 2 million liters of crude oil off the west coast of the Queen Charlotte Islands. Winds carry the oil westward out into the Pacific, and away from land.

April 16

Alberta's Energy Minister Neil Webber appoints former Alberta Environment Minister William Yurko (1971-1975) as AOSTRA's new chairman, a position which he holds until April 16, 1993. Yurko's background is interesting: he was supervisor of Atomic Energy of Canada from 1950-1956; head of process engineering with Sherritt Gordon Mines in Fort Saskatchewan from 1956-1960; with General Electric from 1960-1961, where he helped in the design stage for Manitoba's Whiteshell Nuclear reactor; a director and member of Chemetals in New York, a subsidiary of Gulf States Land and Industries (later, Landmark Inc., Louisiana) from 1961-1965; project manager of the Bagdad Copper Corporation's copper powder refinery in Bagdad Arizona from 1965-1967; his own consulting practice from 1967 to 1969; elected to the Alberta Legislature during a byelection in the Edmonton Goldbar riding, and elected after the next election in 1971; appointed Minister of Environment from 1971-1975; Minister of Housing and Public Works from 1975-1978; a Member of the Energy Committee of the Alberta Cabinet from 1971-1978; vice-chairman of the Alberta Research Council (partner with AOSTRA); and a federal Member of Parliament (MP) for Edmonton East from 1979-1984; appointed Member of the Senate of the University of Alberta. As Larry Pratt states in his 1976 book on the Tar Sands, "Where else but in Canada would an elected cabinet minister (William Yurko) responsible for the protection of the natural environment emerge as a public advocate of the strategy of rapid resource development?" Yurko is member of the American Institute of Mining and Metallurgy, and a member of the Professional Engineers of Alberta and the Chemical Institute of Canada.




William J. Yurko

PARTNERS

PARTNERS IN PROFILE

BUILDING ON THE PAST - LOOKING FORWARD

...a remarkable model of joint industry and government support...



W.J. Yurko

W. J. YURKO,
Chairman and Chief Executive Officer,
Alberta Oil Sands Technology and Research Authority

Since 1966, the Petroleum Recovery Institute has provided a remarkable model of joint industry and government support for the development of EOR technology. The funding for PRI comes from the Alberta Oil Sands Technology and Research Authority (AOSTRA) and 22 member companies. In the fiscal 1990/91 year, AOSTRA will contribute \$1,000,000 to the core program, for development of EOR technology at PRI, with continued support planned into the future. In addition, AOSTRA recently provided a \$150,000 grant to PRI, to assist in widely communicating the advantages of membership on a national and international basis.

<i>June</i>	Principals of the Syncrude oil sands operation have discussions with the federal government on an 80,000 barrel/day expansion program to be completed in 1993 at a cost of \$4 billion. Pre-approval of the project was being sought from the Alberta Energy Resources Conservation Board. The Natural Resources of Canada Minister announces that the federal government would examine requests for assistance to megaprojects on a case-by-case basis, including the criteria that environmental impacts must be taken into consideration.
<i>June 8</i>	Following up on the 1986 report recommendations from the Offshore Assessment Panel, the federal Minister of Energy, Mines and Resources announces that the federal and British Columbia governments have decided to proceed with the lifting of the federal and provincial moratorium on exploration drilling on the west coast offshore which had been in place since 1971. The condition for lifting the moratorium would be based on a joint federal-provincial offshore resources management deal.
	The annual report of the Alberta Energy Resources Conservation Board celebrates its 50 th Anniversary, with the following quote from former Alberta Premier Ernest Manning: "The Board and the people should take great satisfaction from the fact that the principles upon which the Board was founded 50 years ago are just as valid and useful today, and for the foreseeable future. Those basic principles were three in number. First, to encourage the development of the resources. Secondly, to protect the public interest. And third, to ensure that the resources are not wasted. Today, we know of the finite limit to many of the fossil fuels, and we know that some day – perhaps far off, but certainly some day in the future – we are going to face shortages. Avoiding unnecessary waste of Alberta's energy resources just makes common sense."

From an Alberta Government perspective, the growing production and commercial interest in oil sands has several implications. First, the number of projects and proposals actively under consideration has reached such a high level that a fully dedicated staff is required to properly assess their economics, technology and fiscal terms. Secondly, consideration has to be given to the overall direction of development in relation to what is optimal for the province's economy and long-term development. For example, the increase in bitumen being produced may require policies to stimulate the development of upgrading in Alberta.

AOSTRA-The People

- The university connection

In 1974 there were only 10 or so professors engaged in oil sands research, and a similar number of students. Today more than 80 highly qualified professors are involved in research and teaching directly relevant to Alberta's oil sands resources. In addition, more than 500 students have obtained advanced degrees in related fields, and most of these are working in Alberta's oil industry. Ted notes

1988 <i>December</i> 23	A tug boat, owned by the Sause Bros. Ocean Towing of Coos Bay runs into the Nestucca barge in Grays Harbor, Washington State, causing it to spill 875,000 liters of Bunker C fuel oil, which drifts north fouling the beaches off south-western Vancouver Island, killing thousands of seabirds and closing commercial and recreational shellfish harvesting. The leaking barge was towed from Grays Harbour to a destination just south of the Columbia River while it was leaking. At the time, U.S. authorities stated to Canadian authorities that the spill was only at 159,000 liters, leaving Canada anticipating a much smaller spill. By March 22, 1989, the federal government spends \$4.6 million on the cleanup along the entire coast of Vancouver Island.
	The Syncrude group receives approval for a \$3.9 billion expansion of its mining, extraction and upgrading project at Mildred Lake. The approval is issued without a major public hearing by the Energy Resources Conservation Board.

8 Edmonton Hosts 1988 UNITAR Conference The World Comes To Alberta

The participating companies are:

- Alberta Oil Sands Technology and Research Authority*
- Alberta Energy Company Ltd.
- Alberta Research Council
- Amoco Canada Petroleum Co. Ltd.
- BP Exploration Canada Ltd.
- Computer Modelling Group
- Esso Resources Canada Limited*
- Gulf Canada Resources Inc. *
- Mobil Oil Canada Ltd.
- Norcen Energy Resources
- Nova Husky Research Corporation
- Petro-Canada Resources Ltd. *
- Petroleum Recovery Institute
- Shell Canada Resources Ltd.
- Syncrude Canada Ltd. *
- UNOCAL Canada Ltd.

Distinguished speakers will highlight the current status of the industry in their respective countries during the plenary session on Monday, August 8, commencing at 8:30 a.m. Guests, listed in their order of appearance, include the Honorable Don R. Getty, Premier of Alberta; Michel Doo Kingue, Undersecretary General, United Nations and Executive Director, UNITAR; Juan Chacin, President, Petroleos de Venezuela; the Minister of Petroleum Industries, Peoples Republic of China; the Minister of Oil Industries, Union of Soviet Socialist Republics; the Secretary of Energy, United States of America; and the Honorable Dr. Neil Webber, Minister of Energy, Province of Alberta.

1989 <i>January</i> 9	Federal Fisheries Minister Tom Siddon, Environment Minister Lucien Bouchard, and BC Environment Minister Bruce Strachan fly over the southwest coast of Vancouver Island to view the damage caused by the December 23 oil spill. Reporters interviewing provincial government staff report that BC government officials hope to renew negotiations with the federal government in the Spring for oil exploration drilling off BC's coast, for what is called the <i>Pacific Accord</i> to govern offshore resources. Panel members of the 1986 West Coast Offshore Exploration Environmental Assessment were shocked in their final report that the Coast Guard could do little to control an oil spill, which is exactly what transpired some three years later. Chevron Canada Resources Ltd. spokesman Charles Stewart, calling the event a "tragedy", said his company would take necessary precautions this coming summer in anticipated test drilling offshore.
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1989 <i>January 15</i>	Environment Minister Bruce Strachan, interviewed on CBC's radio show on Sunday morning, states that he doubts offshore drilling will ever take place on BC's coast. "I know the politics of the environment and it's highly unlikely in my mind that this activity will ever happen."
<i>January 30</i>	BC Energy Minister Jack Davis states to a newspaper reporter that the BC government is still pursuing an offshore oil Accord with the federal government, and that he was not "panicking" over the recent oil spill.
<i>March 24</i>	<p>Good Friday. At about 12:30 a.m., and 40 kilometers southwest of Valdez, Alaska, the Exxon Shipping Co.'s 300-meter long super oil tanker, the Exxon Valdez, headed with its cargo to a Long Beach, California port, runs aground on a reef in Prince William Sound, rupturing 8 cargo tanks, releasing 43 million liters of Prudhoe Alaska crude oil from its 273 million liter capacity, the largest offshore spill in US history. With the bad weather and winds, and lack of emergency response time and equipment, it turns into a growing disaster, making international headlines. Within 10 days the emulsified oil, with the consistency of black axle grease, spreads over 2,600 kilometers of water. The incident comes three years after the BC offshore drilling moratorium was lifted in 1986, with BC Premier Bill Vander Zalm making comments of "second thoughts about offshore oil." The Premier immediately flew to view the spill with Deputy Environment Minister Richard Dalon, the co-chairman of the new Washington-BC Task Force on Oil Spills, along with Murray Stewart and Fred Olson of the Washington State Department of Ecology of the same Task Force. Andrew Thompson, the former Commissioner of the West Coast Oil Port Inquiry responds, "If the premier wants to deal with something he's got power over, he should move to rule out offshore drilling while everything is still fresh in his mind. Not much has been learned, the public has been misled by industry and government into a false sense of security about clean up capabilities."</p> <p>U.S. President George Bush sends up his top brass to the site as well. At the time, there was a daily average of 3 tankers transporting 1.5 million barrels (238 million liters) of oil down the Alaskan Panhandle and BC's coast to U.S. ports. Daily oil shipments from the port of Valdez are reduced from 2 million to 800,000 barrels, sending up the price of oil. It is a public relations nightmare for the oil industry. The irony, as explained in a Vancouver Sun newspaper article by Larry Pynn, was in a town of Valdez museum that featured a blueprint of the now crippled supertanker with dozens of signatures from Valdez residents, marking a celebration in March 1987 of the tanker that bore the Town's name. A San Diego newspaper reports that both the Exxon Valdez and her sister ship, the Exxon Long Beach, were fitted with single hulls in 1986, which gave a saving of 10 percent to company owners. Said the Mayor of Valdez: "The oil company has lied repeatedly. They are trying to downplay the seriousness of this. Only the news media and pressure from the world community keeps them honest at all."</p>
<i>March 29</i>	In response to the December 1988 and Exxon Valdez oil spills, BC Environment Minister Bruce Strachan announces that the BC government will extend the offshore drilling moratorium another five years, and that there wouldn't be any drilling until another ten years.
<i>April</i>	At an annual shareholders meeting, Trans Mountain Pipelines president Dick Stokes predicts construction of a second parallel pipeline due to the possibility of increased oil sands production in the near future.
<i>April 3</i>	BC government officials, and U.S. members of the recently formed Committee on Oil Spills hold a closed-door meeting in Victoria. The next scheduled meeting to be held in Washington State is opened to the public. BC Deputy Environment Minister Richard Dalon stated his surprise "when told our next meeting in May would be open. Ron Halcomb of the Washington Ecology Department said it is the law to have meetings open to the public, "there are very few meetings that can be closed to the public down here. (The State) very much believes in the public process. It's the way we do business."

1989 <i>April 4</i>	NDP Skeena MP Jim Fulton requests the House of Commons hold an emergency debate into the Alaska oil spill disaster, and calls on a ban of supertanker traffic down the BC Coast. The debate lasts 6 hours in the House, from 8pm to 2am. The NDP call for a full public inquiry into West Coast oil spills, and the Liberals call for high-level Canada-US talks on West Coast supertanker traffic.
<i>April 5</i>	A crisis looms. The town of Valdez is concerned about the dangers on a confrontational and emotional split between oil workers and local fishermen. Reports of an oil worker being run off the highway by another vehicle and death threats to senior Exxon employees. Big oil becomes a smear word. Two police officers guard a Town Council meeting. Company employees continue to receive their pay cheques, while fishermen are out of business.
<i>April 10</i>	Washington Post reporter Luther Carter investigates background information on why the US Congress decided to allow tanker traffic south of Valdez in the summer of 1973, as opposed to an overland pipeline route to Edmonton, Alberta. Vice-president Spiro Agnew casts the deciding vote on a tie-breaker. Leading up to the decision, an environmental review under the <i>National Environmental Policy Act</i> was under challenge in the courts by environmental groups, who wanted to know why the overland route was not followed through with since it offered fewer environmental risks. Charles Cicchetti, author of a study published by the Resources for the Future, recently told a Senate Committee that the US Department of Interior's conclusions were "totally fabricated deceptions." Turns out that the oil companies wanted to keep their options open to marketing their oil to overseas nations like Japan, rather than a dedicated market to Canada and the US. Oil cleanup crews have now recovered about 2.7 million liters of oil in the large affected area, about 7 percent of the oil that was spilled.
<i>April 11</i>	At a news conference, a coalition of prominent BC scientists, writers, artists, and labor leaders appeal to Prime Minister Brian Mulroney for a full public inquiry into the environmental and social effects of oil and other hazardous substances in coastal waters. Andrew Thompson, the former West Coast Oil Ports Inquiry Commissioner states "an internal investigation just wouldn't be as rigorous as a public inquiry because of a tendency of everyone to cover their own backs." An inquiry has powers to subpoena witnesses and documents.
<i>April 15</i>	The 150 member Canadian Petroleum Association president Ian Smyth comments, in regard to the Exxon oil spill, its time to rethink pipeline construction from the Canadian and Alaskan north.
<i>April 20</i>	A US poll shows a 21 percent drop in the number of people who think Republican president George Bush is doing a good job in handling environmental matters.
<i>April 21</i>	A thousand people gather at a bonfire on the Spanish Banks Beach in Vancouver City for a vigil protest on the Exxon oil spill.
<i>April 23</i>	Alaska residents hold a five minute silence to remember the way things were in southern Alaskan waters before the infamous oil spill.
<i>April 26</i>	The supertanker Exxon Philadelphia, filled with Alaskan crude, loses power off southwestern Vancouver Island after a boiler tube ruptures, and drifts for seven hours. Tugboats pull the vessel into Port Angeles. On the same day, NDP MPs in the House of Commons call for a permanent moratorium on West Coast off-shore oil and gas exploration. They present 8,000 petition signatures from British Columbians.

1989 <i>May</i>	Following an anti-oil industry sentiment in Alaska, the pro-oil Republican dominated Alaskan Senate modifies the State's <i>Economic Limit Factor</i> ending a multi-million dollar tax break for industry. The move generates \$235 million in new taxes, angering the oil industry.
<i>May 31</i>	Piled in four locations in Alaska are the refrigerated oily remains of 22,818 migratory birds, 733 sea otters, and 51 birds of prey. They represent a small percentage of the animals and birds killed by the oil spill. At a conference in Vancouver in late February 1990, US fish and wildlife research biologist John Piatt stated that in an abstract presented to an international conference on seabirds of North America, there were somewhere between 100,000 to 300,000 seabirds that died. Later findings conclude the death of 1.9 million salmon, 12.9 billion herring, 2,800 otters, 250,000 birds.
<i>June 24</i>	A Uruguayan oil tanker, the Presidente Rivera, runs aground on the Delaware River tidal flats, spilling some 6 million liters of crude oil, and a Greek oil tanker runs aground off the shores of Rhode Island, spilling 5.5 million liters of heating oil. As one newspaper reports: "Big Oil sold its Big Myth convincingly. Everyone had faith in skimmer boats and containment booms, which turned out to be as effective as scooping Niagara Falls with a bucket."
<i>July 10</i>	At a Vancouver news conference, the federal government identifies appointed panel members of a \$3 million federal review of oil tanker safety and marine spills. They have a September 29 deadline for an interim report, and will conduct a series of public hearings across Canada beginning in late July.
<i>July 14</i>	A unanimous three-judge panel of the US Court of Appeals for the District of Columbia Circuit in Washington, D.C., declares that companies responsible for oil spills and other pollution should be forced to pay the full costs of restoring the environment to its original condition, not just the market value of damaged natural resources.
<i>July 25</i>	At a press conference concerning the start of a federal public review process on oil tanker safety and marine spills, former West Coast Oil Ports Inquiry Commissioner Andrew Thompson is critical of the fact that the review was not initiated as an inquiry under the federal <i>Inquiries Act</i> . In comparison, there was a federal Inquiry into athletic drug use, with critics saying that the federal government was more interested in Ben Johnson's urine than in preventing an environmental catastrophe off the West Coast. Prominent lawyers also criticize the process, saying that the process fails to include a mandate to include offshore oil exploration.
<i>August 15</i>	The State of Alaska files a lawsuit against Exxon Corp. and six other oil companies.
<i>September</i>	Psychologists and counselors acknowledge that the stress, anxiety and social upheaval as a result of the Exxon Valdez oil spill is leading to dramatic increases in family violence, alcoholism and depression in Native villages and in the cities of Valdez and Kodiak. Says Zack Chichenoff, a leader of the village of Ouzinkie, "No one could go hunting or fishing. Prices have gone way up. The cleanup has turned village against village and brother against brother."
<i>September 15</i>	Exxon Corp. winds up its \$1.2 billion clean-up effort before the change in bad weather. As many as 11,000 workers had been cleaning the beaches of southern Alaska in July. By March 1990 expenditures for the cleanup reach \$2 billion. Statistics show that it cost an average \$89,000 to treat each sea otter, \$42,000 for each bald eagle, and \$25,000 for other birds.
<i>November</i>	BC oil spill advisor David Anderson recommends in his report to Premier Bill Vander Zalm to phase out crude oil shipments through Vancouver's harbour.

