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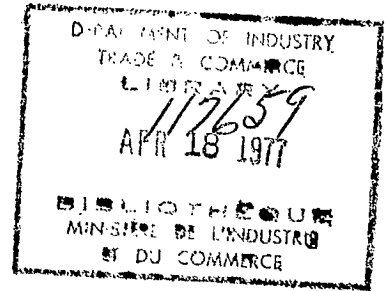
**CANADA
WEST
FOUNDATION**

**WESTERN CANADA: LOCATION OF ENERGY FACILITIES
MAIN OIL AND GAS PIPELINES, REFINERIES, COAL
AND URANIUM MINES, 1973**

**MAIN ELECTRICAL TRANSMISSION SYSTEMS AND
PRINCIPAL POWER GENERATING STATIONS, 1974**

**(Prepared in co-operation with the Department
of Regional Economic Expansion)**

(74-75/05)



WESTERN CANADA: LOCATION OF RESOURCE - BASED INDUSTRIES.

Canada West Foundation, in co-operation with the Department of Regional Economic Expansion, has published a series of reports on the location of resource - based industries in Western Canada. The titles are:

- Western Canada: Location of Primary Wood Using Industries 1973.
- Western Canada: Location of Operating Mines, Processing Plants, and Metallurgical Works, 1974.
- Western Canada: Location of Processing of Materials of Agricultural Origin I. Meat, Poultry and Dairy Plants, 1972.
- Western Canada: Location of Processing of Materials of Agricultural Origin II. Flour, Animal Feeds and Vegetable Oil Mills, 1972. Canneries, Sugar Refineries and Wineries, 1972.
- Western Canada: Location of Energy Facilities. Main Oil and Gas Pipelines, Refineries, Coal and Uranium Mines, 1973. Main Electrical Transmission Systems and Principal Power Generating Stations, 1974.

Each report includes a list, or lists of operating plants and a map or maps showing the location of the plants; as well as some background statistics about the industries.

These reports and maps on the location of resource based industries in Western Canada represent the first project of its kind in the West. As with most first attempts, there were some problems. For example, some of the information is not as current as we would have liked, resource based industries are not always conveniently located near an identifiable community, and, almost inevitably in a task of this magnitude, a few errors occurred. Accordingly, corrections are provided below along with some explanatory notes on matters that appeared to need clarification:

1. Errata

Oil and Gas Pipelines, Saskatchewan:

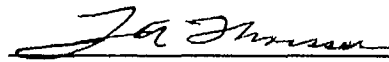
- (i) The Wascana Pipe Line, not shown on the map, is in place as described in the booklet.
- (ii) The following entry should be added:

<u>Name</u>	<u>Owners Operators</u>	<u>Gathering Area</u>	<u>Route</u>	<u>Destination</u>	<u>Capacity</u>
West Spur Pipe Line	Dome Petroleum	Midale	NE into Manitoba	Connects with Interprovincial line in Manitoba	175,000 b/d

2. Explanatory Notes

Main Oil and Gas Pipelines, Refineries, Coal and Uranium Mines:

Natural gas processing plants were not mapped because they are too numerous to be usefully given on a map of convenient size.



L.A. Thorssen
Executive Director

**WESTERN CANADA:
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MAIN ELECTRICAL TRANSMISSION SYSTEMS AND
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Prepared by.

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of Regional Economic Expansion)

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Government of Canada

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Government of Alberta

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Mr. G. Lester, Mapping Division, Department of Geography, for the preparation of manuscript maps.

DataMetrics, Calgary, for assembling data.

Mr. A.R. Brown for processing data.

WESTERN CANADA: LOCATION OF ENERGY FACILITIES

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PREFACE

This report is concerned primarily with the location of energy facilities in Western Canada. The report is divided into two parts. The second part entitled 'Location of Energy Facilities: Main, Oil, and Gas Pipelines, Refineries, Coal and Uranium Mines, 1973; Main Electrical Transmission Systems and Principal Power Generating Stations, 1974', is the principal part. It includes lists of coal mines, petroleum refineries, natural gas processing plants, oil and gas pipelines, electrical generating plants, and high voltage transmission lines. The two accompanying maps show the location of the oil and gas pipelines, refineries and coal mines; and the location of power generating stations and transmission lines, in Western Canada.

The first part of the report, entitled 'Introduction', provides some further information about energy. The information relates to energy reserves, and production of coal mines, refineries, electrical generation plants, natural gas plants and uranium mines. Comparisons are made between Western Canada and Eastern Canada, and between Provinces in the West.

**WESTERN CANADA:
LOCATION OF ENERGY FACILITIES
MAIN OIL AND GAS PIPELINES, REFINERIES, COAL AND URANIUM MINES, 1973
MAIN ELECTRICAL TRANSMISSION SYSTEMS AND
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INTRODUCTION

**WESTERN CANADA:
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INTRODUCTION

Primary Energy Resources

In March, 1974, CANADA WEST FOUNDATION published 'A Perspective on the Energy Resources of Western Canada' prepared by Laborde Simat Ltd., Calgary, Alberta (73-74/02). The material in this section is drawn from that report.

TABLE 1

Proportion of Canada's Total Primary Energy Resources Located in Western Canada

	Proved Energy Resources %	Potential Energy Resources ¹ %
Oil - Conventional	99.6	28.0
- Synthetic	100.0	100.0
Gas	97.1	28.0
Coal	96.3	89.7
Hydro	<u>20.1</u>	<u>51.8</u>
Total (ex. uranium)	90.3	75.0
Uranium	<u>2.5</u>	<u>4.6</u>
Total (inc. uranium)	70.1	64.8

1. Includes proved remaining energy reserves.

The proven reserves of oil, both conventional and synthetic, lie mainly in Western Canada; proven reserves of hydro power and uranium lie mainly in Eastern Canada. The substantial reduction in the proportion of Canada's potential conventional oil and gas reserves reflects both the relatively limited remaining potential in the West and the extensive potential reserves believed to exist in the Arctic Islands and offshore areas. Western Canada's uranium potential is relatively small; but the West has substantial reserves of hydro power.

TABLE 2

**Primary Energy Resources: Provinces of Western Canada
(as at December 31, 1972)**

	Proved Energy Reserves	Potential Energy Reserves
Oil - Conventional: Millions of barrels	9,669	18,800
- Synthetic: Millions of barrels	26,500	250,000
Gas - Billions of cubic feet	51,349	95,000
Coal - Millions of short tons	9,824	118,711
Hydro	7,286	54,344
Uranium - Tons	6,000	43,000

Total potential energy reserves of the Western Provinces amounted to close to 4,000 quadrillion Btu's. (British Thermal Units). Coal is the largest single source with oil, mainly synthetic oil, the next most important. Between them, coal and oil account for about 95% of the total.

TABLE 3

Production and Disposition of Primary Energy Resources, Western Provinces, 1972

	Oil Mb/d ¹	Gas Bcf. ²	Coal Short Tons '000
Production	1,832	2,281	15,950
Consumption	402	535	7,941
Shipments to Eastern Canada	405	741	289
Exports	1,025	1,005	7,720

1. Mb/d = Thousand Barrels per day
2. Bcf = Billion cubic feet

The Western Provinces consumed less than one-quarter of the oil and gas produced; and about one-half of the coal. Of the total shipments from the West about 72% of the oil, 58% of the gas, and 96% of the coal was exported to other countries. The oil and gas went mainly to the United States; coal to Japan.