	In Alberta's Energy Resources Conservation Board's annual report for 1989, is a summary of environmental concerns, under the heading of <i>Creating Sustainable Development</i> : "The challenge to protect the air, land and water seems immense. But what exactly should be done? How does the ERCB promote the sustainable process? The ERCB and the energy industries it regulates have a major responsibility to protect and maintain Alberta's ecology. Both acknowledge past mistakes and the good things that have been done in planning appropriate action for the future. In Alberta, the ERBC looks at the interaction of various energy projects with existing human endeavors and the natural environment, finding ways to balance many opposing forces. While ongoing research is needed, the province cannot simply hold back on all development until that research has been concluded, nor can we delay rectifying problems. Fortunately, the information now in place is adequate to permit development at acceptable risk levels without causing irreversible damage to the environment... Advances in science now hold the promise of more efficient and environmentally sound oil sands developments. Dealing effectively with the enormous scale of oil sands projects is an ongoing challenge for all."
1990 <i>February 7</i>	The crude oil tanker American Trader spills 1.5 million liters of oil off Huntington Beach in California. Strong on-shore winds foul 25 kilometers of beaches.
<i>February 23</i>	Two ships in Vancouver's harbor spill 40,000 liters of heavy oil.
<i>February 27</i>	The US Justice Department announces a five count criminal indictment against Exxon Corp. and its shipping subsidiary, with potential criminal fines and associated penalties of some \$700 million. The incident raises the hackles of local municipalities, particularly Burnaby Council, now critical of Trans Mountain's proposal to increase its pipeline capacity, since approval from the National Energy Board in 1989 for the expansion of Trans Mountain's facilities at its Westridge terminal to double crude oil loading tankers.
<i>March 19</i>	The US Wilderness Society releases its report, <i>100 Spills, 1,000 Excuses</i> , citing that since the Exxon Valdez spill there have been a total of some 10,000 oil spills in the US responsible for releases between 57 to 75 million liters of oil. Says George Frampton, its president, "by this time tomorrow, we can expect that there will have been another 27 oil spills in the U.S."
<i>March 22</i>	At a symposium on marine spills before delegates at a Globe '90 international conference on business and the environment, a manager of the London-based International Tanker Owner's Pollution Federation comments that the Federation has responded to more than 200 major oil spills over the last 15 years worldwide.
<i>November</i>	The United States government tightens its <i>Clean Air Act</i> .
<i>December</i>	The Canadian federal government releases its <i>Green Plan</i> , allocating \$3 billion over a 5 year period for environmental objectives, of which \$575 million are dedicated towards combating global warming caused by the combustion of fossil fuels. In tandem, the Alberta government coordinates a <i>Clean Air Strategy</i> .
	By year's end, Syncrude has produced 9 million cubic meters of synthetic crude oil, or 56.6 million barrels (an increase of a half million cubic meters in 1989), and Suncor's production is at 3 million cubic meters.

	In its annual report for 1990, Alberta's Oil Sands Advisory Committee comments on how Beak Consulting Ltd. was "retained by the Alberta government (Municipal Affairs) to provide guidelines for municipalities to use when they become involved in environmental impact assessment resulting from major resource development. Because of the Advisory Committee's advisory experience in the heavy oil and oil sands sector, we have begun a process of periodic liaison to ensure effective coordination between the work of the consultants and the Advisory Committee."
1991 <i>April 2</i>	The Canada Oil and Gas Lands Administration (COGLA) is disbanded, transferring 58 staff to the National Energy Board. The transfer coincides with new environmental regulations to the NEB Act and the creation of a new NEB Environmental Directorate, combining all functions and responsibilities of the Environmental Branch of the NEB and those of the Environmental Protection Board of COGLA. The environmental responsibility arises out of the <i>NEB Act</i> , the <i>Oil and Gas Production and Conservation Act</i> , and the <i>Canadian Petroleum Resources Act</i> .
<i>May</i>	The <i>Canadian Environmental Assessment Act</i> is reintroduced in Parliament. It now requires an environmental evaluation to be carried out on all new projects that are financed wholly or partly by the federal government, that take place on federal lands or for which the federal government would be the decision maker. In the energy sector, the legislation covers activities including electricity exports, international power lines, international and interprovincial pipelines, gas plants, oil storage and loading facilities.
	The Natural Energy Board completes its report <i>Canadian Energy Supply and Demand 1990-2010</i> , updating an earlier study published in 1988.
<i>September 3</i>	The National Energy Board that began in 1959 begins operations in its relocated headquarters office in Calgary, Alberta , on the western oil front lines, and in close proximity to the executive offices of the oil and gas companies. On June 21, Bill C-2, <i>National Energy Board Act</i> (Measures to Amend), was given Royal Assent, its purpose to give effect to the government's decision to relocate the NEB away from Ottawa. The relocation comes amidst the US war in the Middle East against Iraq (January) and the National Round Table on the Economy and Environment conference (March) on "sustainable development" initiatives.

The Petroleum Society of CIM and Alberta Oil Sands Technology and Research Authority (AOSTRA) are teaming up to combine the annual technical meetings of both important petroleum technology organizations into this "1991 Technical Conference." You are cordially invited to attend this landmark meeting to be held at the new Banff Springs Hotel Conference Centre in Banff, April 21-24, 1991.

The conference theme "OUR ENERGY FUTURE" reflects the challenging technical, economic, environmental, and social issues facing our industry in the decades to come. With the integration of two technical meetings, the conference is packed with a record number of sessions; opportunities to inquire, learn, challenge, and understand these issues.

The Plenary Session will set the tone of the Conference. We have invited distinguished keynote speakers to address "OUR ENERGY FUTURE" from four points of view: the multinational corporation's perspective; the need for Canadian R&D; the contribution of heavy oil and tar sands; and global economic factors. The Conference offers twenty-seven technical sessions covering a wide scope of petroleum technology. These include sixteen traditional sessions, four special AOSTRA heavy oil sessions, four special theme sessions and three sessions forming a sludge symposium.

Luncheon speakers include the Honourable Rick Orman, Minister of Energy for the Province of Alberta; Neville Nankivell, Publisher and Editor-in-Chief of the *Financial Post*; and author and cartoonist Ben Wicks. The Tuesday luncheon will honor the recipient of the AOSTRA Karl Clark Award.


<i>December</i>	The House of Commons' Standing Committee on the Environment releases its 105-page report, <i>The Risks of Irreversible Climate Change</i> , based on hearings completed in March 1991. The report focuses on three main premises: global warming has been proved scientifically; it is an inevitable and continuing consequence of past and present patterns of human activity; and it represents a severe threat to both Canada and the planet as a whole. The report presents the basic issues, policy considerations, and strategy for the 1990s to achieve targets for emission reduction. It also considers what has to be done to stabilize greenhouse gas emissions at a sustainable level by the year 2050.
	By the year 1991, there have been a total of 146,000 wells drilled in Alberta, about 27,500 of which are listed as inactive. Alberta's Energy Resources Conservation Board expresses concerns that the inactive wells "could have adverse consequences for public and environmental safety."
1992 <i>June</i>	Canada is one of 150 countries to sign the <i>Framework Convention on Climate Change</i> in Rio de Janeiro. On December 4, Canada formally ratifies the Convention and also the Biodiversity Convention.
	Alberta's Environmental Protection Ministry grants a water license to Imperial Oil for 3.3 million cubic meters per year for its phase 7 and 8 tar sands operations at Cold Lake. In response to concerns by local residents about the use of water in a drought-stricken area, a Regional Water Management Task Force begins in August 1992. In November 1993, the Task Force recommends that a special pipeline should be built from the North Saskatchewan River to supply Imperial Oil's heavy demands for water. Cold Lake has also been the source of Esso Resources Canada's nearby in situ project, and in October 1991 the Alberta government temporarily halts water extraction from Cold Lake.
<i>June 23</i>	The <i>Canadian Environmental Assessment Act</i> , which had been reintroduced in Parliament in 1991, receives Royal Assent. The legislation makes provision for the Canadian Environmental Agency to advise and assist the Minister of the Environment in performing the duties and functions conferred on the Minister by the <i>Act</i> .



Environment conference

The Second International Conference on Environmental issues and management of Waste in Energy and Mineral Production will be held in Calgary, Alberta, September 1-4, 1992. The conference has been organized by an international group of universities including the University of Calgary, and will address a

range of timely topics that includes the philosophy of sustainable development, environmental impact assessment and permitting, economics of environmental compliance, environmental issues in oil sands developments, and waste management. See page 6 for more information.

	<p>During 1992, the National Energy Board's Environmental Studies Research Fund (ESRF) funded 20 studies valued at \$1.5 million, with 6 new studies being funded from the \$991,000 1992 budget. The ESRF is a research program which sponsors environmental and social studies to assist government decision making related to oil and gas exploration and development on Canada frontier lands. Funding for the ESRF is provided through levies on frontier lands paid by interest holders such as the oil and gas companies. The ESRF is directed by a joint government/industry management board chaired by NEB's director general of the environment directorate.</p>
<p>1993 <i>January</i></p>	<p>The House of Commons' Standing Committee on Energy, Mines and Resources releases a 202-page report, <i>Sustainable Energy and Mineral Development: A Realistic Response to the Environmental Challenge</i>.</p>
	<p>The Alberta Chamber of Resources (ACR) initiates its own National Oil Sands Task Force, almost all members of which come from the oil industry. Its mission is to promote the oil sands as an economically attractive and productive resource. Chairman of the AB Chamber of Resources is Eric Newell (president, CEO, and Board Chairman of Syncrude), who is credited for instigating the Task Force. Its series of glossy reports are released in the Spring of 1995.</p> <p>The ACR history goes back to 1935 with the formation of the Alberta and Northwest Chamber of Mines and Resources, which evolved into an effective lobby organization for the natural resources industry. During 1977, it went through a reorganization to become the ACR, bringing together oil sands, petroleum, and coal mining development under one umbrella, and becoming "the voice of the Alberta Resource Industry, strengthening their role with the Alberta Government and developing closer working relationships with its members." By 2004, the ACR would establish a second program report, called the Oil Sands Technology Roadmap initiative.</p>
	 <p>Eric P. Newell</p>
<p><i>March 19</i></p>	<p>The governments of Canada and Alberta announce new initiatives designed to support the development of Alberta's oil sands and the heavy oil resources of Alberta and Saskatchewan through research and development partnerships, the establishment of a National Centre for Upgrading Technology (NGUT) in Devon, Alberta, and the creation of a National Task Force on Oil Sands Strategies (NTFOSS). Through to the spring of 1996, federal staff of EMR's (Energy Mines and Resources) Canada Centre for Mineral and Energy Technology (CANMET) at Devon was to be increased by 30 positions to a total of 90 and research expenditures were to be doubled to \$15 million. One outcome of this increase was to be the buildup of Devon as CANMET's principal centre for oil sands upgrading research and development. The initiative was also to involve a collaborative effort between CANMET and the Alberta Research Council to create a National Centre for Upgrading Technology to develop technologies that lower the costs of producing synthetic crude oil and petroleum products derived from the oil sands and heavy oil deposits. CANMET has a long history of involvement in the many aspects of oil sands technology, with established laboratories in Ottawa, and satellite laboratories in Edmonton and Calgary. The mission of the National Task Force on Oil Sands Strategies was to be a catalyst for further development of Canada's oil sands through identification of a clear vision for growth and technological, socio-economic, environmental and marketing aspects of oil sands development. The Task Force was to identify new concepts, technologies and strategic approaches, and communicate the results to key private and public decision makers.</p>

April 4-7	"Oil Sands – Our Petroleum Future" conference.
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1993 April 30	The Science Council of BC releases a <i>Strategic Framework Overview</i> report, <i>Ocean Opportunities for the West Coast of Canada</i> . The 21 person steering Committee, through workshops and meetings, develops recommendations for future offshore oil and gas development on BC's coastal waters, what it calls "sustainable use strategies" of the ocean's wealth: "It is therefore recommended that: the federal and provincial governments negotiate a joint management agreement to govern the exploration and development of non-renewable resources ... an associated working group plan the environmental management of offshore exploratory activities from a perspective of sustainable management and advise on policies, programs, and regulatory structures." Follow-up action plans and forums are recommended.
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May	<div> <div>Feature Article</div> <div> THE BUSINESS of REGULATION—NEW DIRECTIONS for THE ERCB in 1993 </div> <div> Streamlining energy regulation in the face of long-term budget constraints </div> </div> <p>Recently elected Alberta Premier Ralph Klein (1992) directs all provincial government departments and agencies to undertake a complete review of regulation in Alberta, with the intent to remove regulations that are no longer deemed necessary or relevant. With the intention to downsize government under the banner of "efficiency", Alberta's energy sector regulations are thinned out. The deregulatory initiatives are preceded by the Canada-Alberta Economic meeting in March 1993, where federal and provincial ministers jointly agree to reduce "overlap and duplication" between the two orders of government."</p> <div> <div> <p>In its 1994 annual report, AB's Energy Resources Conservation Board comments on the deregulation and downsizing:</p> <p>"Recent reductions and staffing at the ERBC meant that there were simply no longer adequate numbers of staff to sustain the historic model of thorough review of large numbers of detailed applications. As a result, the Board began to look at much more fundamental changes to regulatory requirements in the past year. The most likely future regulatory approach will require a significant transfer of responsibility to industry for ensuring that it understands and carries out regulatory requirements... There will, however, need to be a major</p> </div> <div> <p>ERCB involvement in provincial regulatory review</p> <p>.... In May 1993, Premier Klein directed all provincial government departments and agencies to undertake a complete review of regulation in Alberta. The review is intended to remove regulation that is no longer necessary or relevant and to make sure remaining regulation is efficient and cost-effective.</p> <p>The regulatory review fit well with a number of initiatives already under way at the ERCB. One of these is the streamlining of application handling processes at the ERCB. Because of the large number of applications submitted by Alberta's energy industries to the ERCB for various approvals, this review and approval process is a priority area for streamlining and continuous improvement.</p> </div> </div>
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	shift in the degree and type of interaction between the Board and the energy industry. Under the new regulatory model, the Board expects some types of applications will no longer be required. For many more, there will be simpler requirements for submitting information... Operational inspections will continue to be reduced.” In 1994, the ERCB reviewed 24 applications for oil sands projects, major projects of which were related to Syncrude Canada Ltd., Suncor Inc. operations near Ft. McMurray, and to Amoco Canada Petroleum Company Ltd. And Imperial Oil Resources Ltd. in situ projects near Cold Lake. In 1994 Suncor applies for another project site across the Athabasca River from its existing site to be running by 1998.
<i>June</i>	The University of Alberta press publishes <i>Alberta’s Petroleum Industry and the Conservation Board</i> , a study by Dr. David Breen on the regulatory history of the Energy Resources Conservation Board.
<i>June 23</i>	The federal government ascends the North American Free Trade Agreement (NAFTA).
<i>August 23</i>	The Western System (the crude oil pipeline from Taylor to Kamloops, BC), owned by Westcoast Petroleum Ltd., changes hands, and is sold to Numac Energy Inc. In turn, Numac sells it to Federated Pipe Lines (Western) Ltd. in 1994 which is owned by Imperial Oil and a subsidiary of Anderson Exploration Ltd. who operate seven pipelines systems in BC and AB. Federated’s new pipeline (the name “Western Line” is changed, and the BC Utilities Commission recognizes it as the “Federated Line”) is operated through a state of the art control room in Calgary. Federated then sells the pipeline to Pembina Pipeline Group of Companies on July 31, 2000.
<i>October</i>	Alberta’s Energy Resources Conservation Board (ERCB) conducts a public hearing into Syncrude Canada Ltd.’s application to amend its commercial approval: to increase oil production, to process tar sands oil from off-lease sources, to extend its project expiry date, and approval of lease development and reclamation plans. It is one of the ERCB’s longest hearings, 31 days, with 250 exhibits and some 7,000 pages of transcripts. Concerned that Syncrude had not complied with expanded environmental assessment requirements under Alberta’s new <i>Environmental Protection and Enhancement Act</i> , a coalition of advocacy groups challenge the ERCB’s jurisdiction to deal with Syncrude’s application at the outset, going to the Alberta Court of Appeal. Despite the challenge, the ERCB continues with the hearing, and approves the application in July 1994.
<i>October</i>	Amidst numerous scandals, the Progressive Conservative Party is defeated by the Liberal Party of Canada. Prime Minister Jean Chretien appoints newly elected Anne McLelland, MP for Edmonton, as Minister of Natural Resources Canada who steadily helps promote tar sands development.
1994	The National Energy Board’s mandate is expanded “to include decision making authority for Frontier lands”.
	The tar sands Syncrude company files its first report with Environment Canada’s National Pollutant Release Inventory (NPRI), covering 1993.
	The Alberta government creates the Alberta Science and Research Authority (ASRA) with board members from academia, business and research communities. Its mission is to “enhance the contribution of science and research to the sustainable prosperity and quality of life for Albertans”, including the improvement of oil sands technology.
<i>January</i>	The oil industry establishes the Canadian Oil Sands Network for Research and Development (CONRAD), with the objective of coordinating and integrating research performed by the private sector, government and academics. Five technical planning groups (TPGs) are then

1994 (continued)	formed under CONRAD: Mining, Extraction, Upgrading, Environmental and In-situ recovery. Consortium members of CONRAD are: Amoco Petroleum Co. Ltd., Chevron Canada Ltd., Imperial Oil Ltd., Shell Canada Ltd., Suncor Inc., Oilsands Group, Syncrude Canada Ltd., the Alberta Environmental Centre, AOSTRA, Alberta Research Council, Canada Centre for Mineral and Energy Technology, National Research Council, Universities of Alberta and Calgary.
May 12	The federal government passes Bill C-6, <i>An Act to amend the Canada Oil and Gas Operations Act</i> , the <i>Canada Petroleum Resources Act</i> and the <i>National Energy Board Act</i> , and to make consequential amendments to other Acts. The Act defines certain authorities and responsibilities to the National Energy Board in respect of the <i>Canada Oil and Gas Operations Act</i> , the <i>Canada Petroleum Resources Act</i> and the <i>National Energy Board Act</i> and it repeals the <i>Canada Oil and Gas Act</i> . The amendments transferred authority to the NEB to regulate oil and gas activities in frontier areas, except offshore Nova Scotia and Newfoundland where there are federal/provincial shared management agreements. Rights and issuance matters remain under the authority of the Minister of Natural Resources and the Minister of Indian Affairs and Northern Development. The amendments authorize the NEB and its officers and employees to provide advice to ministers, officers and employees of government departments, ministries and agencies. They also transfer authority to hear appeals, hold inquiries, and make orders in respect of declarations of significant discoveries and resource conservation matters.
July 18	Canadian First Ministers sign an <i>Agreement on Internal Trade</i> to eliminate barriers to trade, investment and mobility within Canada.
July 22	Natural Resources Canada Minister Anne McLelland and the President of Syncrude Canada Limited sign a Memorandum of Agreement to consolidate a successful research and development partnership between Syncrude and CANMET (Canada Centre for Mineral and Energy Technology), an industry-led advisory Board to the Minister of Natural Resources Canada. During the previous 6 years, CANMET and Syncrude had worked together on a number of joint research and development projects to develop technologies related to the conversion of oil sands to synthetic oil. Under the MOU, both organizations agree to plan a series of joint projects which would make the best use of the talents of each organization to use existing technologies and create new ones for the continued successful development of Canada's largest source of liquid hydrocarbons. The agreement provided for discussion of plans between Syncrude and CANMET with other interested developers. The two parties were confident that their collaborative research would become a cornerstone for activities by the Canadian Oil Sands Network for Research and Development (CONRAD).
July 28	The National Energy Board releases its report, <i>Canadian Energy Demand, 1993-2010</i> .
November 14	The Trans Mountain Pipe Line Company amalgamates with BC Gas.
1995 January	The federal government ascends the <i>Canadian Environmental Assessment Act</i> . The CEEA establishes, for the first time in legislation, a process for the systematic conduct of environmental assessments of public or private projects involving the federal government.
May	As a main focal point on the promotional history of Alberta's oil sands , the oil industry-led Alberta Chamber of Resource's National Task Force on Oil Sands Strategies (the National Oil Sands Task Force) releases its eight, glossy colored, interrelated reports. The first is a <i>Comprehensive Report - The Oil Sands: A New Energy Vision for Canada</i> , with six appendix reports: A, <i>Technology Report - A Science and Technology Strategy for Canada's Oil Sands Industry</i> ; B, <i>Environment Report - Securing a Sustainable Future for Canada's Oil Sands Industry</i> ; C, <i>Fiscal Report - A Recommended Fiscal Regime for Canada's Oil Sands Industry</i> ;

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(continued)



D, *Marketing and Transportation Report - Marketing Opportunities and Challenges for Canada's Oil Sands Industry*; E, *Informetrica Study - Macro-Economic Benefits of an Expanded Oil Sands Industry*; F, *Background - Canada's Oil Sands Industry: Yesterday, Today, and Tomorrow*. There is an additional *Final Report - A New Era of Opportunity for Canada's Oil Sands*.

A membership list of the Alberta Chamber of Resources is provided. Of the 129 lobby members are prominent oil corporations, oil service companies, banks, consultant companies, associations, etc. Included in the long list are two strangers, an educational institution, the University of Alberta (how is this possible?) and the National Research Council, a federal government body.

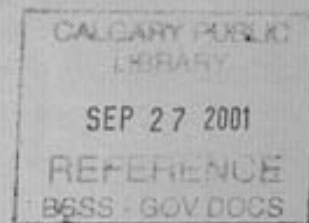
Contrary to its grandiose impressive-sounding title, the task force is anything but a Canadian “national” task force initiative of federal and provincial governments - it is a corporate Canada oil industry competitive consortium with Alberta focused interests. Its steering committee, under task force president Eric Newell (president and ceo of Syncrude), is made up of the following: task force director Don Currie from industry association lobby group the Alberta Chamber of Resources; task force chairman Dr. Erdal Yildirim of Canadian Occidental Petroleum Ltd.; task force “overall strategies” point man Phil Lachambre of Syncrude; Burt Lang and Greg Lindsay of Suncor Inc. Oil Sands Group; Howie Dingle of Imperial Oil Resources Ltd.; Dr. David Brown for the Canadian Centre for Mining and Energy Technology; David Tuccaro of the Neegan Development Corporation; Norm MacMurchy of the Alberta Industrial Gas Consumers Association; Pat Daniel of the Interprovincial Pipe Line Ltd.; David Swain from the Canadian Imperial Bank of Commerce; Bernard Coady of Delta Catalytic Corporation; Peter Quinn of HRI Research and Engineering. From the federal government is Ferris Clark of the National Research Council, and Ross Vani of Natural Resources Canada. From the Alberta government are Paul Precht and Terry Roberts of the Alberta Energy Department.

It gets worse. Under the six sub-committees, Marketing and Transportation, Science and

<p>1995 (continued)</p>	<p>Technology, Environment and Regulatory, Government and Communications, Fiscal and Socio-Economic, Material/Coalition and Services Building, are a small host of primarily oil industry representatives.</p> <p>The Task Force completes the biggest strategic hurdle: to project and emphasize the financial attributions to the Canadian public, investors, and the federal government, overcoming the obstacles at the federal and provincial levels on the degradation of the ecology and pollution of the atmosphere by the development of the oil sands. The Task Force lays out a 25-year strategic plan that envisions tar sands production doubling or tripling to reach between 800,000 and 1.2 million barrels per day by 2020 (by 2004, synthetic oil production more than doubles to 1.1 million barrels/day, 16 years ahead of the Task Force's production schedule). The strategy also calls for efforts to improve public perception of the dirty sounding "tar sands." The term "oil sands" was selected as the new brand name for tar sands, framed as "a national prize."</p> <p>The report and its army of big business defenders are responsible for creating a large promotional wave, unleashing a complicated set of future circumstances to rationalize and promote tar sands development. Following the staging ground release of the Task Force's reports is the beginning of a large set of land use and technical reporting processes, all of which are identified and summarized in the July 1999 <i>Regional Sustainable Development Strategy for the Athabasca Oil Sands Area Technical Report</i>.</p> <p>In concert with the reports, is the creation of the National Centre for Upgrading Technology, Devon, to support development of Alberta's oil sands and heavy oil resources.</p> <p>Credit for conceiving the Task Force is given to Syncrude Oil president Eric Newell (a fact reiterated ad nauseam), who would later become the Chancellor of the University of Alberta (2004), and a director of the global energy corporation Nexen.</p>
<p><i>July</i></p>	<p>A failure due to stress corrosion cracking (SCC) occurred on TransCanada Pipelines' system near Rapid City, Manitoba. The National Energy Board immediately stated its serious concern about the increased incidence of SCC and decided to hold a wide-ranging public inquiry into this phenomenon on Canadian oil and gas pipelines. The inquiry was initiated in August and a report was planned for mid-1996. SCC involves a complex process which can result in the formation of cracks on the surface of a buried pipeline. In severe cases, the pipeline can fail if the cracking goes undetected for several years. Environmental assessment and protection was another area where the NEB was intensifying its efforts, incorporating the <i>Canadian Environmental Assessment Act</i> into its procedures.</p>
<p><i>August</i></p>	<p>Through recommendations based on concerns in 1994 by Aboriginal groups, environmentalists and Alberta Health, Alberta's Energy Resources Conservation Board begins a study into the effects of atmospheric pollution from tar sands operations on local population. "The Board acknowledges the concerns of many of the interveners that atmospheric emissions from the oil sands plants are impacting on the health of the region's population. The Board believes that there is an obligation on industry to address this issue as effectively and quickly as possible. The Board also acknowledges Syncrude's commitment to support and participate in a regional health study that is broadly based and involves all stakeholders. The Board notes, however, that concerns about health effects about atmospheric conditions have, despite a number of efforts, continued to exist in the oil sands region as well as other areas of the province." The Technical Approach Study, <i>The Alberta Oil Sands Community Exposure and Health Effects Assessment Program</i>, states that "little knowledge exists of human exposure to sources of pollution like stack emissions, industrial effluents, toxic wastes, etc. The exposure of populations from all pathways (i.e., air, food, drinking water, and direct skin contact) is largely unknown."</p>

THE ALBERTA OIL SANDS COMMUNITY EXPOSURE AND HEALTH EFFECTS ASSESSMENT PROGRAM

TECHNICAL APPROACH



Fort McMurray, Alberta
August, 1995

Through to December, the National Energy Board carried out environmental assessments of more than 150 projects in 1995. The NEB has incorporated the *Canadian Environmental Assessment Act* into its procedures. The projects assessed included pipeline facilities applications, research and development activities, energy export applications, frontier drilling programs, development plans, seismic and geological programs. The NEB ensures that all companies under its jurisdiction have adequate emergency response plans to deal with and reduce or mitigate any negative effects to personnel safety, public health, and the environment resulting from an oil spill or natural gas leak. The NEB works closely with the responsible company and other government agencies to monitor and control the situation during emergencies.

1996

Release of the *Northern River Basins Study*, conducted over a 5 year period (1991-1996). The multidisciplinary study program, to address environmental and socio-economic effects of industrial, municipal, agricultural and other development in the Peace, Athabasca and Slave River basins, resulting from concerns expressed by northern residents following the 1991 approval of the Alberta Pacific Pulp Mill in Athabasca. Funding for the project by federal, provincial and territorial governments totals \$12 million. About 150 individual studies were completed, the results of which were reported in 148 technical reports and summarised by 13 synthesis reports. Recommendations are presented in a June 1996 final report, *Northern River Basins Study: Report to the Ministers*. Follow-up actions are being addressed by the Northern River Ecosystem Initiative (NREI) and by related initiatives supported by PERD and Environment Canada. The study has critical implications for Alberta's tar sands development proposals.

1996	After 4 years of meeting and planning, the McLelland Lake Wetland Complex, some 164 square kilometers in area, and north of Ft. McMurray, is subject to a provincial Integrated Resource Plan and placed off-limits to oil sands mining. In 2002, under pressure from the Ralph Klein Cabinet, Alberta's Energy Utility Board rejects the 1996 IRP, and PetroCanada and UTS Energy rush in to try to mine the site. The Alberta Wilderness Association fights to protect a small section of the tar sands area.
<i>March</i>	More pressure to eliminate the offshore moratorium on BC's coast. The BC Ministry of Energy, Mines and Petroleum Resources, under the NDP government, releases a report, <i>Assessment of Progress in Scientific, Technological and Resource Management Issues Related to the 1986 Review of Offshore Petroleum Exploration in British Columbia Waters</i> . "Acceptable levels of environmental risk for an exploration program have not been established for British Columbia waters. Such an expression of acceptable risk must recognize the move toward sustainable resource management involving all the stakeholders in the Province. New modeling tools will be required to quantify environmental risk from an exploration program... The expertise required to develop integrated resource management techniques is available in BC lodged within government, university and the ocean industry sector. This knowledge could be tapped to give creative, provincially-relevant solutions in scientific areas through the joint-initiatives program of the Canadian Ocean Frontier Research Foundation (COFRI), or other means." COFRI was launched in 1995 as a strategic focus following the 1993 report by the BC Science Council and SPARK (Strategic Planning for Applied Research and Knowledge). The report emphasizes the new language of "sustainable development" for offshore exploration, giving recognition to the loose principles and definitions of the recently established BC Round Table on the Environment and Economy. It suggests that "The old ways have to change" is "indicative of a maturing society".
<i>March</i>	The Oil Sands Water Release Technical Group releases its 35 page report, <i>Approaches to Oil Sands Water Release</i> . Members of the group are from Suncor, Syncrude, the Alberta government, the federal government (Department of Fisheries and Oceans and Environment Canada). Members met from June to September 1995. "The OSWRTWG used the term "water release" to describe waters that potentially could be directly or indirectly released into the environment from Oil Sands facilities. This term included two main categories: operational and reclamation water releases. The following two tables categorize various source waters from Oil Sands operations and summarize the general nature of the two types of water releases."
<i>June</i>	The Alberta Environmental Protection Ministry, through the Director of its Land Reclamation Division, announces the formation of committee with a purpose for making recommendations to the Alberta government and the oil sands mining industry on regulatory review and approval process for reclamation and end land use processes. Committee members include the oils sands industry, the Alberta Environmental Protection Ministry, the Alberta Energy and Utilities Board. The End Land Use Committee members begin meeting in February 1997, and in 1998 release a report, <i>Oil Sands Mining: Report and Recommendations</i> .
<i>December</i>	Following a Terms of Reference from September 1995, the National Energy Board releases its Inquiry Report, <i>Stress Corrosion Cracking on Canadian Oil and Gas Pipelines</i> . Three separate incidents of pipeline ruptures and fires on TransCanada Pipeline Limited's submerged crude oil pipeline in 1993 and 1995 gave rise to the Inquiry. Section 15 of the National Energy Board Act allows the Board to conduct Inquiries. The Board issues 27 recommendations for buried oil and gas pipelines in Canada. "This Inquiry is the first comprehensive one in the world on SCC (Stress Corrosion Cracking) and the results, as well as providing valuable scientific and technical data that relate to the Canadian situation, could be of interest and use outside Canada." "Since 1977, SCC has caused 22 pipeline failures in Canada. These failures include 12 ruptures and 10 leaks on both natural gas and liquids pipeline systems. Most of the SCC-related failures occurred since 1985 on pipelines that were coated with polyethylene tape and installed between