The report 'A Perspective on the Energy Resources of Western Canada' reached the following conclusions with respect to the relation between reserves and future needs:

"With respect to the relation between the energy resource potential of Western Canada and the future demands likely to be placed on such resources, we find that the ability of oil production to expand to satisfy requirements for Canadian oil in areas already served in Canada, and to supply a portion of the Quebec market, is dependent over the long-term on the rate at which oil sands plants are brought into production. Western Canada's conventional oil reserves base will not support the continuation of exports to the United States at present levels beyond 1980 or so, irrespective of whether the Quebec market is served. The extent to which exports must be curtailed is again primarily dependent on the availability of synthetic oil.

Virtually all the potential gas reserves of the region will be required to meet long-term Canadian gas requirements and existing export commitments, in the absence of supplemental supplies of gas for Canadian markets from other sources. However, the latter are expected to be available as, for example, development of the frontier areas proceeds.

The vast coal reserves of Western Canada provide ready opportunities for the supply of coal to other parts of Canada - especially Ontario - and will support large-scale use of coal for new processes such as coal gasification.

The existence of a substantial number of developable hydro sites, primarily in British Columbia, Manitoba and Alberta, will permit new hydro projects to meet a significant portion of the expected growth in Western Canada's electricity demand. Moreover, export opportunities in the United States will provide scope for the optimal phasing of hydro developments at least in British Columbia and Manitoba."

Coal Mining in Canada, 1972¹

In the 1960's coal production in Canada remained fairly constant at between ten and eleven million tons per year. Some decrease in production in the East was balanced by increased output in the West. Since 1969 total production has increased rapidly, with the main increase in the West. In 1972 the West accounted for more than 90% of total output. Alberta was the largest producing province followed by British Columbia. (Table 4)

In 1972 about 40% of the coal produced in the West was consumed in the region with significant movement from Saskatchewan and Alberta into Manitoba. Over 80,000 tons were shipped to Ontario. Exports, almost entirely to Japan, totalled over 9 million tons.

1. The material in the text and the table in this section is drawn from: Coal Mines in Canada, January 1973, Operators List 4, Mineral Resources Branch, Department of Energy, Mines and Resources

TABLE 4

Canada Coal Production¹ by Types and Provinces, 1971 and 1972²
(Tons)

	1971				1972			
	Bituminous	Sub-Bituminous	Lignite	Total	Bituminous	Sub-Bituminous	Lignite	Total
Nova Scotia	1,965,489	-	-	1,965,489	1,425,439	-	-	1,425,439
New Brunswick	517,209	-	-	517,209	429,544	-	-	429,544
East	2,482,698	-	-	2,482,698	1,854,983	-	-	1,854,983
Saskatchewan	-	-	3,300,186	3,300,186	-	-	3,282,798	3,282,793
Alberta	3,586,573	4,425,731	-	8,012,304	4,118,747	4,905,690	-	9,024,437
British Columbia	4,637,011	-	-	4,637,011	6,547,098	-	-	6,547,098
West	8,223,584	4,425,731	-	15,949,501	10,665,845	4,905,690	3,282,798	18,854,333
Canada	<u>10,706,282</u>	<u>4,425,731</u>	<u>3,300,186</u>	<u>18,432,199</u>	<u>12,520,828</u>	<u>4,905,690</u>	<u>3,282,798</u>	<u>20,709,316</u>

1. Includes production of clean coal and shipments of raw coal from the mines
2. 1972 preliminary.

TABLE 5

Crude Oil Received at Canadian Refineries, Selected Years

	Total Crude Oil Received bbl/d	Canadian Crude as Per Cent of All Receipts
1972 ¹	1,535,543	48.3
1971	1,390,312	51.9
1970	1,280,290	55.4
1965	965,978	59.2
1955	525,484	54.8
1950	254,460	24.4
1945	178,081	8.8

1. Estimated

'During much of the last decade, Canadian crude delivered to domestic refineries has been a fairly constant percentage of total refining receipts, while almost doubling in volume. However, since 1970 this percentage has been declining and this is because of the trend to a concentration of refining capacity in those areas of Eastern Canada, served by imported crude oil. During 1972 a total of 272 million barrels of Canadian crude were received. Imported crude amounted to 290 million barrels with 144 million coming from Venezuela, 82 million from the Middle East, 22 million from Nigeria and 5 million from Colombia.'

1. The material in the text and the tables in this section is drawn from: Petroleum Refineries in Canada, January 1973, Operators List 5, Mineral Resources Branch, Department of Energy, Mines and Resources.

TABLE 6

Crude Oil Refining Capacity by Provinces, 1962 and 1972

	1962		1972	
	No. of Operating Refineries	Crude Oil Capacity (bbls/calendar day)	No. of Operating Refineries	Crude Oil Capacity (bbls/calendar day)
Newfoundland	1	8,500	1	14,000
Nova Scotia	1	50,000	3	178,500
New Brunswick	2	45,300	1	120,000
Quebec	6	304,500	7	587,500
Ontario	7	279,170	7	410,800
East	17	687,470	19	1,310,800
Manitoba	3	37,420	2	48,500
Saskatchewan	6	69,720	4	65,250
Alberta	10	94,560	7	173,650
British Columbia	6	97,300	7	129,300
Northwest Territories	1	1,500	1	2,800
West	26	300,500	21	419,500
Canada	43	987,970	40	1,730,300

In 1962 crude oil refining capacity in the West accounted for about 30% of total capacity. By 1972 the proportion had dropped to 24%.

Electrical Generation in Canada, 1971

TABLE 7

Generating Capacity, Electrical Energy Generated,
and Electrical Energy Consumed by Provinces and Regions, 1971¹

	Net Generating Capability '000Kw ²	Electrical Energy Generated			Energy Consumed Gwh ⁴
		Water Power	Thermal Power '000Kwh ³	Total	
Newfoundland	2,289	4,723,275	308,146	5,031,421	} 13,674
Prince Edward Island	87	-	274,026	274,026	
Nova Scotia	955	782,885	3,332,121	4,115,006	
New Brunswick	1,232	2,070,619	3,609,076	3,679,695	
Quebec	13,748	75,355,311	891,995	76,247,306	70,585
Ontario	<u>14,597</u>	<u>38,110,708</u>	<u>30,528,819</u>	<u>68,639,527</u>	<u>72,780</u>
East	32,908	121,042,798	38,944,183	159,906,981	157,039
Manitoba	1,912	9,122,313	615,887	9,738,200	} 25,649
Saskatchewan	1,485	2,568,339	3,507,029	6,075,368	
Alberta	2,648	1,201,099	9,896,465	11,097,564	
British Columbia	5,743	26,645,584	2,392,648	29,038,282	} 28,639
Yukon Territory	52	191,325	47,329	238,654	
Northwest Territories	<u>68</u>	<u>213,027</u>	<u>84,127</u>	<u>297,154</u>	
West	11,908	39,941,687	16,543,535	56,485,222	54,288
Canada	<u>44,816</u>	<u>160,984,485</u>	<u>55,487,718</u>	<u>216,472,203</u>	<u>211,327</u>

1. Source: Canada Year Book, 1973, Statistics Canada.
2. Kw = Kilowatts
3. Kwh = Kilowatt Hours
4. Gwh = Gigawatt or million kilowatt hours

With generating capacity in Canada in 1971 totalling 44,816,000 kilowatts capacity in Western Canada accounted for 11,908,000 kw or 26.6%. Total electrical energy generated in Canada was 216,472,203,000 kilowatt hours with 56,485,222 kwh or 26.1%, generated in the West. Water power accounted for about 75.7% of the power generated in the East, and about 70.7% in the West. Within the West water power predominated in Manitoba and British Columbia. In Alberta over 90% of the energy generated was from thermal power. Of the total consumption of energy in Canada, the West consumed 25.7%. There were some exports of electrical energy from Ontario, British Columbia and New Brunswick.

Natural Gas Production in Canada, 1970

TABLE 8

Natural Gas Production in Canada by Provinces 1970¹

	Thousand Cubic Feet	Per Cent Total
Manitoba	-	-
Saskatchewan	71,165,592	2.9
Alberta	2,067,247,488	83.3
British Columbia	342,908,830	13.8
Canada	<u>2,481,321,910</u>	

1. Source: Canada Year Book, 1973 - Statistics Canada.

Uranium Production in Canada, 1971¹

"Canada's proven uranium reserves (about 20% of the world's reserves outside U.S.S.R., Eastern Europe and China) should be ample to meet the domestic requirements until the 21st century." The producing areas are at Elliot Lake, Ontario and Uranium City, Saskatchewan. Exploration has occurred in the Carswell Dome and Wollaston Lake areas of Northern Saskatchewan, as well as in the Northwest Territories, the Maritimes, Quebec and Labrador.

Mines and mills are operated in the Elliot Lake area by Dennison Mines Ltd. and Rio Algom Mines Ltd., and in Uranium City by Eldorado Nuclear Ltd. The Gulf Minerals Canada Limited project in the Wollaston Lake area of Northern Saskatchewan is expected to come into production in 1975.

In 1971, about 85 per cent of production (4,976 tons) was from the Elliot Lake area and the remainder from the Uranium City area.

The only refinery, operated by Eldorado Nuclear Limited, is at Port Hope, Ontario.

Quantity of Producers' Shipments of Uranium (U_3O_8) by Provinces, 1965, 1968 and 1971¹

	<u>Ontario</u> lb.	<u>Saskatchewan</u> lb.	<u>Canada</u> lb.
1965	6,825,046	2,060,167	8,885,213
1968	5,361,460	3,040,736	7,402,196
1971	7,009,985	1,204,406 ²	8,214,391

1. Source: Canada Year Book, 1973, Statistics Canada.

2. The mill at Uranium City was operating well below capacity.

1. The material in the text and the table in this section is drawn from: Canada Year Book, 1973, Statistics Canada.

LOCATION OF ENERGY FACILITIES

**MAIN OIL AND GAS PIPELINES, REFINERIES, COAL AND URANIUM MINES, 1973;
MAIN ELECTRICAL TRANSMISSION SYSTEMS AND
PRINCIPAL POWER GENERATING STATIONS, 1974**

TABLE 9

**Summary Table: Location of Operating Coal Mines in Western Canada
by Provinces and Size, 1973¹**

	Number of Mines			Output (Short Tons)					
	Surface	Underground	Total	Less than 100,000	100,001	500,001	1,000,001	2,000,001	More than 3,000,000
					to 500,000	to 1,000,000	to 2,000,000	to 3,000,000	
Manitoba	-	-	-	-	-	-	-	-	-
Saskatchewan	3	-	3	-	1	1	-	1	-
Alberta	16	5 ²	21	12	2	3	2	2	-
British Columbia	2	1	3	-	-	-	2	-	1
Yukon Territory	-	1	1	1	-	-	-	-	-
Northwest Territories	-	-	-	-	-	-	-	-	-
West	21	7	28	13	3	4	4	3	1

1. Source: Coal Mines in Canada, January, 1973, Operators List 4, Mineral Resources Branch, Department of Energy, Mines and Resources

2. In some cases both underground and surface.

The accompanying map shows the location of the 28 coal mines operating in Western Canada. The three mines in Saskatchewan are located in the lignite coal area around Estevan. They are surface operations. The largest number of mines is in Alberta. The mines in the sub-bituminous coal area of Central Alberta from Edmonton to Drumheller are generally relatively small surface operations. The other coal mines in Alberta are found in the coking coal area of Southern Alberta. This area extends into British Columbia and includes the three operating mines in that Province. The coking mines include both underground and surface operations. There is one relatively small underground mine in the Yukon Territory.

**Summary Table: Location of Petroleum Refineries in Western Canada
by Provinces and Size, 1973¹**

Number of Refineries by Crude Oil Capacity
(bbl./day)

	Less Than 50,000	50,001 to 100,000	100,000 to 200,000	200,001 to 300,000	300,001 to 400,000	400,001 to 500,000	Total
Manitoba	2	-	-	-	-	-	2
Saskatchewan	1	-	2	1	-	-	4
Alberta	-	3	2	1	-	1	7
British Columbia	-	2	2	2	1	-	7
Yukon Territory	-	-	-	-	-	-	-
Northwest Territories	1	-	-	-	-	-	1
West	4	5	6	4	1	1	21

1. Source:

The accompanying map shows the location of the 21 refineries in Western Canada. There are 2 small refineries in Winnipeg. In Saskatchewan there are three medium-sized refineries in the Regina-Moose Jaw area; and a small refinery at Kamsack. Alberta has 7 refineries of which 3 are in Edmonton and 2 in Calgary. The largest plant in the West is in Edmonton. The refineries at Bowden and Lloydminster are relatively small. British Columbia also has 7 refineries with a concentration of 4 in the Vancouver area. The plants at Taylor, Kamloops and Prince George are relatively small.

Summary Table: Location of Gas Processing Plants at December, 1974¹

	Number of Plants	Raw Gas Mmcf/d	Residue Gas Mmcf/d	Propane b/d	Butane b/d	Pentanes Plus b/d	Sulphur Tons/d	Cost of Plant \$000
Saskatchewan	10	369	354	2,105	1,085	1,249	7	16,080
Alberta	187 ²	12,665	10,517	139,707	70,311	277,923	25,016	1,002,973
British Columbia	6 ³	1,552	1,422	900	1,100	3,037	1,025	56,000
Northwest Territories	1	188	188	-	-	-	-	8,000
Western Canada	204	14,774	12,481	142,712	72,496	282,209	26,048	1,083,053
Ontario	5	22	22	-	-	10	-	2,000
Canada	<u>209</u>	<u>14,796</u>	<u>12,503</u>	<u>142,712</u>	<u>72,496</u>	<u>282,219</u>	<u>26,048</u>	<u>1,085,053</u>

1. Source: Oilweek, January 21, 1974 - Figures include new plants and expansion projects under contract on out to bid and scheduled for completion in 1974. Totals include capacities scheduled to be available at the end of 1974.
2. The largest plants in Alberta are at Balzac, Carstairs-Crossfield, Cochrane, Dunvegan, Edson, Empress (2), Harmattan, Judy Creek, Jumping Pound, Kaybob (2), Ram River, Rimbey, Strachan, Waterton, and Windfall.
3. The largest plants in British Columbia are at Beaver River, Fort Nelson and Taylor.

WESTERN CANADA: LOCATION OF COAL MINES, 1973
LIST OF COAL MINES, 1973

Source: Coal Mines in Canada, January 1973. Operators List 4. Mineral Resources Board, Department of Energy, Mines and Resources.