	<p>1968 and 1973.”</p> <p>In 2003, the NEB releases spreadsheet data on inter-provincial pipeline ruptures in Canada from 1991-2002, providing all relevant details, and contemplates releasing more information on all ruptures prior to 1991.</p>
1997	<p>Passage of the <i>Canada-British Columbia Agreement on Environmental Assessment Cooperation</i>. The Act was passed “in order to establish a single EA process, avoid duplication, and carry out EAs in an efficient manner when both EA processes apply.” Federal and provincial governments would sign a new ambiguous version of the agreement in 2004, following the dismantling of the BC <i>Environmental Assessment Act</i> by Premier Gordon Campbell’s BC Liberals in 2002.</p>
	<p>In Jay Hanson’s November 10, 1997 article, <i>Fossilgate</i>, he summarizes the financial wealth of the oil majors: “The coal and oil companies are among the most powerful corporations on the planet. Many of them have annual sales larger than the annual value of the total goods and services produced by many countries. For example, Exxon (\$103.5 billion) is larger than Finland (\$93.9 billion) and larger than Israel (\$69.8 billion). Mobil Oil (\$57.4 billion) is larger than Ireland (\$43.3 billion) and larger than New Zealand (\$41.3 billion). Chevron Oil (\$37.5 billion) is larger than Algeria (\$35.7 billion), larger than Hungary (\$35.2 billion), larger than Egypt (\$33.6 billion), larger than Morocco (\$28.4 billion), and larger than Peru (\$22.1 billion). While a few hundred scientists write about the dangers of global warming in journals with names like NATURE, and SCIENCE and THE LANCET --Mobil Oil places ads on the op-ed page of the NEW YORK TIMES simultaneously lobbying both the educated elite and, at the other end of the scale, the Congress, urging ‘no action’ on global warming.” In other words, oil companies have a lot of cash to spend on its army of spindoctors.</p>
1998	<p>Scientific American publishes a sobering article by Colin J. Campbell and Jean H. LaHeréere, <i>The End of Cheap Oil</i>. They predict a decline in “conventional” oil reserves by 2010, the reason why so much attention is being cast by the oil major investors on Alberta’s “unconventional” tar sands. Both authors are associated with the consulting firm Petroconsultants which has its headquarters in Geneva, and offices in London, Houston, Sydney and Singapore. The company, which recently changed its name to ISH Energy Group (subsidiary of Information Sources Handling Group, a diversified conglomerate owned by Holland America Investment Corp., the immediate parent company for the Thyssen-Bornemisza Group), has been extensively used by all big oil companies. In 1995, Colin Campbell wrote a report for Petroconsultants, <i>The World Oil Supply 1930 – 2050</i>, a report which cost \$35,000 per purchase. “We were able to work around many of the problems plaguing estimates of conventional reserves by using a large body of statistics maintained by Petroconsultants in Geneva. This information, assembled over 40 years from myriad sources, covers some 18,000 oil fields worldwide. It, too, contains some dubious reports, but we did our best to correct these sporadic errors... About 80 percent of the oil produced today flows from fields that were found before 1973, and the great majority of them are declining... we calculate that the oil industry will be able to recover only about another 1,000 billion barrels of conventional oil. This number, though great, is little more than the 800 billion barrels that have already been extracted... By 2002 or so the world will rely on Middle East nations, particularly five near the Persian Gulf (Iran, Iraq, Kuwait, Saudi Arabia and the United Arab Emirates)... economists like to point out that the world contains enormous caches of unconventional oil that can substitute for crude oil as soon as the price rises high enough to make them profitable. There is no question that the resources are ample: the Orinoco oil belt in Venezuela has been assessed to contain a staggering 1.2 trillion barrels of the sludge known as heavy oil. Tar sands and shale deposits in Canada and the former Soviet Union may contain the equivalent of more than 300 billion barrels of oil. Theoretically, these unconventional oil reserves could quench the world’s thirst for liquid fuels as conventional oil passes its prime. But the industry will be hard-pressed for the time and money needed to ramp up production of unconventional oil quickly enough. Such substitutes for crude oil might also exact a high environmental price.”</p>

<p>1998 (continued)</p>	<p>Stephen Kerr's August 6, 2003 article, <i>The End?</i>, states: "The depletion of our finite oil reserves is bringing more and more people in touch with this basic reality, and there is a growing movement to bring the meaning of this crisis to the centre of public debate. The unlikely intellectual heroes of this movement are a small collection of petroleum scientists, geologists and dissident economists from the oil industry."</p>
	<p>The Northern and Peace pipeline systems are connected to Taylor BC, competitors with the Western System crude oil pipeline from Taylor to Kamloops. For the first time, Peace River oil area shipments are now routed to Edmonton AB to compete with the Western System line, and are under the jurisdiction of both the National Energy Board and the Alberta Energy and Utility Board. By August, 2000, the Pembina Pipeline Corporation would own all these pipelines. The Taylor-Peace system consists of the Taylor system from Taylor to Dawson Creek, the Pouce Coupe system from Dawson Creek to the vicinity of Gordondale, Alberta, and the Peace system from the Pouce Coupe interconnect to Edmonton. The Taylor system is under BCUC jurisdiction, the Pouce Coupe system is under NEB jurisdiction and the Peace system is under AEUB jurisdiction.</p>
	<p>Creation of the <i>BC Oil and Gas Commission Act</i>, and the BC Oil and Gas Commission, which reports to the Minister of Energy and Mines. It is a Crown corporation, to regulate exploration and production of onshore activities in BC. The Commission is responsible for the oil pipeline regulation from a technical and safety perspective; it oversees pipeline inspection and integrity management programs to ensure B.C.'s pipelines are properly designed, constructed, operated, and maintained. Through a February 19, 1999 Order-in-Council (#218), its first appointed Commissioner is Rob McManus (from the Canadian Association of Petroleum Producers) who maintained the role until June 1, 2001. Its second Commissioner, Derek Doyle, was appointed on August 9, 2001. As opposition Energy critic Peace River BC Liberal MLA Richard Neufeld stated in Hansard (May 31, 2000), "Before I start with the Oil and Gas Commission, I'd just like to say to the minister, so we can get this out on the table before we start, that I am quite happy with how the Oil and Gas Commission works. I think it works well. I meet on a regular basis with Mr. McManus and discuss issues. He keeps me informed on what's going on with the Oil and Gas Commission... as I understand, the industry funds the Oil and Gas Commission, so there's obviously a bit more money coming in if there are more wells being drilled."</p>
<p><i>September</i> <i>23</i></p>	<p>Through its northeast Boreal Division, Alberta Environment Protection Office Deputy Minister Jim Nichols sends a letter of initiation to the Athabasca Oil Sands Stakeholders, the Sustainable Development Coordinating Council, and the Athabasca Oil Sands Cumulative Effects Initiative Members announcing the development of a <i>Regional Sustainable Development Strategy</i> for the tar sands. The strategy has 5 steps: "1. to describe and approve coordination of current activities; 2. to analyze gaps in science and knowledge; 3. to direct research to fill gaps; 4. to set goals, thresholds and targets; 5. to ensure implementation of effective monitoring, communication and decision-making."</p> <p>By the end of October 1998 a Terms of Reference was provided, "ensuring common understanding and clear direction for resource and environmental management within a provincial and federal regulatory framework is a goal shared among regional stakeholders... to ensure implementation of adaptive management approaches that address regional cumulative environmental effects, environmental thresholds, appropriate monitoring techniques, resource management approaches, knowledge gaps and research to fill gaps. In order to protect the environment and quality of human health as it relates to the environment, the RSDS will become a management tool that keeps pace with new information, science and technology. The management approach delivered within the RSDS may include a streamlining of current regulatory processes thereby gaining more efficient and timely use of public and private resources... The RSDS will apply provincial and federal policy, legislation, standards and programs in a regional context, including principles in the Canadian Council of Ministers of</p>

	the Environment (CCME) Harmonization Accord... The RSDS land base will encompass activities within the area described in the “Fort McMurray-Athabasca Oil Sands Subregional Integrated Resource Plan”, and associated activities on surrounding lands.” Final report of the Strategy to be completed by end of July, 1999.
<i>October 27-30</i>	The International Centre for Heavy Hydrocarbons holds its 7 th annual conference in Beijing, China. Amidst numerous papers on Alberta’s oil sands, the Alberta Department of Energy’s paper is called, <i>Oil Sands Development in Alberta: The New Paradigm</i> . “Oil sands development in Alberta now appears poised for a major take-off. This development is based on a new paradigm and it is on this period that we want to focus... In the past, governments were willing to intervene directly to seek to provide the impetus needed for development. However, it is contrary to current Alberta government policies to invest public funds into these types of projects and oil sands development in the 1990s is being financed solely by private corporations. Today’s outlook is not only much more bullish, but is based on a set of circumstances that allow a great deal of confidence that the current outlook is realistic and realizable. We used to speak of <i>when</i> , not <i>if</i> , the oil sands would be developed.”
<i>December 21</i>	A report, <i>Review of Offshore Development Technologies Information</i> , commissioned by the Premier’s Advisory Council on Science and Technology. It examines the state of offshore oil drilling in eastern Canada and in the North Sea in order to provide a context for drilling proposals along BC’s coast.
1999 <i>February</i>	The consulting company Golder Associates releases its report on the tar sands, <i>Athabasca Oil Sands Cumulative Effects Assessment Framework Report</i> , to the Cumulative Effects Environmental Management Initiative.
<i>March</i>	The Alberta government introduces a new policy document, <i>Alberta’s Commitment to Sustainable Resource and Environmental Management</i> . It helps direct development of the tar sands sustainable strategy. “Resources such as trees, minerals, wildlife, water, fish, range, public land and plants shall be managed in a manner that addresses their interdependence, and recognizes that the use of one resource can affect other users and other resources. Environmental decisions will take into account economic impacts, and economic decisions will reflect environmental impacts.”
<i>March</i>	Richard Fineberg’s report, <i>Praise the Pipe and Pass the Money: Facts and Reflections of Big Oil in Alaska 10 Years after the Exxon Valdez Spill</i> . A former advisor to the Governor of Alaska on oil and gas policy who later became extremely critical of the oil industry in Alaska, Fineberg presents a detailed account of what has transpired since the Exxon disaster (see Fineberg’s website for a long list of reports and information).
<i>July 31</i>	Through directives set in motion in September 1998, Alberta’s Environment Ministry (AENV) releases its 74-page report, <i>Regional Sustainable Development Strategy for the Athabasca Oil Sands Area</i> , and a companion 144-page <i>Technical Support Document</i> . “The unprecedented pace of development in the Athabasca Oil Sands area, however, presents new challenges for the environmental and resource management systems of governments and industry. These include overlapping needs for access to public land; competition for renewable public resources such as forests, wildlife and water; and increased potential for effects on environmental quality, species diversity and abundance, and human health.” “The 72 issues addressed by the RSDS were identified from project-specific environmental impact assessments in the region, the <i>Athabasca Oil Sands Cumulative Effects Assessment Framework Report</i> , and from issues raised during Alberta Energy and Utilities Board (EUB) hearings on oil sands mines and in situ bitumen production projects.” “Alberta’s environmental and natural resource management systems are designed to make sure the environmental impact of development is minimized, and the air, land, surface water and

	<p>drinkable groundwater all meet provincial guidelines. In addition, they are used to ensure disturbed areas are properly reclaimed, renewable resources regenerate successfully, wildlife populations are sustained and wilderness is conserved.”</p> <p>A spin-off research project entitled <i>Biodiversity Assessment and Conservation in the Athabasca Oil Sands</i> is initiated to produce baseline information on the diversity of amphibians, songbirds and plants in natural and reclaimed areas, particularly wetlands. There is a strong focus on wetlands because these habitats are important for many species and will experience the largest areal declines of all habitat types in the oil sands region.</p>
	<p>The Canadian Environmental Assessment Agency publishes the <i>Cumulative Effects Assessment Practitioners Guide</i>.</p>
2000	<p>In 2000, the Cumulative Environmental Management Association (CEMA), an industry-led (primarily funded by industry) multi-stakeholder group, is established to work with the Government of Alberta to implement its recently created Regional Sustainable Development Strategy by collecting scientific information and making recommendations for how best to manage the cumulative environmental impacts of industrial development in the region. It becomes a registered society and holds its inaugural meeting on June 9 in Ft. McMurray. Its president is Don Klym from Suncor, the chairperson from the former CEEMP’s Stakeholder Task Groups. The establishment of CEMA was preceded by an industry organized initiative called the Cumulative Environmental Effect Management Partnership (CEEMP), which Syncrude, Suncor, Shell, Mobil, Petro-Canada and Gulf contributed about \$200,000 in 1997 and 1998. From that, a Cumulative Effects Assessment Committee released a framework manual in March 1999, four months ahead of the July 31, 1999 <i>Regional Sustainable Development Strategy</i>, documenting the approach for preparing cumulative effects assessments in the Athabasca Oil Sands Region.</p> <p>Between 2000 and the end of 2004, CEMA’s working groups produce 52 reports and four recommendations to the government of Alberta, including one regional environmental management framework. The timelines for CEMA delivering management plans were consistently delayed and may not be complete before many more approvals are granted for oil sands development.</p> <p>Later in the year, the Alberta Energy and Utilities Board (EUB), the Natural Resources Conservation Board (NRCB), and Alberta Environment release new guideline regulations document, <i>Cumulative Effects Assessment in Environmental Impact Assessment Reports Required under the Alberta Environmental Protection and Enhancement Act</i>. Projects that require environmental assessments under both federal and Alberta provincial law are reviewed under the <i>Canada-Alberta Agreement for Environmental Assessment Cooperation</i>.</p>
<i>February 13</i>	<p>Dr. Andrew Thompson, the former federal Inquiry Commissioner of the West Coast Oil Ports Commission, dies. Thompson began his teaching career in 1950 at the University of Alberta Law School as a specialist in petroleum and natural gas law. He became a law professor at the University of BC in 1969, taking on environmental and aboriginal law. In 1973 he chaired the BC Energy Commission, and from 1978-1985 he was a director of the Westwater Research Centre. He was a founding member of the Canadian Petroleum Law Foundation, a member of the International Council on Environmental Law. In 1988 he chaired the Special Committee on Aboriginal Rights in Canada, and in 1990 he received Environment Canada’s award for Outstanding Lifetime Contribution to the Environment (refer to the 2000 Journal of Environmental Law and Practice, Issue 10).</p>