<u>Operator</u>	<u>Name of Mine & Location</u>	<u>Type of Mine</u>	<u>1972 Output (st)*</u>	<u>Number of Employees</u>	<u>Remarks</u>
SASKATCHEWAN					
SOURIS VALLEY DISTRICT					
BIENFAIT AREA					
Manitoba and Saskatchewan Coal Company (Limited)	M & S Mine Bienfait	Surface	625,000	53	
ESTEVAN AREA					
Battle River Coal, Division of Manalta Coal Ltd.	Klimax Mine Estevan	Surface	475,000	50	
Utility Coals Ltd. c/o Manalta Coal Ltd.	Utility Mine Estevan	Surface	2,135,000	60	
ALBERTA					
CROWSNEST					
Coleman Collieries Limited Coleman, Alberta	Vicary Creek Mine No. 1747 Coleman	Under Ground	722,038	562	
	Tent Mountain and Racehorse Mine No. 1695 and 1764 Coleman	Surface	286,086	62	Suspension of operations in Tent No. 4 Pit North and Racehorse strip. Minimal operations took place at Tent No. 2 pit.
CASCADE					
The Canmore Mines, Limited	Canmore Mine No. 2	Under Ground	147,943	} 154	Semianthracite coal is produced from underground and low volatile bituminous coal is produced from surface. New underground mine in 48 seam. Plant was modernized. Devolatilizing plant installed.
	Canmore	Surface	51,582		

* st = short tons

<u>Operator</u>	<u>Name of Mine & Location</u>	<u>Type of Mine</u>	<u>1972 Output (st)*</u>	<u>Number of Employees</u>	<u>Remarks</u>
ALBERTA (Cont'd)					
MOUNTAIN PARK Cardinal River Coals Ltd.	Cardinal River Mine Mine No. 1768 Luscar	Surface	1,210,000	177	
SMOKY RIVER McIntyre Coal Mines Limited	Smoky River Mines Mine No. 1765 & 1771 Grande Cache	Under Ground Surface	1,656,168 1,180,778	777	Closed No. 2 underground mine in early January, 1973. Surface mining done under contract by a Mannix Co. Ltd. subsidiary, Grande Resources Management Ltd. Developing No. 9 Surface mine to replace No. 8.
ARDLEY Sissons Mines Ltd.	Sissons Mine Mine No. 809 Alix	Surface	17,579	6	
BROOKS Manitoba and Saskatchewan Coal Company (Limited)	Bow City Mine No. 1404 Bow City	Surface	2,100	4	
CAMROSE Burnstad Coal Ltd.	Burnstad Coal Ltd. Mine No. 724 Camrose	Surface	13,438	6	
CASTOR Battle River Coal, Division of Manalta Coal Ltd.	Vesta Mine Mine No. 1046 Halkirk	Surface	550,000	50	

* st = short tons

<u>Operator</u>	<u>Name of Mine & Location</u>	<u>Type of Mine</u>	<u>1972 Output (st)*</u>	<u>Number of Employees</u>	<u>Remarks</u>
ALBERTA (Cont'd)					
CASTOR (Cont'd)					
Forestburg Collieries Limited	Diplomat Mine Mine No. 1578 Forestburg	Surface	610,000	41	
Stettler Coal Company Limited	Stettler Coal Mine Mine No. 1614 Halkirk	Surface	17,411	6	
DRUMHELLER					
Century Coals Limited	Atlas Mine No. 1742 East Coulee	Under Ground Surface	54,000 Nil	65	The company is investigating new markets for its coal.
EDMONTON					
Egg Lake Coal Company Limited	Egg Lake Mine No. 1582 North Morinville	Surface	11,000	5	
Star-Key Mines Ltd.	Star-Key Mine Mine No. 1626 St. Albert	Under Ground	20,500	19	Markets are declining.
PEMBINA					
Manalta Coal Ltd.	Whitewood Mine Mine No. 1757 Wabamun	Surface	2,250,000	99	Manalta mines on a contract basis for Calgary Power Ltd.
Manalta Coal Ltd.	Highvale Mine Mine No. 1769 Wabamun	Surface	1,304,000	43	Manalta mines on a contract basis for Calgary Power Ltd. Expanding production to 2.4 million tons annually beginning in 1974.
Warburg Coal Co. Ltd.	Pinter Coal Mine Mine No. 1670 Warburg	Surface	11,000	6	

* st = short tons

<u>Operator</u>	<u>Name of Mine & Location</u>	<u>Type of Mine</u>	<u>1972 Output (st)*</u>	<u>Number of Employees</u>	<u>Remarks</u>
ALBERTA (Cont'd)					
SHEERNESS					
Battle River Coal a Division of Manalta Coal Ltd.	Roselyn Mine Mine No. 443 Sheerness	Surface	12,000	4	
TABER					
Henry Miller	Taber Ajax Mine No. 1766 Taber	Surface	2,394	1	
TOFIELD					
Dodds Coal Mining Co. Ltd.	Dodd's Coal Mine Mine No. 215 Ryley	Surface	8,920	5	
WESTLOCK					
Picardville Coal Co. (1960) Ltd.	Picardville Coal Mine Mine No. 1523 Picardville	Surface	7,640	4	
BRITISH COLUMBIA					
EAST KOOTENAY DISTRICT					
Kaiser Resources Ltd.	Michel Colliery Michel Natal	Under Ground	1,025,000	417	Company continued to develop its underground hydraulic mine, opening 2nd portal for hydraulic mine. A small amount of surface mining is done at this mine. Construction completed on Erickson Dam to prevent pollution of Erickson Creek. Installed dust suppression system for coal trains. Processing plant start-up began in March, shipments to Japan commenced in April. At year end operation was producing 70% of design capacity. Production rate of 3 million tons annually should be reached by end of 1973.
Kaiser Resources Ltd.	Balmer Strip Natal	Surface	5,282,168	982	
Fording Coal Limited	Fording Mine Fording Valley	Surface	1,009,000	610	

* st = short tons

<u>Operator</u>	<u>Name of Mine & Location</u>	<u>Type of Mine</u>	<u>1972 Output (st)*</u>	<u>Number of Employees</u>	<u>Remarks</u>
YUKON Anvil Mining Corporation Ltd.	Tantalus Butte Coal Mine Carmacks	Under Ground	21,086	8	

* st = short tons

WESTERN CANADA: LOCATION OF PETROLEUM REFINERIES, 1973
LIST OF PETROLEUM REFINERIES, 1973

<u>Company</u>	<u>Location of Refinery</u>	<u>Type of Refinery and Source of Crude'</u>	<u>Crude Oil Capacity (bbl/day)</u>	<u>Chief Products Made for Sale</u>	<u>Remarks Including Plant Expansion</u>
Source: Petroleum Refineries in Canada, January, 1973, Operator's List 5. Mineral Resources Branch, Department of Energy, Mines and Resources.					
1. S	-	Skimming			
C	-	Cracking			
A	-	Asphalt			
Comp.	-	Complete			
MANITOBA					
Imperial Oil Enterprises Ltd.	Winnipeg	S-C-A Alta., Sask., & Man.	22,000	Motor gasoline, aviation gasoline, tractor fuel, aviation turbine fuel, kerosene, stove oil (#1), diesel fuel, light fuel (#2 & 3), heavy fuel oil (#4,5 & 6), asphalt, sulphur	Plant first operated in 1951. Sulphur plant = 14 lt/d.
Shell Canada Limited	St. Boniface	S-C-A Alta. & Sask.	26,500	Motor gasoline, tractor fuel, aviation turbine fuel, stove oil (#1), diesel fuel, light fuel (#2 & 3), heavy fuel oil (#4,5 & 6), asphalt, L.P.G.	Plant first operated in 1927.
SASKATCHEWAN					
Canadian Propane Gas & Oil (Sask) Ltd.	Kamsack	S-A	1,200	Motor gasoline, tractor fuel, stove oil (#1), diesel fuel, furnace oil (#2 & 3), heavy fuel oil (#4,5, & 6), asphalt	Plant first operated in 1936
Consumers' Co-operative Refineries Limited	Regina	S-C Alta. & Sask.	21,500	Naptha specialties, motor gasoline, tractor fuel, kerosene, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5 & 6), L.P.G., coke.	Plant first operated in 1935.

<u>Company</u>	<u>Location of Refinery</u>	<u>Type of Refinery and Source of Crude'</u>	<u>Crude Oil Capacity (bbl/day)</u>	<u>Chief Products Made for Sale</u>	<u>Remarks Including Plant Expansion</u>
SASKATCHEWAN (Cont'd)					
Gulf Oil Canada Limited	Moose Jaw	S-A Alta. & Sask.	10,350	Asphalt	Plant converted to asphalt operation in 1971.
Imperial Oil Enterprises Ltd.	Regina	S-C-A Alta. & Sask.	32,000	Motor gasoline, tractor fuel, aviation turbine fuel, kerosene, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5 & 6), asphalt.	Plant first operated in 1916.
ALBERTA					
Gulf Oil Canada Limited	Edmonton	S-C Alta.	72,000	Naptha specialties, motor gasoline, tractor fuel, aviation turbine fuel, kerosene, diesel fuel, light fuel oil (#2 & 3), L.P.G., coke.	Plant first operated in 1951. An 80,000 b/d refinery replaced existing plant in mid-1971. Sulphur plant 40 lt/d.
Gulf Oil Canada Limited	Calgary	S-A Alta.	6,750	Asphalt	Plant converted to asphalt operation in mid-1971.
Husky Oil Limited	Lloydminster	S-A Alta. & Sask.	10,000	Motor gasoline, aviation turbine fuel, tractor fuel, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5, & 6), asphalt, specialty asphalts.	Plant first operated in 1947.
Imperial Oil Enterprises Ltd.	Edmonton	Comp. Alta.	39,900	Motor gasoline, aviation gasoline, tractor fuel, aviation turbine fuel, kerosene, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5 & 6), lube oils, asphalt.	Plant first operated in 1948; being expanded to over 100,000 bbl/day.

<u>Company</u>	<u>Location of Refinery</u>	<u>Type of Refinery and Source of Crude'</u>	<u>Crude Oil Capacity (bbl/day)</u>	<u>Chief Products Made for Sale</u>	<u>Remarks Including Plant Expansion</u>
ALBERTA (Cont'd)					
Imperial Oil Enterprises Ltd.	Calgary	S-C-A Alta.	20,000	Naptha specialties, aviation gasoline, motor gasoline, tractor fuel, aviation turbine fuel, kerosene, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5 & 6) asphalt.	
Shell Canada Limited	Bowden	S Alta.	5,000	Motor gasoline, tractor fuel diesel fuel, light fuel oil (#2 & 3).	Plant first operated in 1960. Charge to crude unit is primarily condensate.
Texaco Canada Limited	Edmonton	S-C Alta.	20,000	Naptha. Specialties, motor gasoline, aviation turbine fuel, kerosene, stove oil (#1), diesel fuel, light fuel oil (#2), heavy fuel oil (#4,5 & 6), petrochemical feed.	Plant first operated in 1951.
BRITISH COLUMBIA					
Gulf Oil Canada Limited	Port Moody	S-C-A Alta. & B.C.	30,000	Naptha specialties, motor gasoline, aviation turbine fuel, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5 & 6).	Plant first operated in 1958. Expansion completed in 1970. Sulphur plant 25 lt/d.
Gulf Oil Canada Limited	Kamloops	S-C-A British Columbia	5,900	Naptha specialties, motor gasoline, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5 & 6), L.P.G. asphalt.	Plant first operated in 1954.

<u>Company</u>	<u>Location of Refinery</u>	<u>Type of Refinery and Source of Crude'</u>	<u>Crude Oil Capacity (bbl/day)</u>	<u>Chief Products Made for Sale</u>	<u>Remarks Including Plant Expansion</u>
BRITISH COLUMBIA (Cont'd)					
Imperial Oil Enterprises Ltd.	Port Moody	S-C-A Alta. & B.C.	34,500	Naptha specialties, aviation gasoline, motor gasoline, aviation turbine fuel, kerosene, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5 & 6), asphalt, petrochemical feed.	Plant first operated in 1915.
Pacific Petroleum Ltd.	Taylor	S-C-A British Columbia	10,400	Motor gasoline, aviation gasoline, tractor fuel, jet fuel, stove oil (#1), diesel fuel, asphalt L.P.G.	Plant first operated as crude oil refinery in 1960. Reforming and Unifining unit for condensate first operated in 1958.
Shell Canada Limited	Burnaby	S-C-A Alta. & B.C.	20,500	Naptha specialties, aviation gasoline, motor gasoline, tractor fuel, aviation turbine fuel, kerosene, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5 & 6), asphalt, L.P.G.	Plant first operated in 1932. A 15 lt/d sulphur recovery plant was added in 1968.
Chevron Canada Ltd.	Burnaby	S-C-A Alta. & B.C.	20,000	Naptha specialties, aviation gasoline, motor gasoline, aviation turbine fuel, stove oil (#1), diesel fuel, light fuel oil (#2 & 3), asphalt, L.P.G.	Plant first operated in 1936.
Union Oil Company of Canada Limited	Prince George	S-A B.C.	8,000	Motor gasoline, stove oil, diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4,5 & 6), asphalt, road oils.	Plant first operated in 1967.
NORTHWEST TERRITORIES					
Imperial Oil Limited	Norman Wells	S Northwest Territories	2,800	Aviation gasoline, motor gasoline, stove oil (#1) diesel fuel, light fuel oil (#2 & 3), heavy fuel oil (#4, 5 & 6).	Plant first operated in 1921.

WESTERN CANADA: LOCATION OF NATURAL GAS PROCESSING PLANTS AT DECEMBER, 1974
LIST OF NATURAL GAS PROCESSING PLANTS AT DECEMBER, 1974