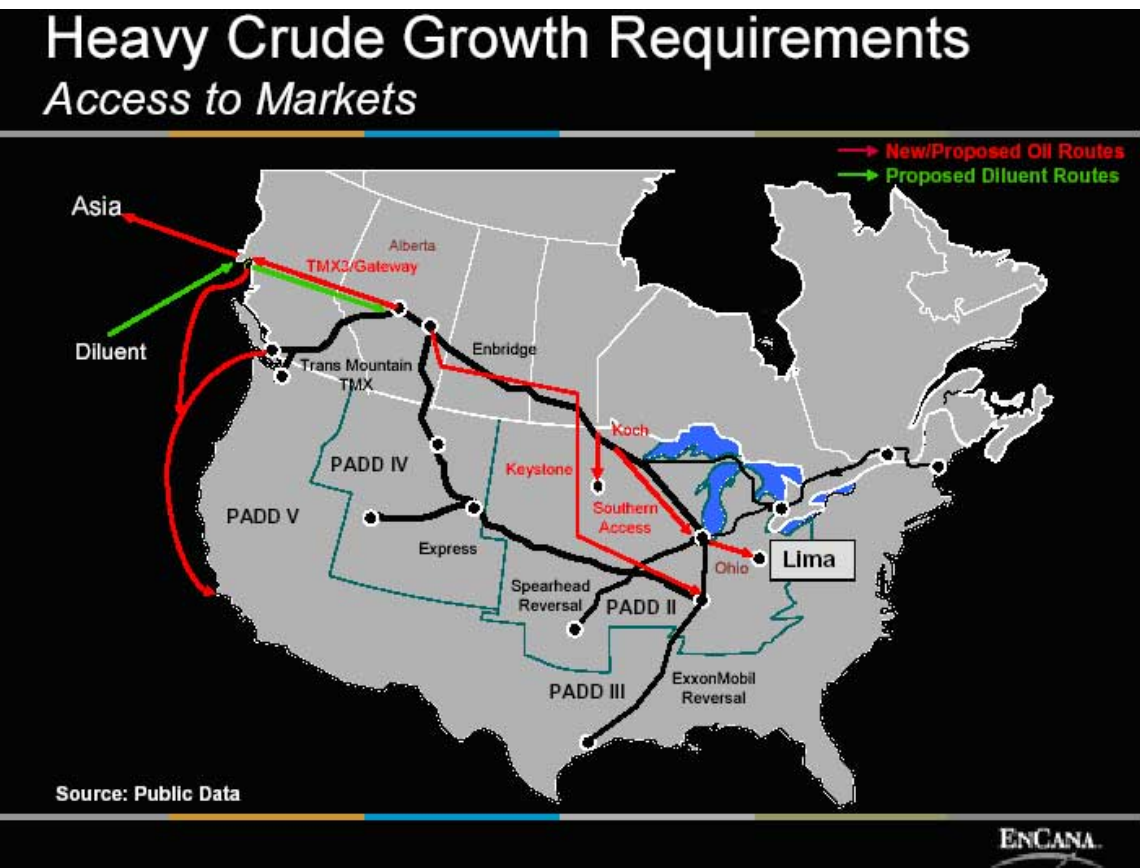
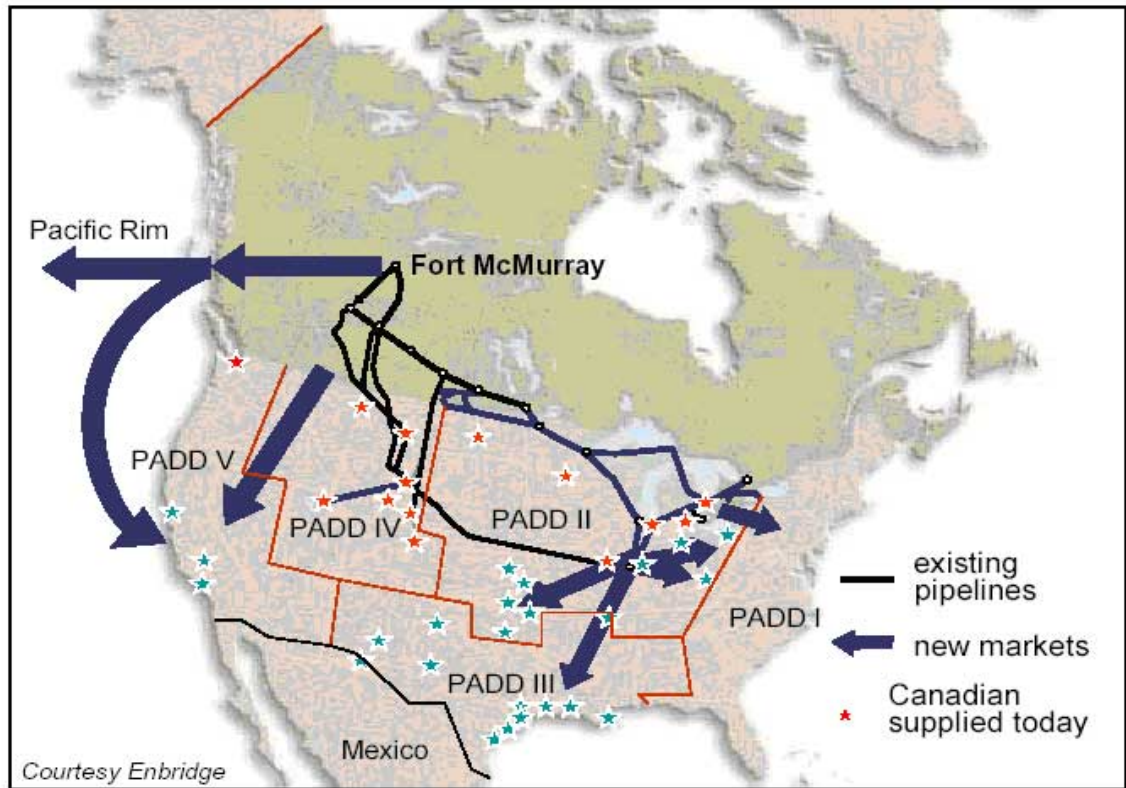
<p>2000 <i>April</i></p>	<p>Release of the first Cumulative Effects Management Association (CEMA) newsletter, <i>The Sustainable Times</i>, for the tar sands development. “The goal of the <i>Sustainable Times</i> is to keep everyone in the region up to date on where we are on the road to RSDS issue resolution. The newsletter will be published regularly and is open to anyone interested in providing articles concerning environmental management, environmental education or any other fun and exciting environmental topics that might be of interest to fans of sustainable development in the region.” 7 more issues are printed, ending in July 2003.</p>
<p><i>June 9-10</i></p>	<p>An environmental conference, called <i>Widening People’s Choices</i>, is organized concerning the impacts of oil on life on the planet. Alberta’s Toxic Watch Society summarizes concerns about the tar sands, and Chief Bernard Ominayak of Alberta’s Lubicon Nation delivers a speech on oil and human rights.</p>
<p><i>July 31</i></p>	<p>Pembina Pipeline Corporation, operating company for the Pembina Income Fund, purchases a group of seven crude oil pipelines in east-central BC and northwest AB from Federated Pipe Lines Ltd. The longest pipeline is the former Federated Western System that connects oil field facilities at Taylor, BC to Kamloops, which one of Pembina’s subsidiaries, Plateau Pipe Line Ltd., through Pembina West Ltd. Partnership, now operates. Pembina now owns a total of 14 pipelines in BC and AB. In addition to the Western System, these pipelines include the Blueberry, BC Light, and Boundary Lake systems which feed oil from gathering lines into the Taylor area, and Pembina’s interest in the Taylor system. Two of these seven pipelines compete with the Western System, transporting crude oil from Taylor to oil terminals in Edmonton, AB.</p>
<p><i>July 31</i></p>	<p>Some ten hours after legally acquiring the pipeline, Pembina’s Federated Western System crude oil pipeline ruptures at 22:37 hours at milepost 102.5, between Garbett and Callizon Creeks, on the northern side of Highway 97 between Prince George and Ft. St. John, spilling some 6,300 barrels of oil, until the line was shut down at 01:17 hours on August 1. By 02:45 hours, pipeline maintenance personnel closed the nearest isolating valves at milepost 92 (10.5 miles upstream of the rupture) and at milepost 106.8 (4.3 miles downstream of the rupture). It took the pipeline maintenance man about one hour and thirty minutes to close the manual block valves on either side of the break. Each kilometer of 12 and three quarter inch pipe contains 77 cubic metres (77,000 litres) of crude oil, and are 10 pipeline stream crossings of the Pine River between Milepost 92 and 106.8. Of the total 27 river crossings made by the Taylor to Kamloops pipeline, 19 are Pine River crossings.</p> <p>“Much of the oil soaked into the ground, while some moved northward into a low area and then into the Pine River about 80-100 meters north of the break point. Approximately 450 m³ of liquid oil was estimated to have entered the Pine River.”</p> <p>The incident is about 90 kilometers upstream of the town of Chetwynd, the Pine River being the source of the town’s drinking water. The town of Chetwynd would later file a claim of over \$3 million for moving and disrupting its water source.</p> <p>After shutting down the line, BC’s Oil & Gas Commission conditionally authorizes Pembina to re-operate its line, but doesn’t do so until September 21 after the company hydrotests the line from Taylor to Prince George. Though the line opened to the Husky Oil Operations Ltd. refinery in Prince George (built in 1967), the remainder of the line from Prince George to Kamloops is shut down for the next year. Upon orders from Environment Canada, the Canspec Group Inc. investigates the metallurgical properties of the confiscated failed pipe section and concludes that it is a time of manufacture defect, wherein a “non-metallic inclusion” caused a “hook” crack to form, calling it a “low probability event”.</p> <p>Pembina later states that the Pine River is the most expensive oil spill in Canadian history, costing the company: just over \$32 million for oil containment, recovery, clean-up and environmental impact assessments; about \$20 million for inspecting and upgrading the pipeline after its rupture; and some \$500,000 for additional oil containment, recovery, and clean-up equipment for future emergency response uses. 29,000 cubic meters of contaminated soils near the rupture is removed, 9,400 tonnes of which is transported by train and dumped at the West</p>

<p>2000 (continued)</p>	<p>Edmonton landfill. Experts state that following clean up mediation it will take ten years for the Pine River to clear up.</p> <p>Pembina remains under investigation regarding possible offences under British Columbia and federal environmental and fisheries statutes. Section 38 of the BC <i>Pipeline Act</i> requires a pipeline company to “make every reasonable effort to prevent spillage” and, if a spillage occurs, to promptly remedy the cause, contain the spillage and restore the site.</p> <p>The spill occurs during a highly sensitive period - the internal political engine swing to market crude oil from the oil sands via pipelines across British Columbia: it remains a public relations nightmare. The issue is raised at Kinder Morgan Canada Inc.’s (former Terasen Pipeline’s) preliminary meetings with environmental groups on January 25, 2006, regarding discussions on its Anchor Loop project (through Jasper National and Mt. Robson provincial parks).</p>
<p><i>August 28</i></p>	<p>Pembina purchases the three main gathering systems upstream of Taylor from the Western Facilities Fund for \$38.4 million. The Western System receives crude oil from a network of three gathering systems (Blueberry, BC Light, and Boundary Lake) upstream of Taylor. At Taylor, the oil has historically moved west and south on the Western System.</p>
<p><i>October</i></p>	<p>The National Energy Board releases a 107-page energy market assessment report, <i>Canada’s Oil Sands: A Supply and Market Outlook to 2015</i>. It is followed by a second update report in November 2004 on the oil sands. The 2000 report is the first report by the NEB on crude oil, or specifically, on the supply and market of unconventional or synthetic crude oil, and devotes 17 pages to the discussion of “the environment” related to the development of Alberta’s tar sands: “The increasing project development currently underway or proposed will bring with it many challenges for the industry, the public and the regulators. Careful planning is required to ensure that no irreparable damage is done to the people and the environment, and that natural resources are developed in a sustainable manner taking into account the needs of the future generations.” “For this report the Board conducted a series of informal meetings and conversations with a representative cross-section of the oil sands industry, including producers, marketers, refiners, pipeliners, industry associations, research institutions, consultants, government agencies and environmental protection groups. Several private individuals, now retired, provided valuable comment and insight.”</p> <p>The reason for the report is directly related to the initiatives on development strategies of the tar sands as set forth by the National Oil Sands Task Force in 1995 that developed a long term crude oil supply objective, along with the Task Force’s recommendation for the establishment of the Canadian Oil Sands Network for Research and Development.</p>
<p><i>November</i></p>	<p>Kenneth W. Vollman, Chairman of the National Energy Board, announces the addition of an Environmental Policy, as part of its 1999-2002 Strategic Plan. “The Board is taking this opportunity to present the NEB Environmental Policy. Establishing an environmental policy is the first of many key activities that will contribute to the achievement of the environmental goal. Centred around the core values of the Board, the policy reflects its overall environmental direction and aligns management and staff with common principles of operation. The Board believes that effective management systems are an integral part of managing safety and protection of the environment. Management systems ensure that a comprehensive approach to managing risk is taken while allowing for flexibility. The development of its own management system is another key activity the Board is undertaking to contribute to the achievement of the environmental goal.”</p> <p>“The NEB promotes sound environmental decision-making throughout its activities, consistent with the principles of sustainable development, prevention of pollution, cost effectiveness and in compliance with all applicable environmental legislation and other requirements.”</p>
	<p>Exxon Mobil corporation, during the increase in the price of oil, nets the largest annual profits ever recorded in US corporate history, at \$17.72 billion.</p>

2001	For the first time in Alberta's history, conventional crude oil production is exceeded by bitumen crude production.
<i>April 2</i>	<p>After Pembina Pipeline Corporation filed a toll application with the BC Utilities Commission on December 29, 2000 as a result of the Pine River oil pipeline rupture in August 2000, a tribunal (oral public hearing, under oath) begins at the Commission's office in Vancouver over the next seven business days, all proceedings of which are recorded and transcribed. According to the Commission's 103-page Decision of June 26, 2001, this was the first time in the history of the Commission's operational activities for "a comprehensive review of an oil pipeline regulated under the Pipeline Act." Due to the associated costs of more than \$50 million resulting from the pipeline rupture, Pembina proposes toll increases with the Commission, stating that such costs are already "unpalatable" to its shippers. More costs are forthcoming due to what Pembina admits to as "significant upgrades" to its pipeline system.</p> <p>About a month after the rupture, the BC Oil and Gas Commission directs Pembina to develop an Integrity Management Plan to be submitted within 12 months. Once approved, it must be implemented as directed by OGC. The plan is to include baseline assessment, a continual process of assessment and evaluation, an analysis of available information about pipeline integrity and consequences of a failure, criteria for repair actions, identification of areas of high consequence and a plan to protect these areas, methods to measure program's effectiveness, and a process for review of integrity assessment results and data analysis.</p>
<i>August</i>	The National Energy Board releases a 96-page technical report, <i>Conventional Heavy Oil Resources of the Western Canada Sedimentary Basin</i> . "The ultimate recoverable resources of heavy conventional crude oil in Western Canada are thus estimated to be some 1,391 million m ³ (8.7 billion barrels), representing an increase of 8.2 percent compared with the Board's 1999 Supply and Demand Report."
<i>December 20</i>	Justice Heneghan of the federal court Trial Division rules that the federal Ministers of Environment and Fisheries failed to comply with their duties under the <i>Canadian Environmental Assessment Act</i> (CEAA) when they approved Suncor's "Project Millennium" in northeastern Alberta. The project involved a \$2 billion expansion and upgrade of an existing oil sands mine. The federal Minister of Environment, after considering the Terms of Reference from Alberta Environment Ministry's Regional Sustainable Development Strategy (RSDS), made her decision on January 21, 1999, approving the project, and stating that "the project as described, is not likely to cause significant adverse environmental effects." She then referred the matter back to the federal Minister of Fisheries, who in turn issued authorizations under the <i>Fisheries Act</i> . Three environmental groups, the Environmental Resource Centre, Prairie Acid Rain Coalition and Toxics Watch Society, brought applications for judicial review related to the approval of Suncor Energy's "Project Millennium", with the Sierra Legal Defence Fund as their legal counsel. The Applicants argued that the federal Comprehensive Study Review (CSR) did not comply with section 16 of the Canadian Environmental Assessment Act (CEAA) because the authors of the CSR relied on the Alberta regulatory processes, especially the RSDS, to mitigate environmental effects. Since the work authorized had been carried out by the time the applications were heard Justice Heneghan did not make an order of prohibition. However, she did issue a declaration that the federal Minister of Environment's decision was wrong in law as were the federal Minister of Fisheries' authorizations. As the Canadian Environmental Law Centre stated, the Decision: "reaffirmed the role of the federal government as a "watch-dog" of environmental matters and demonstrated that it cannot defer to provincially controlled processes that have no regulated goals or outcomes. It clearly strengthened the federal government's role in the environmental assessment process as it relates to provincial energy projects. The federal government must be an active participant in the environmental assessment process, not just another participant on par with all other stakeholders. Federal Environment Ministers can no longer dodge their responsibilities."

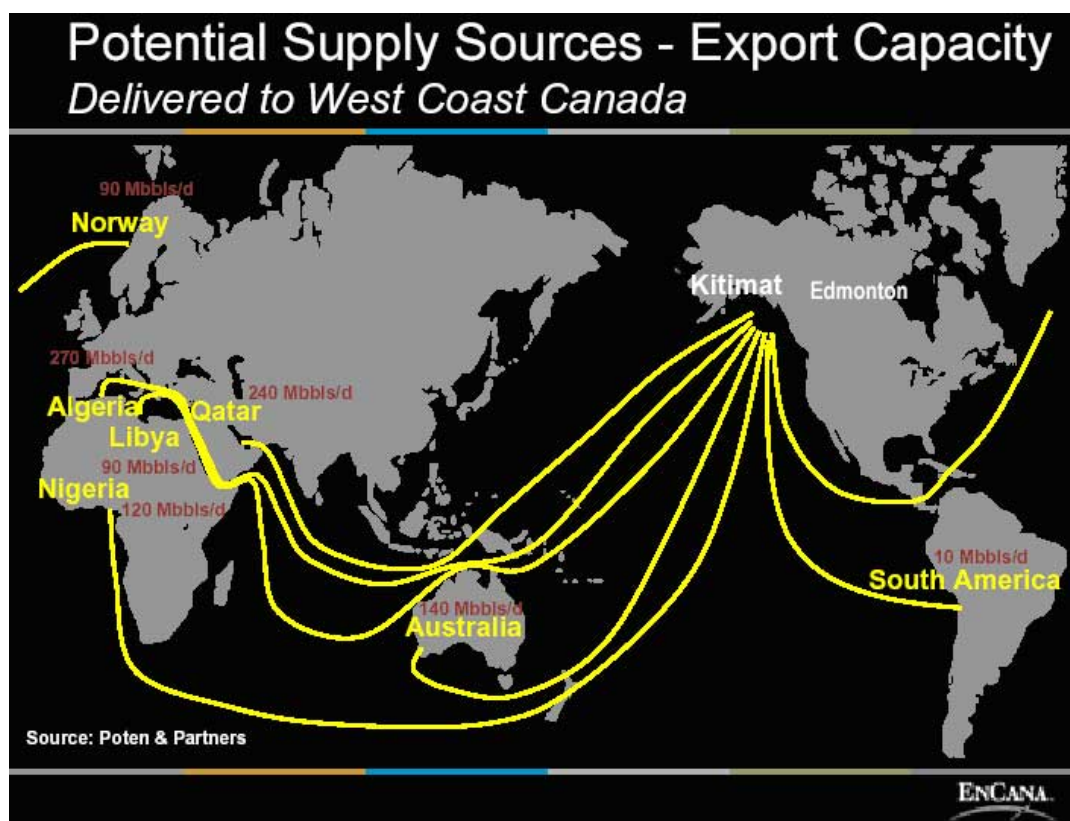
	<p>According to the US Central Intelligence Agency's website on oil consumption in its World Factbook, the combined global consumption of oil is at 77.04 million barrels/day, or 28.12 billion barrels/year (and rising), the annual volume equivalent of filling a mile square swimming pool one mile deep (or accurately - 1,647.4 meters cubed. One barrel = 5.61 cubic feet = 0.159 cubic meters = 42 US gallons = 34.97 imperial gallons).</p> <p>The US is the largest consumer at 19.65 million barrels/day, or 7.172 billion barrels/year (25.51 percent of global daily total, with 5 percent of the world's population), Japan the second largest at 5.29 million barrels/day, and Canada in sixth place at 2.2 million barrels/day.</p> <p>According to a 1997 US study on emissions, in 1997 the US military used 101 million barrels of oil, of that 72 percent was used domestically. Wayne Ellwood's 2001 report, <i>Mired in Crude</i>, states that Canadian exports of crude oil to the US are at 1.7 million barrels/day - 8.7 percent of US total consumption, or 77.3 percent of Canadian total consumption – and is the third ranked supplier to the US, behind Saudi Arabia and Venezuela. By 1997, some 800 billion barrels of oil (“cumulative production”) have been consumed since the oil era began in Pennsylvania in 1859, which by 2005 would rest at just over 1 trillion barrels (the equivalent of almost 159 billion cubic meters of oil, or about 5.41736 cubic kilometers, or a little more than 3.3 cubic miles of oil). Coupled with its need to import oil, the US total debt at the end of 2004 is at a staggering \$7.4 trillion (about \$2 billion/day).</p>
2002	<p>**** The new BC Liberal government (with a landslide 77 out of 79 total provincial seats) revamps the <i>Environmental Assessment Act</i>. Eliminated from the <i>Act</i>, are: requirements for a Project Committee that included First Nations and public representatives; requirements to assess the cumulative effects of a project; the need for and alternatives to a project; and an introductory section that emphasizes sustainability. Environmental assessments for major projects are no longer deemed as necessary or as a requirement.</p>
<i>January 10</i>	<p>Alberta's Environment Minister Lorne Taylor announces the formation of a new Environmental Protection Advisory Committee: “Environmental protection is a collaborative effort, and committees like this one are key to ensuring we strike the right balance between economy, community and the environment. The Environmental Protection Advisory Committee is an example of how we can work with Albertans to develop new and innovative ways to sustain and enhance our environment, and keep it healthy for our children and grandchildren.” On the committee is the Executive Vice President of Suncor Energy Inc.'s Oil Sands Division, Mike Ashar. Ashar was later replaced by Steve Williams.</p>
<i>March</i>	<p>24 years to the month after West Coast Oil Ports Inquiry Commissioner Andrew Thompson rejected oil tanker traffic in his final summary report, representatives from the Enbridge corporation at an Alberta Department of Energy workshop forecast Oil Sands Pipeline capacity to 3 million barrels/day by 2011 and unveil the Western Transportation Study, a pipeline corridor from Fort McMurray to Prince Rupert/Kitimat. Its “target market” is Los Angeles and Yokohama. Enbridge begins an Oil Sands Market Study and hires Jacques Whitford Environment Limited to conduct route and port option analyses completed in 2003.</p>
<i>June</i>	<p>Richard Fineberg's 170 page report, <i>The Emperor's New Hose: How Big Oil Gets Rich Gambling with Alaska's Environment – A Status Report on the Trans-Alaska Pipeline System</i>.</p>