Source: Oilweek, January 21, 1974

Operator	Location	Type	Raw Gas mmcf/d	Residue Gas mmcf/d	Propane b/d	Butane b/d	Pentanes Plus b/d	Sulphur Tons/d
SASKATCHEWAN								
SPC	Alsask 16-30-29 W3	Absorp-Desic.	4	4	-	-	14	-
Aquitaine	Beacon Hill NE 12-62-25 W3	Compression	31	31	-	-	-	-
SPC	Coleville 17-31-23-W3	Absorp. (Oil)	60	59	-	-	225	-
Mobil Oil	Dollard 22-7-10 W3	Comp.-Refrig.	2	2	85	85	85	-
SPC	Gull Lake 9-14-19 W3	-	16	15	-	-	150	-
Marathon	Hatton 16-13-29 W3	Dehyd-Desic.	180	180	-	-	-	-
Imperial	Nottingham-Alida	Comp.-Refrig.	9	6	570	300	170	-
Imperial (Smiley Gas)	Smiley	Comp.-Refrig.	4	3	-	-	70	-
Steelman Gas	Steelman 21-4-5 W2	Comp.-Refrig.	38	30	1,450	700	450	7
SPC	Success 17-17-16 W3	Adsorp-Desic.	25	24	-	-	85	-
ALBERTA								
Can. N.G. Liquids	Acheson 2-53-26 W4	Adsorp-Dehyd-MEA	10	6	864	515	259	-
Atlantic Richfield	Alderson 10-11-15-11 W4	Deyhd-Comp.	5	5	-	-	-	-
Can. Ind. Gas.	Alexander 6-16-56-27 W4	Refrig. (not operating)	-	-	-	-	-	-
Pan Canadian	Atlee-Buffalo 8-19-20-6 W4	Dehyd.-Comp.	31	31	-	-	-	-
Petrogas	Balzac 10-2-26-29 W4	Hot Pot-Refrig.-DEA	319	212	2,441	2,579	4,413	1,840
Goliad Ltd.	Bantry 4-33-17-12 W4	Comp-Refrig.-DEA	4	4	-	-	75	-
Pan Canadian	Bassano 10-5-22-18 W4	Adsorp-Disc.	8	8	-	-	63	-
Anderson Expl.	Belloy 13-16-78-1 W6	Dehyd.-Comp.	25	25	-	-	-	-
Great Plains	Bigoray 10-22-51-8 W5	Refrig.	3	3	-	-	69	-
Amoco	Bigoray 6-28-51-8 W5	Dehyd-Refrig.-MEA	13	12	-	-	80	-
Amoco	Bigstone 10-61-22 W5	Refrig.-Sulfinol	56	43	-	-	-	376
Pennzoil	Big Bend 13-36-66-27 W4	Dehyd-Comp.	20	20	-	-	-	-
Provident Res.	Birch SW5-50-11 W4	Dehyd.-Comp.	20	20	-	-	-	-
Can.-Montana	Black Butte 18-1-8 W4	Absorp.-MEA	10	10	-	-	-	-
Sun Oil	Black Diamond 10-12-19-2 W5	Refrig.-MEA	12	11	-	-	427	13
Texaco Exp.	Bonnie Glen SW 17-47-27 W4	Adsorp.-MEA	50	32	1,400	1,300	900	15
Imperial	Boundary L.S. 14-85-13 W6	Adsorp.-Desic.	25	25	-	-	290	-
Hudson's Bay	Brazeau River 12-46-14 W5	Refrig.-Adsorp.-DEA	196	176	-	-	2,662	89
Dome Petroleum	Brownfield 2-2-39-11 W4	Dry Desic.-Adsorp.	20	19	-	-	93	-
Shell Canada	Burnt Timber 10-13-30-7 W5	Sulfinol-Adsorp.	70	57	-	-	287	187

Operator	Location	Type	Raw Gas mmcf d	Residue Gas mmcf d	Propane b d	Butane b/d	Pentanes Plus b/d	Sulphur Tons d
ALBERTA (Cont'd)								
Albersun	Calling Lake 33-72-17 W4	Dehyd.	15	15	-	-	-	-
CWNG	Carbon 8-17-29-22 W4	Throttling-Refrig.	150	143	-	-	975	-
Altana Ex.	Caroline 12-36-34-6 W5	Refrig.-MEA	11	7	-	-	450	-
Hudson's Bay	Caroline SW 20-34-4 W5	Refrig.-Adsorp.-DEA	55	38	1,452	624	1,452	20
Mobil Oil	Carson Creek N 4-23-61-12 W5	Refrig.-Adsorp.-DEA	87	76	2,060	1,790	4,770	-
BP Oil & Gas	Carstairs 7-28-30-2 W5	Refrig.-MEA	5	4	-	-	118	-
Home Oil	Carstairs-Crossfield 6-30-2W5	Refrig.-Adsorp.-DEA	350	280	4,046	3,441	11,350	58
Hudson's Bay	Cessford 2-8-24-12 W4	Comp.-Refrig.	125	123	-	-	476	-
Amerada	Cessford 4-15-27-15 W4	Adsorp.-Desic.	17	17	-	-	41	-
Tidal	Cessford 3-6-24-10 W4	Adsorp.-Desic.	16	15	-	-	9	-
Canex Gas	Cessford 2-31-22-1 W4	Adsorp.-Desic.	23	22	-	-	26	-
King Resources	Cessford 16-34-25-15 W4	Adsorp.-Desic.	5	4	-	-	8	-
Francana	Cessford North 17-26-14- W4	Refrig.	7	7	-	-	25	-
Tees Hydrocarbons	Chigwell 7-14-41-24 W4	Refrig.	3	3	-	-	20	-
Imperial	Chigwell 9-7-41-24 W4	Adsorp.-Desic.	6	5	-	-	50	-
Alberta Nat. Gas	Cochrane 21-26-4 W5	Refrig.-Adsorp.	1,000	965	13,070	mix LPG/cond.	-	-
Saratoga	Coleman SE 11-8-5 W5	Adsorp.-MEA	75	59	-	-	-	377
North Canadian	Corbett Creek SW 26-61-8 W5	Dehyd.-Comp.	9	9	-	-	-	-
Sun Oil	Countess 6-36-20-16 W4	Adsorp.-Desic.	22	20	-	-	20	-
Pan Canadian	Countess 10-16-18-15 W4	Refrig.-Dehyd.	6	5	-	-	130	-
Supertest	Craigend 9-25-64-14 W4	Comp.	25	25	-	-	-	-
King Resources	Crossfield 14-32-28-2 W5	Comp.-Refrig.	3	3	84	66	103	-
Amoco	Crossfield E. NE 14-28-1 W5	Refrig.-Sulfinol	179	114	-	-	2,611	1,710
Anderson Expl.	Dunvegan 15-3-81-4 W6	Refrig.-Adsorp.	207	203	-	-	2,068	-
Atlantic Richfield	E. Swan Hills 10-32-67-9 W5	Dehyd.-Comp.	6	6	-	-	-	-
Hudson's Bay	Edson SW 11-52-18 W5	Adsorp.-Refrig.-DEA	377	340	-	-	3,988	285
Edmonton Liquid Gas	Ellerslie 4-52-24 W4	Refrig.-Adsorp.	80	72	2,200	770	630	-
Dome Petroleum	Empress 11-20-1 W4	Refrig.-Adsorp.-Turbo	1,475	1,439	10,900	3,750	1,250	-
Pacific Pet.	Empress 11-20-1 W4	Refrig.-Adsorp.	2,000	1,950	13,000	7,000	3,500	-
Sun Oil	Enchant 11-35-13-17 W4	Adsorp.-Desic.	6	5	-	-	15	-
Mobil Oil	Equity 33-31-23 W4	Refrig.	15	14	175	(LPG mix)	214	-
Amerada	Ferrier 2-6-41-7 W5	Refrig.	100	88	2,725	1,840	4,530	-
Seafort Pet.	Ferrier 1-20-39-7 W5	Refrig.	20	18	1,360	(mix)	-	-
Atlantic Richfield	Ferrier 9-22-39-8 W5	Refrig.	9	8	-	-	200	-
Pan Canadian	Ferrybank 2-1-44-28 W4	Refrig.	21	20	-	-	107	-
Tenneco	Flat Lake 12-66-20 W4	Dehyd.-Comp.	30	23	-	-	-	-
Chevron	Fort Sask. S½ 14-55-22 W4	Liquids Sepn.	-	-	25,000 b/d mixed stream	-	-	-
Atlantic Richfield	Gilby 5-5-40-3 W5	Refrig.-Adsorp.	28	26	-	-	137	-

Operator	Location	Type	Raw Gas mmcf d	Residue Gas mmcf d	Propane b.d	Butane b.d	Pentanes Plus b/d	Sulphur Tons,d
ALBERTA (Cont'd)								
Pacific	Gilby 27-40-3 W5	Dehyd.-Sweet	25	23	-	-	-	-
Can. Homestead	Gilby 10-10-41-3 W5	Adsorp.-Desic.	12	11	-	-	140	-
Total Petr.	Gilby 10-12-41-3 W5	Adsorp.-Desic.	9	8	-	-	115	-
Texaco Ex.	Gilby 15-22-30-3 W5	Adsorp.-Desic.-Refrig.	58	51	880	550	660	-
Gulf Oil Can.	Gilby 26-40-3 W5	Adsorp.-Desic.	30	28	-	-	330	-
Hudson's Bay	Gilby 26-40-3 W5	Adsorp.-Desic.	9	9	-	-	135	-
Hudson's Bay	Gilby 12-41-4 W5	Refrig.	4	4	-	-	70	-
Chevron	Gilby 1-24-41-3 W5	Adsorp.-Desic.	21	20	-	-	252	-
Atlantic Richfield	Gold Creek NW 26-67-5 W6	Refrig.-Adsorp.-DEA	23	18	-	-	900	20
Imperial Oil	Golden Spike 22-51-27 W4	Comp.	45	40	3,800	(LPG mix)	1,000	-
Petrofina	Greencourt D3 26-59-9 W5	Dehyd.	32	31	-	-	269	-
Westcoast Petr./ Sulpetro	Hanna SE 25-32-14 W4	Refrig.	12	12	-	-	45	-
Can. Superior	Harmattan 27-31-4 W5	Sulfinol rec.	25	12	-	-	-	482
Can. Superior	Harmattan Area 27-31-4 W5	Refrig.-MEA	493	300	4,370	3,290	10,120	-
Home Oil	Harm.-Elkton 2-3-31-4 W5	Refrig.-Adsorp.-MEA	5	5	-	-	149	-
Voyager Petr.	Holden NE 19-48-16 W4	Dehyd.-Comp.	16	16	-	-	-	-
Francana Oil	Holmberg NW 14-44-17 W4	Dehyd.-Comp.	12	12	-	-	15	-
Shell Canada	Hope Creek 16-64-13 W5	Refrig.	15	14	-	-	145	-
Tenneco	Hussar 13-36-24-21 W4	Refrig.	84	60	938	586	550	-
Pennzoil	Hussar 2-1-27-21 W4	Dehyd.-Refrig.-Comp.	15	14	232 (mix)	-	-	-
Camac Expl.	Huxley 6-17-34-24 W4	Adsorp.	13	13	-	-	19	-
Shell Canada	Innisfail 3-35-1 W5	Refrig.-MEA	20	13	(including crude)	-	13,600	158
Imperial Oil	Joffre NE 17-39-26 W4	Refrig.-MEA	8	5	269	247	130	27
Great Plains	Judy Creek 19-64-11 W5	Adsorp.	5	5	-	-	120	-
Imperial Oil	Judy Creek 15-25-64-11 W5	Adsorp.-Refrig.-MEA	265	181	26,570 (mix)	-	9,000	-
Imperial Oil	Judy Creek 15-25-64-11 W5	Adsorp.	31	26	-	-	170	-
Shell Canada	Jumping Pound 13-33-25-5 W5	Refr. Sulfinol-MEA	250	200	800	790	2,890	500
Pacific	Kaybob 8-9-64-19 W5	Comp.-Refrig.	99	97	-	-	757	-
Chevron III	Kaybob S. 15-59-18 W5	Refr.-Ads-DEA	445	285	8,950	9,000	32,720	1,020
Hudson's Bay I	Kaybob S. 1 & 12-62-20 W5	Refrig.-Adsorp.-DEA	219	189	3,672	3,134	13,084	1,070
Hudson's Bay II	Kaybob SW 12-62-20 W5	Refrig.-Adsorp.-DEA	170	120	-	-	11,890	3,050
Can. Ind. Gas	Kessler 5-39-8 W4	Adsorp.-Desic.	6	6	-	-	7	-
Can.-Cities Ser.	Keystone 35-48-4 W5	Refrig.	21	20	62	102	90	-
Voyager Petr.	Killam SW 5-45-12 W4	Dehyd.-Comp.	12	12	-	-	-	-
Pan Canadian	Leedale 7-11-43-4 W5	Adsorp.	4	4	-	-	50	-
Western Decalta	Leduc Woodb'd 5-20-49-25 W4	Adsorp.-MEA	-	-	Moved to Rockford			-
Imperial	Leduc W (Devon) 34-50-26 W4	Comp.-Refrig.-MEA	38	28	11,010	5,990	3,000	-
Hudson's Bay	Lone Pine Creek 23-30-28 W4	Adsorp.-Claus-DEA	74	59	-	-	2,062	279

Operator	Location	Type	Raw Gas mmcf/d	Residue Gas mmcf/d	Propane b/d	Butane b/d	Pentanes Plus b/d	Sulphur Tons/d
ALBERTA (Cont'd)								
Can. Superior	Lone Pine Creek S 27-29-28 W4	Refrig.-Adsorp.-DEA	35	26	-	-	652	151
Gulf Oil Can.	Lookout Butte 13-2-29 W4	Comp.	-	-	-	-	-	-
Pan Canadian	Makepeace 12-33-22-18 W4	Adsorp.-Desic.	20	20	-	-	40	-
Sulpetro	Mannville SW 5-50-11 W4	Dehyd.-Comp.	33	33	-	-	-	-
Home Oil	Marten Hills 14-22-74-24 W4	Glycol-Dehyd.	25	25	-	-	-	-
Amoco	Marten Hills 18-76-25 W4	Comp.-Dehyd.	143	140	-	-	-	-
Atlantic Richfield	Medicine Hat SE 20-15-3 W4	Dehyd.-Comp.	10	10	-	-	-	-
CEJA	Mikwan 10-8-37-23 W4	Dehyd.-Refrig.	14	13	-	-	97	-
CanDel	Minnihik Buck L. 10-5-46-6 W5	Adsorp.-Desic.-MEA	108	100	-	-	1,652	32
Chevron	Mitsue 30-72-4 W5	Refrig.	22	15	1,280	860	640	-
Gulf Oil Can.	Morrin SE 11-31-21 W4	Refrig.	110	108	-	-	763	-
Gulf Oil Can.	Nevis NE 33-38-22 W4	Adsorp.-Refrig.-MEA	125	94	3,633	2,423	1,684	292
Chevron	Nevis N. SE 22-39-22 W4	Adsorp.-Refrig.-DEA	100	88	770	780	2,024	258
Loydean Engin.	Newell SW 15-18-14 W4	Adsorp.-Dehyd.	3	3	-	-	-	-
Tenneco	Nordegg R. 6-10-44-12 W5	Dehyd.-Adsorp.-MEA	67	60	-	-	840	41
Texas Gulf	Okotoks SW 27-20-29 W4	Adsorp.(MEA)	35	17	-	-	123	419
Amerada	Olds 6-18-32-1 W5	Adsorp.-Refrig.-MEA	84	60	335	675	1,884	383
Hudson's Bay	Oyen 13-36-28-5 W4	Adsorp.-Desic.	4	4	-	-	3	-
Amer. Trading	Oyen 16-26-29-4 W4	Refrig.-Dehyd.	2	2	-	-	3	-
Dorchester Expl.	Oyen SW 3-28-3 W4	Refrig.-Dehyd.	2	2	-	-	-	-
Cities Service	Paddle River 13-6-57-8 W5	Amine-Refrig.-MEA	30	28	-	-	235	-
Pan Canadian	Parflesh 12-1-25-22 W4	Dehyd.-Dry Desic.-Adsorp.	2	2	-	-	11	-
Texaco Exp.	Pembina 13-22-49-10 W5	Comp.-Refrig.	9	8	350	(LPG mix)	150	-
Amoco	Pembina 2-50-6 W5	Refrig.	13	11	-	-	148	-
Goliad	Pembina 13-24-48-7 W5	8 Comp. 1 Frac.	83	78	3,120	2,140	1,570	-
Amoco	Pembina 17-50-7 W5	Refrig.	20	18	-	-	201	-
Amoco	Pem. (Lobstick) 9-17-50-7 W5	Refrig.-Comp.	6	5	310	(LPG mix)	-	-
Ashland	Pembina 15-48-3 W5	Refrig.	7	7	186	(LPG mix)	-	-
Ceja	Penhold 10-30-36-27 W4	Refrig.	6	6	-	-	64	-
Pan Canadian	Phoenix 7-21-39-10 W5	Adsorp.-Dehyd.	3	3	-	-	600	-
Gulf Oil Canada	Pincher Creek S½ 23-4-29 W4	Adsorp.-DEA	105	81	638	1,000	5,500	196
Provident Res.	Plain Lake 52-13 W4	Dehyd.-Comp.	8	8	-	-	-	-
Voyager Petr.	Plain Lake NE 36-52-13 W4	Dehyd.-Comp.	17	17	-	-	-	-
Kerr McGee	Prevo 11-20-39-1 W5	Adsorp.-Desic.	5	5	-	-	21	-
Chevron	Princess 12-12-20-12 W4	Adsorp.-Desic.-MEA	13	12	-	-	36	-
CIGOL	Princess 12-16-20-11 W4	Adsorp.-Desic.	4	4	-	-	5	-
Murphy	Princess 16-20-10 W4	Adsorp.-Desic.	3	2	-	-	-	-
Provo Gas	Provost 9-19-36-5 W4	Adsorp.-Refrig.	85	80	-	-	175	-
TGS Hydrocarbons	Provost 7-34-34-6 W4	Adsorp.	12	10	-	-	6	-