Figure 2.3 New Markets

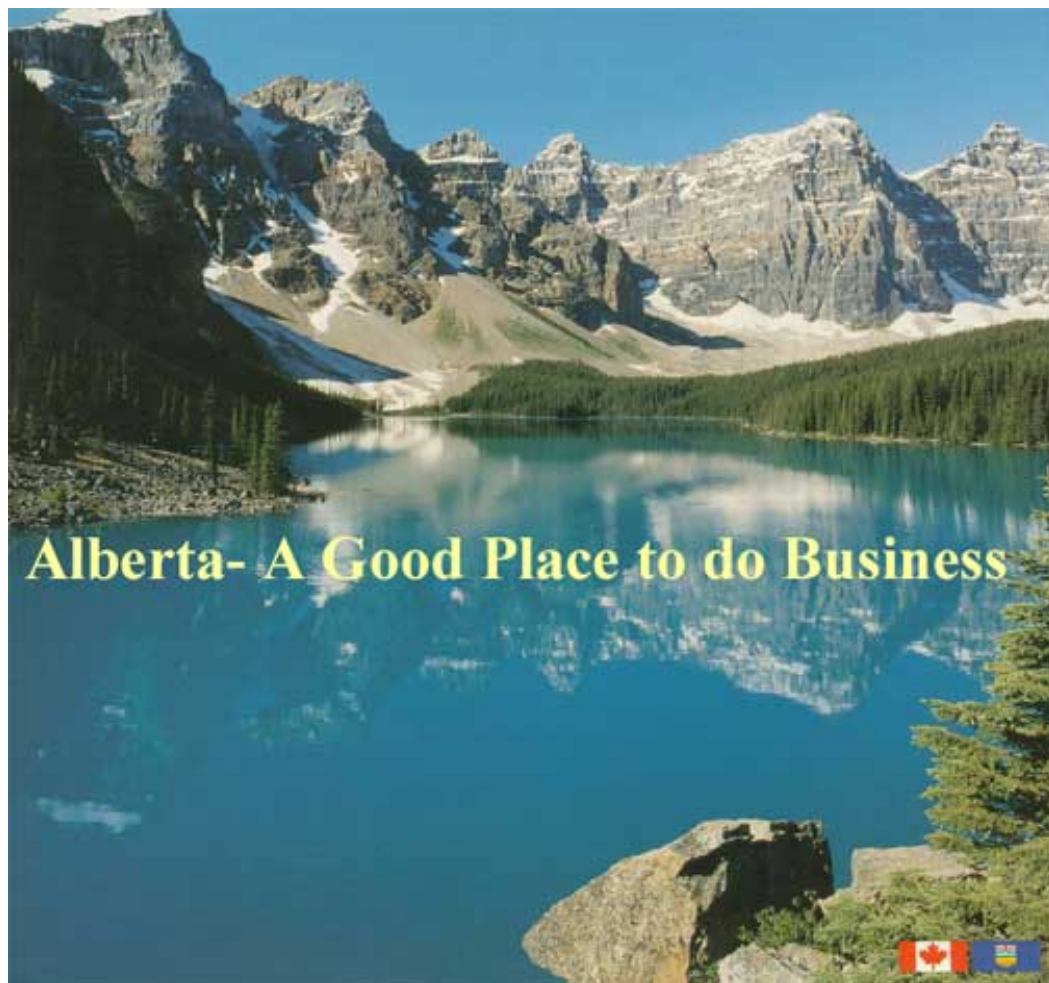


2003	The BC Liberal government passes the <i>Significant Project Streamlining Act</i> that provides the B.C. Cabinet and individual ministers extraordinary powers to overrule provincial or local government laws, regulations or bylaws if they are perceived as being constraints to development projects that the government designates as provincially significant.
	Alberta Energy and Utilities Board report, <i>Alberta's Reserves 2002 and Supply/Demand Outlook 2003-2012</i> .
	Canadian Energy Research Institute report, <i>Oil Sands Supply Outlook: Potential Supply and Costs of Crude Bitumen and Synthetic Crude Oil in Canada 2003-2017</i> .
	The Oil & Gas Journal, and the Cambridge Energy Research Associates, recognize the Oil Sand reserves of bitumen (liquid hydrocarbons), and rank Canada as second in the world's oil reserves.
<i>March</i>	Regional Issues Working Group presentation report to the Canadian Institute of Energy, <i>Alberta's Oil Sands Industry</i> .
<i>April</i>	<p>Pembina Institute for Appropriate Development report, <i>Oil and Troubled Waters – Reducing the Impact of the Oil and Gas Industry on Alberta's Water Resources</i>. "It is our view that an enhanced regulatory management regime is required to encourage industry to avoid the use or disturbance of freshwater resources as much as possible, and to optimize efficient use where usable water continues to be required. Doing so could help minimize the potential for future conflict between competing uses, and provide for longer-term sustainability of Alberta's water resources."</p> <p>"In the past Alberta Environment granted unfettered licences to large oilsands companies for the volume of water required for start-up of their operations. This start-up volume is substantially larger than volumes required for normal operations. The practice of granting water licences and approvals set at the full startup requirement withdrawal rate has allowed these companies to implement numerous large-scale expansions and new projects that have substantially increased their daily average water withdrawal requirement without needing to apply for a new licence. Since the Water Act came into force in 1999, Alberta Environment grants licences with a 10-year renewal period, sufficient to meet routine operations (with a separate temporary licence to meet additional water requirements during start-up). However, licences granted before the Water Act came into force have been grandfathered, in recognition of commitments made under earlier legislation and the fact that investments had been made based on those commitments.⁷⁸ As a result, they have not been subject to re-evaluation or re-assessment for potential environmental impacts or the appropriateness of the magnitude of the allocation."</p>
<i>May</i>	BC's West Coast Environmental Law Association releases its report, <i>Pump It Out: The Environmental Costs of BC's Upstream Oil and Gas Industry</i> . Numerous serious environmental concerns are raised in this report. For instance: "In BC's northeast, thousands of kilometres of seismic lines are cut each year. 6,913 kilometres were constructed in 1999, for example, and 10,362 kilometres more were constructed in 2000. The provincial government wants to double the amount of oil and gas activity over the next five years... A company must obtain a licence to cut from the Oil and Gas Commission in order to cut and/or remove Crown timber from provincial forest land [s. 51 <i>Forest Act</i> , s. 17 <i>OGCA</i>]."

<i>May 18</i>	Sonja Shah's article, <i>Our Liquid Slave</i> : "The M1 Abrams tanks that plowed through Iraq rumbled just a half a mile forward on a full gallon of petroleum, the average American truck, just 6 miles. Jet planes zooming overhead get just a quarter of a mile to the gallon; ocean liners just .005 miles to the gallon. US industry gorges on over 200 million gallons a day, most profligately in the refining of petroleum itself, producing the fuels, fertilizers, pharmaceuticals and plastics that pulse through the US economy, coating the country in a thick sheen of oil. Industrial farms saturate the land with petro-fertilizers, packing the harvest off in diesel-burning trucks that burn over 4,000 gallons a year on average. Cars and trucks combust over 500 million gallons every day on almost 4 million miles of petro-asphalt-paved highways, their passengers gorging on petro-fertilized foods off of petro-plastic plates."
<i>July</i>	National Energy Board report, Canada's Energy Future: <i>Scenarios for Supply and Demand to 2025</i> .
<i>August</i>	Canadian Association of Petroleum Producers report, <i>Western Canada Crude Oil Supply and Markets 2002-2010</i>
<i>November</i>	National Energy Board round table with selected stakeholders to identify "key issues and opportunities surrounding the oil sands"
<i>December</i>	Report by CIBC World Markets, <i>Oil Pipeline Expansion Heats Up: Enbridge, Terasen and the Producers</i> .
	China's Ministry of Communications on Marine Oil Transportation predicts a sharp increase in crude oil imports over the next few years, and more later. From 1996 to 2002, China's oil imports surge from 20 to 70 million tons, and by 2005 to 100 million tons. In 2002, China is ranked as the third largest consumer of oil, at about one quarter the consumption of the USA. Enbridge Inc. is looking to make a deal with PetroChina to market Alberta's oil sands to China. Of its 5 million barrels/day consumption in 2002, China imports 1.4 million barrels/day. In 2002, the world uses three times more oil than was discovered, which is why so much attention is being cast on the Middle East oil reserves.



2004	Enbridge Inc., an international transportation/distribution energy corporation, releases its company profile report, <i>Corporate Social Responsibility</i> , to accompany its annual 2004 shareholder report. “We endorse the principles of the United Nations Global Compact and the Voluntary Principles on Security and Human Rights and we work with host governments, community leaders, landowners and all our stakeholders to ensure that we conduct our work ethically, appropriately and share our experiences to the benefit of others (“its nine principles address best practices in human rights, labour and environmental issues”).” “Enbridge is committed to environmental protection and stewardship. Enbridge recognizes that pollution prevention, biodiversity and resource conservation are key to a sustainable environment, and will effectively integrate these concepts into our business decision-making.” Its Corporate Resources Group Vice-President states, “Risk management is an integral component of goal-setting and business decision-making and is truly embedded into the culture of Enbridge.” The company is quietly undertaking a new crude oil and condensate pipelines proposal to transport Alberta’s tar sands crude, one of the greatest Canadian industry-caused environmental impact disasters, across BC.
	Joint venture with Athabasca Oil Sands Project (AOSP), Shell Canada Limited, Western Oil Sands Inc, and Chevron Canada.



Alberta- A Good Place to do Business

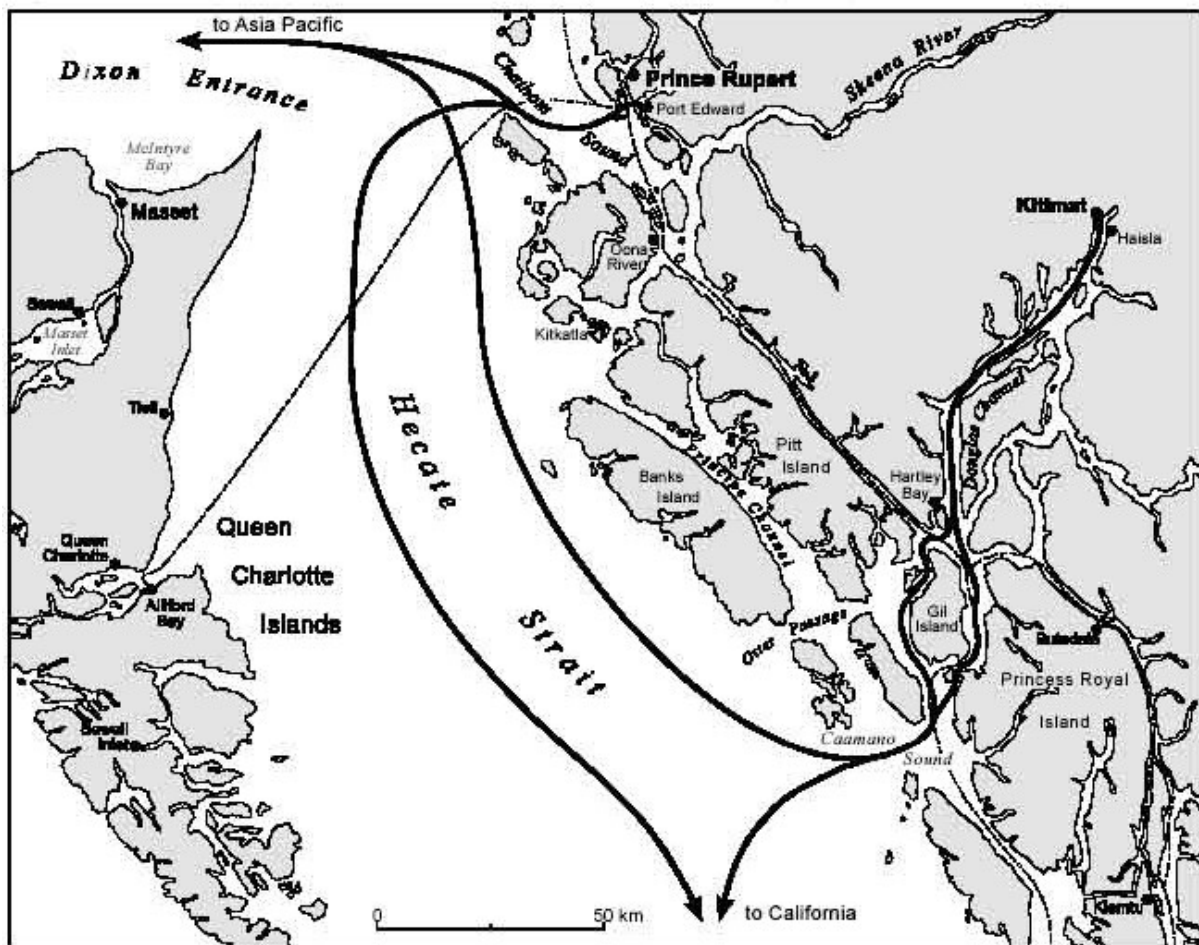
Photo from an October 18, 2004, presentation, *Alberta’s Oil Sands Resources, Production Growth, Products and Markets*, by the Alberta Energy Research Institute, showing the famous Lake O’Hara in Banff National Park, and the Valley of the 10 Peaks. Is it appropriate to use National Park scenery to promote business opportunities, and, is there a hidden message in this photo? (Source: internet.) Note: This very scene was formerly on the reverse side of the Canadian \$20 bill.

2004 <i>January</i>	<p>The Alberta Chamber of Resources industry lobby group releases its second major strategic reporting (the first in 1995) on the tar sands, <i>Oil Sands Technology Roadmap: Unlocking the Potential</i>. “The Chamber is well known for its success in pursuing oil sands initiatives on behalf of our members and stakeholders. The report of our National Task Force on Oil Sands Strategy became the pre-eminent vision for the development and expansion of the oil sands (see Timeline, May 1995). That plan became a reality through the efforts of our members, governments and partners. The Alberta Chamber of Resources is now pleased to release the Oil Sands Technology Roadmap, a strategy that will be essential to the continued development of this vast resource.”</p> <p>Says Robert Simpson, writing for the Alberta Chamber of Resources Directory 2004: “The concept behind producing a technology roadmap is not unlike traveling in an unfamiliar locale without a map – you may know where you are going but not how to get there. The destination or goal for the Alberta oil sands industry is to produce five million barrels of bitumen daily by 2030 and the Oil Sands Technology Roadmap identifies the challenges the industry must overcome to achieve this growth in an economically, environmentally and socially responsible manner... The Oil Sands Technology Roadmap was borne out of the success of the National Task Force on Oil Sands Technology. Members of the Alberta Chambers’ Oil Sands Task Force recognized the influence that a collaborative approach had on oil sands development and began to develop a platform of technology needs and opportunities that will drive research and development to reach the industry’s goals.”</p>
<i>March</i>	Canadian Energy Research Institute report, <i>Oil Sands Supply Outlook: Potential Supply and Costs of Crude Bitumen and Synthetic Crude Oil in Canada 2003-2017</i>
<i>April 22</i>	Federated Pipe Lines Ltd., a subsidiary of Pembina Pipeline Income Fund, the operator for Pembina Pipe Lines, pleads guilty in BC’s Provincial Supreme Court in Prince George to criminal charges under the federal Fisheries Act (Section 36-3) for dumping crude oil into a fish-bearing river. The charges were laid after a three and one half year investigation into Pembina’s spill by Environment Canada investigators. Total fines levied against Pembina are \$400,000, a drop in the big crude oil bucket. This was the first criminal prosecution of an oil pipeline company in Canadian history.
<i>April 28-30</i>	Fourth International Conference on Hydrocarbon, Spills, Modelling, Analysis and Control, Oil Spill 2004, is held at the University of Alicante in Spain. “The danger of oil pollution in coastal areas such as that around Alicante cannot be overstressed. Oil spills are not only expensive to remediate but have negative long-term effects in zones depending on tourism and fishing for their livelihood. Numerous and frequent oil spills have shown the extent of the damage inflicted on the environment, when a large volume of oil is released over a short period of time and, in particular, the susceptibility of certain environments, such as coastal regions, to these spills. Although oil spills are frequently a major issue at sea and in coastal areas, the conference also addressed topics related to soil and land spills, such as those due to leaks during transportation over land or storage tanks and pipelines.”
<i>May</i>	The National Energy Board releases its 138-page report, <i>Canada’s Oil Sands: Opportunities and Challenges to 2015</i> . The report is an update of its October 2000 report and market assessment on the oil sands: “The key objectives of the report are to update the supply and demand aspects contained in the first EMA and to provide a comprehensive assessment of the opportunities and issues facing the oil sands... In November 2003, the Board conducted an informal roundtable discussion with selected stakeholders to provide parties the opportunity to comment on the Board’s identification of the key issues and opportunities surrounding the oil sands. As well, the Board conducted a series of informal meetings with a cross-section of oil sands stakeholders, including producers, refiners, marketers, pipelines, electricity and petrochemical officials, industry associations, consultants, government departments and agencies, and environmental groups. The NEB greatly appreciates the information and comments provided and would like to thank all participants for their time and expertise.”

<p>2004 (continued)</p>	<p>“The environmental thresholds proposed by CEMA for the Athabasca oil sands region have not yet been established and concerns have been identified by several agencies including Environment Canada, the Standing Committee on Environment and Sustainable Development and the Sierra Club of Canada. The main concern is that the number of newly proposed projects in the region and the rate of construction is potentially exceeding the ability of CEMA and the RSDS to effectively develop management systems and establish environmental thresholds.”</p> <p>“The population in Fort McMurray has grown steadily from 1,100 in 1961, to 6,000 in 1971, to 24,000 in 1978, and to 35,200 in 1996. The latest census information indicates that the population of Fort McMurray has reached 47,240 as of 2002, and supports an additional 8,063 living in oil sands work camps. This growth is forecast to continue with the population reaching 70,000 by 2010.”</p> <p>“The significant investment of time and resources in the various areas of environmental research speaks to the commitment the oil sands industry has for environmentally responsible activities... The economic benefits associated with the development of the oil sands are considerable.... There are many challenges facing the oil sands industry; however, continued efforts to enhance research and development activities, and to create public-private partnerships and supporting government policies and programs, will improve the future of oil sands developments. It will be necessary to overcome barriers, both technical and economic, to the implementation of new methods and technologies that will reduce the overall environmental effects from the oil sands and promote the well-being of people in supporting communities.”</p> <p>In its press release of May 27, 2004, the NEB summarizes: “Over \$60 billion in new oil sands related projects have been proposed, with \$20 billion already invested in completed projects. In 2004, oil sands production will surpass 160,000 cubic metres (1 million barrels) per day; by 2015, production is expected to more than double to 340,000 cubic metres (2.2 million barrels) per day. Growth in global oil demand suggests that markets will exist for the rising oil sands output and pipelines will be constructed or expanded to tap these markets... Natural gas requirements for the oil sands industry are projected to increase substantially during the outlook period from 17 million cubic metres (0.6 billion cubic feet) per day in 2003 to a range of 40 to 45 million cubic metres (1.4 to 1.6 billion cubic feet) per day in 2015.”</p>
<p><i>May 25</i></p>	<p>The Pembina Institute for Appropriate Development, Prairie Acid Rain Coalition, and Toxics Watch Society of Alberta, through its lawyers with the Sierra Legal Defence Fund, are in court challenging a controversial decision to limit the scope of an environmental assessment required under the Canadian Environmental Assessment Act for TrueNorth Energy’s proposed Fort Hills oil sands project near Fort McMurray, Alberta. Specifically, the Department of Fisheries and Oceans’ 2002 decision to limit the project’s environmental assessment to an examination of one small creek within the project area, instead of investigating the impacts of the 10,600-hectare oil sands project as a whole.</p>
<p><i>August</i></p>	<p>After initiating its proposal with BC coastal First Nations, Enbridge Inc. receives concerns from their representatives about requiring a preliminary assessment on environmental, socio-economic and institutional/regulatory issues related to its Gateway pipeline project. As a result, Simon Fraser University student Timothy Van Hinte undertakes his 141 page Resource Management Masters Thesis published in the Spring of 2005, <i>Managing Impacts of Major Projects: An Analysis of the Gateway Pipeline Proposal</i>. In Van Hinte’s thorough summary review of relevant issues, the only serious matter overlooked (in Chapter 3.2.9, <i>Oil Spills and Accidents</i>) is the August 2000 Pine River crude oil pipeline rupture spill in northeast BC (the most expensive pipeline spill in Canadian history), with its liability implications for other pipeline spills. Another related component (outside of the BC provincial boundaries) overlooked in the assessment, is the consideration whether Alberta’s tar sands should in fact be mined at all, given the enormous disturbance and pollution of the ecology and atmosphere. If the rationale behind the development of the tar sands is in question, then so is the pipeline. Enbridge is scheduled to file its project proposal with the Canadian Environmental Assessment</p>

2004
(continued)

Agency in September 2005, and to file an application with the National Energy Board in April 2006. The NEB has powers to consider environmental impacts of proposed projects under its jurisdiction and to attach appropriate terms and conditions to project certificates. The NEB is required to conduct environmental assessments (EAs) for projects under its jurisdiction, pursuant to the *Canadian Environmental Assessment Act (CEA Act)* (CIRL 2004). In assessing applications, the NEB states that it is the responsibility of the NEB to consider all aspects of the project in order to determine if the pipeline project is in the public interest, which the NEB defines as follows: "The public interest is inclusive of all Canadians and refers to a balance of economic, environmental and social interests that changes as society's values and preferences evolve over time." Following the submission of an application, the NEB may conduct public hearings depending on the nature of the proposed pipeline. For pipelines more than 40 kilometers in length, the NEB requires a certificate hearing (Canada NEB 2003b). At certificate hearings, all relevant matters pertaining to pipeline applications are reviewed. However, if potentially affected stakeholders raise valid and sincere objections about a proposed pipeline route or related construction activities, the NEB is obligated to conduct a detailed route hearing. The procedures for certificate hearings and detailed route hearings are similar. Land acquisition processes for the pipeline proposal are scheduled for November 2006. **Enbridge's Gateway Project proposal, should it be accepted, is contingent upon lifting the 1972 federal moratorium on oil tanker traffic.**



November

Ministry of BC Energy and Mines releases its report, *Economic Impact of Oil and Gas Industry in British Columbia*.

November

After 45 years since its establishment, the National Energy Board now regulates the construction and operation of over 45,000 kilometers of natural gas and oil pipelines in Canada.

2005	Through a research contract with Russian oil giant LukOil (the world's sixth largest oil producer and second largest holder of oil reserves), the Alberta Research Council helps facilitate oil sands production in Russia's Timan Pechora Basin.
January 31	<p>The Pembina Institute releases a report on Canadian inter-government financial subsidies on the oil and gas industry, <i>Government Spending on Canada's Oil and Gas Industry – Undermining Canada's Kyoto Commitment</i>.</p> <p>"It turns out that the industry's real fear may well be that Canadian taxpayer will object to the huge corporate welfare that is being provided to the country's richest and biggest polluters. While proclaiming its desire to combat global climate change by ratifying the Kyoto Protocol and promising to reduce greenhouse emissions, the Government of Canada provided the oil and gas industry with \$1,446 million (2000\$) in subsidies in 2002. The increase in subsidies between 1996 and 2000 was 33%. Total expenditure between 1996 and 2002, inclusive, was equal to \$8,324 million (2000\$). Federal government expenditure on oil sands alone is estimated to be approximately \$1,193 million (2000\$) from 1996 to 2002, inclusive."</p> <p>"In 2000 the Commissioner of the Environment and Sustainable Development undertook a study on the level of federal government support for energy investments in Canada... His analysis revealed that oil sands, like all mining investments, receive a significant tax concession. With respect to income tax, oil sands projects are subject to the mining provisions contained in the <i>Income Tax Act</i> rather than the oil and gas provisions. According to the Commissioner of the Environment and Sustainable Development, the mining provisions are similar to those for oil and gas but allow more generous write-offs for property and preproduction development costs. In 1996, the federal government announced key changes to the federal income tax policy related to oil sands developments. The federal government extended the tax rules relevant to oil sands mining projects to those of oil sands in situ projects so that both types of oil sands projects would be treated the same for taxation purposes. The changes also specified that all investments (whether relevant to new projects or expansions of existing projects) would be treated the same as far as income taxes are concerned. Now, and since 1996, when a company acquires assets for a new oil sands project or major oil sands expansion, it can write these assets off immediately, as long as the write-off does not exceed the income from the project. Thus, the company only pays federal income tax on the income from an oil sands operation once it has written off all of the eligible capital costs. These tax rules make oil sands projects much more attractive than they would be otherwise and, according to the Commissioner on the Environment, result in a significant tax concession. Indeed, the federal Department of Finance estimates that the benefit of this tax concession is between \$5 million and \$40 million for every \$1 billion invested (1996\$). While the magnitude of future oil sands investments is still unknown, we do have solid information on the level of capital expenditure that has taken place to date. For example, between 1996 and 2002, capital expenditure on oil sands projects was over \$23.9 billion (see table below).¹²⁰ Using the range of tax expenditure associated with ACCA developed by the federal Department of Finance and presented above (between \$5 million and \$40 million for every \$1 billion invested), and the figures for expenditure below, we can estimate a range of total tax expenditure associated with the ACCA for the 1996–2002 period to be between \$120 million and \$960 million. The \$120 million in deferred tax revenue assumes the tax concession is equal to \$5 million for every \$1 billion in expenditure, while the \$960 million results from a concession of \$40 million for every \$1 billion in expenditure. Finance Canada estimated tax expenditure associated with oil sands to be \$625 million (2000\$) between 1996 and 2002 inclusive.¹²⁴ Over the same time period, the federal government pledged support of oil sands research and development of \$60 million (2000\$); support through the SRO equalled \$507 million (2000\$). Adding these figures together yields total expenditure of \$1,193 million (2000\$) over the 1996–2002 period. We consider this estimate to be conservative. Recent comments by the federal Minister of Environment in a speech to the House of Commons indicate the level of public support provided to oil sands developments over several decades: "In the past, Canada has shown that it can transform impossible energy dreams into reality. When the oil sands of the Athabaska [sic] were discovered in the 1960s, no technology existed to exploit them and the economics</p>

<p>2005 (continued)</p>	<p>were simply crazy. It took decades of dedication and, especially, sustained federal support (\$40 billion in various fiscal incentives and tax breaks) to eventually transform this impossible project into a thriving industry that will both provide enormous amounts of both energy and wealth to the country for decades to come.”</p> <p>An investigation into the trends in oil sands production relative to oil sands royalties indicates that the high level of oil sands investment taking place is indeed leading to deferred royalty payments. The table below shows the trend in royalties from oil sands versus total royalties collected in Alberta, as well as the trend in oil sands production versus total oil and gas production in the province. The figures in Table 5-6 demonstrate that, while oil sands production is increasing (up 67% between 1995 and 2002), royalties from oil sands are decreasing (down 49% over the same period). As is shown in the bottom of the table, for each barrel of oil equivalent (BOE) developed from oil sands over the 1996–2002 period, the province obtained declining revenues (from \$2.1/BOE of oil sands in 1996 to \$0.6/BOE of oil sands in 2002).</p>
<p><i>February</i></p>	<p>Canadian Association of Petroleum Producers report, <i>Crude Oil Expansion Summary</i></p>
<p><i>February 3</i></p>	<p>The University of Alberta’s Environmental and Conservation Students Association (ECSA) presents a roundtable discussion on the environmental and human impacts of oil sands developments. The panel includes New Democratic Party MLA Raj Pannu, Alberta University ecology professor Dr. David Schindler, author Gordon Laird, and Dan Woynillowicz from the Pembina Institute, as well as representatives from Albion Sands and Suncor, two of the companies working on oil sands development. Department of Renewable Resources professor Dr. Lee Foote comments in advance of the meeting: “It’s probably the most disruptive extraction one can do in the absence of radioactive mining. The entire landscape is turned upside down as the bitumen is extracted, there’s a substantial amount of airborne pollutants, there’s substantial groundwater risk, and they go to great efforts to contain groundwater. One can imagine all sorts of scenarios of some big tar island dike breaking and polluting the Athabasca River.”</p>
<p><i>August 14</i></p>	<p>Following the Canadian National railway derailment Bunker C and pole treating oil spill disaster at Lake Wabamun, the Alberta government announces the formation of a new Environmental Protection Commission, on “Alberta’s ability to respond to environmental incidents”. Eric Newell, the former head of Syncrude, and now Chancellor of the University of Alberta, becomes its Chairman. Alberta is, of course, ‘unable to respond’ to the ‘environmental incident’ of the oil sands project. The Commission’s final report was released in November 2005.</p>
<p><i>September 8</i></p>	<p>Anne McLelland, Liberal MP, and Deputy Prime Minister and Minister of Public Safety and Emergency Preparedness Canada, addresses the Canadian Club of Calgary. “We all know we’re celebrating Alberta’s one hundredth birthday (September 1, 1905), but I do want to spend just a few moments now looking just a bit into Alberta’s present prosperity because in fact this too is celebrating a significant anniversary. And what I want to talk about is the oil sands and the importance of the oil sands in driving Alberta’s prosperity and well-being, and it fits. There are so many reasons, because it was 10 years ago this month that the National Oil Sands Taskforce reported to governments, reported to me as Minister of Natural Resources, reported to my then-colleague, the Minister of Energy in this province, Pat Black, as she then was, and Eric Newell and other members of that taskforce delivered a report to me and to others entitled “The Oil Sands, a New Energy Vision for Canada.” I think the key word here is “vision”... The order books of companies all across our great land are full because of the oil sands. And I have to assure everyone that the Government of Canada will not put at risk the success of this province or the promise of its resources... As a result of the tax changes announced in the 1996 federal budget and the Alberta government’s introduction of a new generic royalty regime for oil sands mining, there has been more than \$35 billion invested in</p>

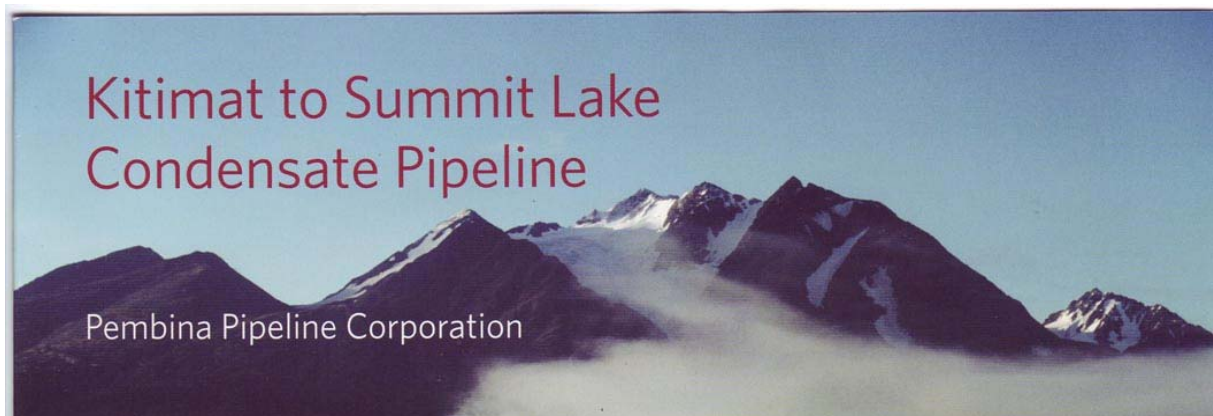
<p>2005 (continued)</p>	<p>the oil sands in Fort McMurray and the heavy oil and in oil developments in the Cold Lake and Athabasca areas, and another \$20 billion in investments are predicted to come. And I was reminded this morning in my discussions that those numbers are well ahead of any prediction that was made 10 years ago in terms of the investment in that resource, the number of barrels per day that would be produced from the oil sands, and I think it's fair to say the overall economic impact of the oil sands 10 years ago, nobody could have imagined that we would have come as far as we have today... A philosopher some of you may know named Schopenhauer summed it up best when he said this, and I quote: <i>Anyone can sympathize with another's sorrow, but to sympathize with another's joy is the attribute of an angel...</i> The challenge that stands before us, as Albertans, is great. At the end of the next one hundred years, for what do we want to be remembered? For what will our grandchildren and our great-grandchildren remember us?... Now, ladies and gentlemen, as some of you know, I was to be in Calgary today to welcome Vice President Dick Cheney who was going to come and visit our province on an official visit and in fact we were going to take Vice President Cheney to the oil sands tomorrow because clearly the oil sands are a resource that are not only of enormous benefit to our province and to our country but to North America. We are all aware why Vice President Cheney postponed his visit, because of the terrible tragedy of Hurricane Katrina."</p>
<p><i>October</i></p>	<p>Release of the National Round Table on the Environment and Economy's 93 page report, <i>Boreal Futures: Governance, Conservation and Development in Canada's Boreal</i>. "Much of Canada's oil and natural gas resource extraction and virtually all of its oil sands development is undertaken in the boreal. The Western Canada Sedimentary Basin, most of which underlies the boreal forests of northern Alberta, northeastern British Columbia, southeastern Yukon and southwestern Northwest Territories, has much of Canada's oil and gas reserves. As areas of the basin mature, most of the growth opportunity is likely to be in the boreal – the terrestrial frontier for Canada's oil and gas industry. Alberta's oil sands are second only to Saudi Arabia's in global oil reserves."</p>
<p><i>October</i></p>	<p>The government of Alberta releases a nine page draft strategy on the oil sands, <i>Mineable Oil Sands Strategy</i> (MOSS – ironically, the acronym's literal meaning is physically obliterated in the oil sands strategy). The strategy opens the proverbial door for large scale development (ecological devastation) to override previous regional and sub-regional landscape planning agreements, providing exclusivity for mining the oil sands against all and any other constraints ("the priority resource use"). It is essentially a doctrine of annihilation on the eve of upscale synthetic oil sands production.</p> <p>"2. Priority on Oil Sands - Oil sands mining will have the highest priority within the coordinated development zone. <i>This policy shifts from managing all resources in the mineable oils sands area with equalweight to placing higher priority on extracting mineable oil sands.</i>"</p>
<p><i>October</i></p>	<p>An article in the Oilweek magazine bashes the BC offshore oil moratorium, calling it "unofficial". Pressure is mounting by the oil industry on Ottawa to open oil tanker traffic and exploration drilling.</p>
<p><i>November</i></p>	<p>The Pembina Institute publishes a 76 page report, <i>Oil Sands Fever – The Environmental Implications of Canada's Oil Sands Rush</i>. It is a vivid account on the greatest environmental blemish in Canadian history, the destruction and ecosystem alteration of northern Alberta. "The greatest risk associated with the oil sands is the long-term environmental and climate implications arising from the current pace and approach to exploiting this resource." synthetic crude oil."</p> <p>"The oil sands industry consumes about 0.6 billion cubic feet of natural gas per day, enough to heat 3.2 million Canadian homes per day. In 2012, to produce two million barrels per day will require approximately two billion cubic feet of natural gas per day, more than 1.5 times the amount of natural gas that would be available from the proposed Mackenzie Valley Pipeline. This daily requirement is roughly equivalent to the amount of natural gas needed to heat all of the homes in Canada for a day."</p>

<p>2005 (continued)</p>	<p>“The National Energy Board characterizes the problem of managing fluid fine tailings as “daunting” – the volume of fluid fine tailings produced by Suncor and Syncrude alone will exceed one billion cubic metres by the year 2020, enough to fill 400,000 Olympic-sized swimming pools. If a company were not able to cover the cost of cleaning up tailings ponds, these costs could become major public liabilities.”</p> <p>“ “What’s happening to the boreal forest within the 3,450-squarekilometre oil sands Surface Mineable Area of northeast Alberta, can legitimately be described as an ecological holocaust (Dr. Richard Thomas)” ...The amount of landscape destruction experienced to date is only a hint of what is still to come.”</p>
<p><i>November 2</i></p>	<p>International Trade Minister Jim Peterson becomes a salesman for the Alberta oil sands in an article published in the <i>Embassy</i>, Canada’s Ottawa-based foreign policy newsletter, pitching export potential to the Asian market. “A big part of this industry’s success rests with Canada’s significant oil reserves, particularly our oil sands. Our reserves rank second in the world, topped only by Saudi Arabia. The vast untapped onshore and offshore energy supplies in Alberta, British Columbia, Saskatchewan, Atlantic Canada and the Arctic, along with several extensive pipeline projects on the horizon, mean that Canada is in an excellent position to service a broad share of the global market in the years to come.... Emerging markets, like China, are a particular focus. To help this sector penetrate tomorrow’s markets, Canada’s Trade Commissioners are working closely with industry, the provinces, and other federal departments and agencies to organize missions to new and emerging markets, develop and disseminate market studies and intelligence, and ensure strong and active Canadian participation in major international trade events... The Trade Commissioners are also active on the financial side, working with partners in Export Development Canada, the Canadian Commercial Corporation, provincial governments, and my department’s Investment Branch to develop export prospects, financial options and investment opportunities to help oil and gas companies expand their horizons and put their equipment and services to use throughout the world.”</p> <p>In the same newsletter feature about Canadian oil production, is an interview with the Calgary-based Oilweek editor Dale Lunan, who brushes aside the Kyoto Accord as harmful to the “Canadian economy” (i.e., the oil sands): “The tour <i>de jour</i> this year is the oilsands. That’s what everyone wants to see. A delegation might come from Venezuela to look at the operations in the oilsands to see if there is anything they can take back to develop their own heavy oil reserves — which are of equal significance to Canada.” “Which is the main country moving in on Canada’s oil and gas sector? China. It has to secure a supply of oil. They might be looking in other countries, but right now they are looking at the oilsands. They’ll go to where the oil is. Are Canadian companies receptive to China? I can’t see any reason why they wouldn’t be. Their money is as good as any money. They are the fastest-growing energy market in the world right now. A couple of Chinese companies do have minor interest in very small oilsands projects. The Chinese have the right of first refusal in capacity in a new pipeline that is planned to take bitumen from Edmonton to the West Coast. A Chinese buyer has signed up for half of that capacity — which is about 200,000 barrels a day. There are delegates all the time coming to Canada and delegates going to other countries to share whatever expertise they have developed in extracting oilsands or refining heavy oil or drilling for gas or methane. It goes on all the time. It’s one of the reason that the industry has developed the way it has because what’s s being done in Canada is being monitored in Saudi Arabia and Brazil and Russia for ways it might help the situation there. And if some engineer sees something that he might be able to apply at home he’s going to look at it.”</p> <p>Another article, an interview with Alberta Energy Minister Greg Melchin, advertises the Enbridge company’s proposal for a crude oil pipeline across BC to Kitimat from Edmonton, to export oil to China and other Asian markets. Almost sounds like a done deal. As the big caveat, Melchin delivers the big punchline: “The federal government receives 43 per cent of revenue from the oil sands; Alberta receives 36 per cent. I think Canadians need to appreciate that the country is benefiting even more than the province of Alberta by the oil sands.”</p>

<p>2005 <i>November 10</i></p>	<p>The BC Utilities Commission Decision regarding American-based (headquarters, Houston, Texas) Kinder Morgan Inc.'s acquisition of Common Shares of Terasen. Terasen has total assets of almost \$5 billion (Canadian), with 105.2 million common shares outstanding (as of December 31, 2004). Kinder Morgan is a U.S. energy storage and transportation company that operates over 30,000 miles of natural gas and petroleum products pipelines. Among the many holdings of Terasen: it is sole owner of the Trans Mountain crude oil pipeline (9.2 million shares) that operates from Edmonton to Burnaby/Washington State and is regulated by the National Energy Board; owner of the Corridor pipeline system (Fort McMurray to Edmonton, Alberta); and the Express/Platte pipeline systems (Hardisty, Alberta to the US Rocky Mountain region and the US Midwest). Though many of the 36 Intervenor urged the Commission to hold public hearings, it did not do so. More than 8,000 letters against the acquisition were sent in to the Commission.</p>
<p><i>November 30</i></p>	<p>Enter the stage, a new kid on the block. Kinder Morgan Inc. acquires Terasen Pipelines and Terasen Gas, and renames Terasen Pipelines, the operator of the petroleum transportation division of the former Terasen Group of Companies, to Kinder Morgan Canada Inc. Former Enron president Richard D. Kinder is a close friend and financial supporter of U.S. president elect George W. Bush, who personally donated \$250,000 to Bush's second inauguration estimated to cost between \$30-40 million.</p>
<p><i>December 1</i></p>	<p>a press release and declaration by 10 Canadian environmental organizations (ENGOS), and a legal environment organization, advocating "responsible" development of Alberta's oil sands on the state of the ecology: Canadian Parks and Wilderness Society, David Suzuki Foundation, Dogwood Initiative, Greenpeace Canada, Pembina Institute, Prairie Acid Rain Coalition, Sage Centre, Sierra Club of Canada (National and the Prairie Chapter), Toxics Watch Society of Alberta, West Coast Environmental Law, World Wildlife Fund Canada.</p>
<p>2006 <i>January 22</i></p>	<p>U.S. CBS Television documentary program 60 Minutes runs a short piece on Alberta's oil sands. It is, without a doubt, a public relations promotion for the oil industry, providing no investigative insight into the oil sands. Former CBS 60 Minutes investigator Lowell Bergman (as characterized in the hard-hitting movie, <i>The Insider</i>) would undoubtedly shake his head in disgust as he once did with the shameful manner in which CBS Corporate forced CBS News to betray Dr. Geoffrey Wigand, the whistleblower on big tobacco. "They're called oil sands, and if you've never heard of them then you're in for a big surprise because the reserves are so vast in the province of Alberta that they will help solve America's energy needs for the next century. Within a few years, the oil sands are likely to become more important to the United States than all the oil that comes to us from Saudi Arabia.... Greg Stringham, who works for the Canadian Association of Petroleum Producers, says surprisingly, that Washington has only been paying attention for the "last couple of years." Stringham often lobbies for the oil sands in Washington. He says that in Alberta you don't have to look for the oil sands — the earth moves.... "Alberta is a very good place to do business. It's a very stable environment."... Rick George of Suncor Energy insists in the future people won't recognize the mines. "So "what you see today is a mine. What you'll see 10 years from now is a replanted forest," he says. The program airs on the eve of the Canadian election, with the defeat of the Liberal minority government and replaced by a "Conservative" (Reform and Tory party coalition) minority government, with a clean sweep of Conservatives (i.e., Reformists) in Alberta. What will the oil industry do next?</p>
<p><i>February 1</i></p>	<p>In his address to the Nation, US president George W. Bush announces that the Nation's dependence on oil from the Middle East will soon end, with the eventuality that 75 percent of its imports will come from Alberta's oil sands. Follow-up television station commentaries, such as Canada's CBC news, from its Calgary Station, features an interview with Alberta Premier Ralph Klein's hopeful replacement Jim Dinning (former Chairman of the Canadian Clean Power Coalition). Dinning referred to the recent 60 Minutes program that</p>



	featured Alberta's oil sands, and gave the promotion, and the President's speech reference, his blessing.
<i>March 22</i>	B.C. Ferries' Queen of the North sinks off Gil Island, about 135 kilometers south of Prince Rupert. Rumors abound on the sinking related to human error. An oil slick from 5,700 gallons of #2 diesel fuel and 5,200 gallons of hydrolic oil, and oil and fuel from passenger vehicles, spreads to nearby shorelines along the ocean straight passageways during stormy weather. Authorities are unable to respond to contain the slick. The incident raises great concerns among First Nations along the Coast related to proposed oil tanker traffic and proposed oil and gas exploration.
<i>June 9</i>	Two weeks before the deadline for public comments on Kinder Morgan's Anchor Loop Project, Kinder Morgan finalizes a new draft proposal for crude oil loop project in British Columbia, the TMX-2 Project, from Hargreaves (western edge of Mt. Robson Provincial Park) to Darfield (40 kilometers south of Clearwater) pump station. This new line is for a 36 inch diameter main that will parallel the existing right of way, or close to it, and then to depart through a new corridor right of way from the village of Blue River to the town of Clearwater, along the southeastern boundary of Wells Gray Park, adjacent to the Raft River. According to the company's related "fact sheet", it is the "second major proposed expansion of the Trans Mountain system" and will add "100,000 barrels per day of incremental capacity".
<i>June 21</i>	The Pembina Pipeline Corporation, proposing its new pipeline scheme to transport condensate from Kitimat to the oil sands (part new pipeline, along with existing infrastructure and right of way on its existing Western System pipeline from Prince George north to Taylor, the pipeline that spoiled the Pine River in August 2000, eradicating the crude oil shipments south to Kamloops), publishes a small advertisement in the town of Houston's weekly newspaper for a public review ("open house") of its new plans. According to angry and concerned Houston residents, the advertisement came out the very day the public meeting was scheduled, providing no lead up time for residents to learn about and prepare for the meeting. According to Houston residents, the same tactic was used earlier in the year by Enbridge in the same newspaper for its oil and condensate proposals across BC. This is not proper public consultation, and what obviously amounts to being highly controversial issues. Is it a coincidence that this happened twice for the same town, and why??? BC residents deserve proper advance notice of critical development projects.



To meet growing demand for condensate, Pembina proposes to develop a new pipeline linking its existing Western System pipeline at Summit Lake near Prince George, British Columbia to Kitimat, British Columbia. About 100,000 barrels per day of condensate would be transported on the proposed new pipeline and then along sections of the existing pipeline network to Edmonton.

July 6

Canada's National Post newspaper, front page, with photos of former U.S. vice-president Al Gore and Alberta Premier Ralph Klein, duking it out over Alberta's oil sands. Al Gore's recent documentary film on global warming is the fulcrum for Gore's criticism over the extensive energy needed to mine the oil sands (i.e., the Kyoto Accord), adding to the North American and global ecological crisis.

GORE ON THE ALBERTA OILSANDS:

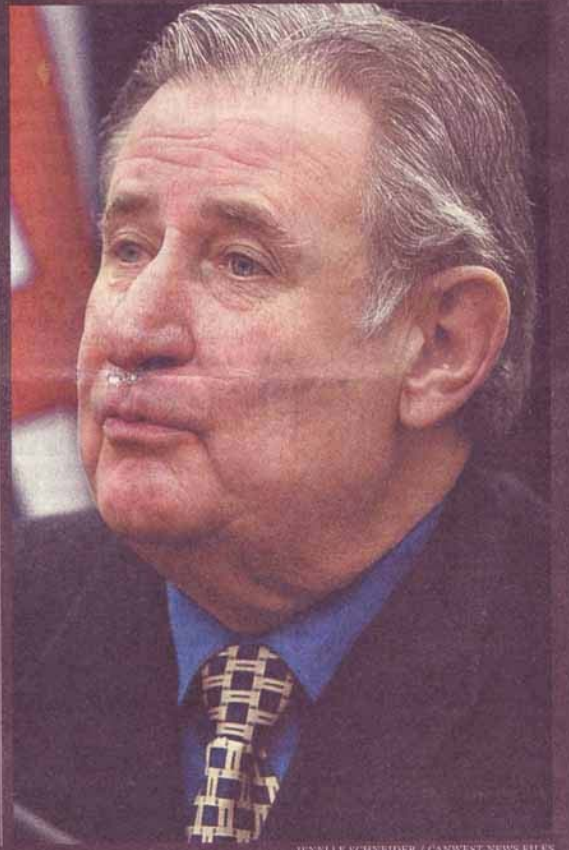
"They have to tear up four tonnes of landscape for one barrel of oil. It is truly nuts. But you know, junkies find veins in their toes."



EVAN SISLEY / REUTERS FILES

KLEIN ON GORE:

"I don't know what he proposes the world run on, maybe hot air. The simple fact is America needs oil."



JENELLE SCHNEIDER / CANWEST NEWS FILES