Operator	Location	Type	Raw Gas mmcf/d	Residue Gas mmcf/d	Propane b/d	Butane b/d	Plus b/	Sulphur Tons/d
ALBERTA (Cont'd)								
Spooner	Provost 10-12-36-8 W4	Adsorp.-Desic.	10	10	-	-	30	-
North Central	Provost 2-35-9 W4	Adsorp.	20	19	-	-	170	-
Imperial Oil	Quirk Creek 4-21-4 W5	Refrig.-Adsorp.-DEA	90	68	-	-	4,355	286
Aquitaine (oil and gas)	Rainbow 10-10-109-8 W5	Claus MEA Refrig.	140	60	19,600	(LPG mix)	-	137
Imperial Oil	Rainbow 23-110-7 W6	Dehyd.	16	14	900 (mix)	-	-	-
Mobil Oil	Rainbow 10-110-6 W6	Refrig.	21	21	25,000	bfd mixed stream	-	-
Amoco	Rainbow S. 25-107-9 W6	Refrig.-MEA	7	7	-	-	-	-
Aquitaine	Ram River S½ 2-37-10 W5	Sulfreen-Refrig.	400	268	-	-	5,200	4,100
Imperial Oil	Redwater 29-57-21 W4	Comp.-Refrig.-MEA	22	12	1,645	1,180	580	26
Home Oil	Retlaw 12-2-13-19 W4	Adsorp.-Iron Sp.	7	7	-	-	89	-
Amoco	Ricinus 11-30-35-8 W5	Refrig.	75	60	7,500	(LPG condensate mix)	-	-
Gulf Oil Can.	Rimbey S½ 5-44-1 W5	Adsorp.-Refrig.-MEA	422	357	10,184	7,078	14,237	327
West Decalta	Rockford 10-24-26-23 W4	Adsorp.-MEA	5	5	-	-	18	-
Can. Ind. Gas	St. Albert SE 26-54-25 W4	Refrig. (Oil)	20	18	280	170	63	-
Petrofina	Samson 11-9-44-24 W4	Refrig.	3	3	-	-	12	-
Canex Gas	Sedalia 9-29-31-5 W4	Adsorp.-Desic.	5	5	-	-	3	-
Atlantic								
Richfield	Sedgwick 2-16-42-12 W4	Dehyd.-Comp.-Adsorp.	6	6	-	-	-	-
Sun Oil	Sibbald 5-6-28-2 W4	Adsorp.-Desic.	6	6	-	-	2	-
Shell Canada	Simonette 6-63-25 W5	Sulfinol-Adsorp.	37	27	-	-	1,540	209
West. Decalta	Simonette 9-6-63-25 W5	Adsorp.	8	7	-	-	70	-
Provident	Stanmore SW 1-29-12 W4	Defrig.-Dehyd.	3	3	-	-	30	-
Westcoast Prod.	Stanmore 7-9-30-10 W4	Comp.-Adsorp.	18	18	-	-	31	-
Gulf Oil Canada	Strachan N½ 34-37-9 W5	Refrig.-Adsorp.-DEA	275	223	4,048	(LPG mix)	7,553	955
Hudson's Bay (Oil and Gas)	Sturgeon Lake S 1-69-22 W5	Sulfinol-Refrig.	35	17	25,000	stab. crude	916	96
Gulf Oil Canada	Swalwell 33-29-24 W4	Adsorp.	4	4	-	-	23	-
Hudson's Bay	Sylvan Lake 14-32-37-3 W5	Adsorp.-Refrig.-MEA	65	60	790	475	895	15
Chevron	Sylvan Lake 1-21-38-2 W5	Refrig.	28	26	489	300	532	-
Edwin L. Cox	Sylvan Lake 13-25-37-3 W5	Adsorp.	30	22	-	(mix)	735	-
Star Oil & Gas	Sylvan Lake NE 19-38-1 W5	Refrig.-Dehyd.	5	5	-	-	96	-
Amoco	Three Hills Creek 13-13-35-26 W4	Adsorp.-Desic.	10	10	-	-	134	-
West. Decalta	Turner Valley 14-6-20-2 W5	Adsorp.-MEA	40	39	530	-	1,300	12
Albersun	Tweedie 28-68-13-W4	Dehyd.	20	20	-	-	-	-
Andex Oil	Twining 12-10-31-24 W4	Refrig.-Dehyd.	16	16	-	-	447	-
Pan Canadian	Ukalta NE 25-57-17 W4	Dehyd.-Comp.	6	6	-	-	-	-
Dome Petr.	Vulcan 24-15-22 W4	Refrig.-Adsorp.-Sulfinol	25	22	-	-	203	-
Provident Res.	Warwick NW 4-54-14 W4	-	8	8	-	-	-	-
Amoco	Waskahigan 7-18-64-23 W5	Dehyd.-Comp.-Adsorp.	15	14	-	-	146	-

<u>Operator</u>	<u>Location</u>	<u>Type</u>	<u>Raw Gas mmcf d</u>	<u>Residue Gas mmcf d</u>	<u>Propane b/d</u>	<u>Butane b/d</u>	<u>Pentanes Plus b/d</u>	<u>Sulphur Tons d</u>
ALBERTA (Cont'd)								
Shell	Waterton 1 & 2-20-4-30 W4	Adsorp.-Refrig.-Sulfinol	473	315	2,650	2,200	27,000	3,100
Pan Canadian	Wayne-Rosed'I 5-17-27-19 W4	Adsorp.-Desic.	19	18	-	-	85	-
Pan Canadian	Wayne-Rosed'I 1-20-28-21 W4	Comp.-Refrig.	22	20	91	96	122	-
Tenneco	Wayne-Rosed'I 12-4-28-20 W4	Adsorp.-Desic.	23	20	-	-	100	-
Gulf Oil Can.	Westerose South	Cycling	40	40	-	-	1,602	-
Pacific	Whitecourt NW 26-59-11 W5	Dehyd.	65	61	-	-	452	-
Petrofina	Wildcat Hills 6-16-26-5 W5	Adsorp.-Desic.-MEA	125	115	-	-	1,290	174
Texaco Exp.	Willesden Green 1-17-42-6 W5	Comp.-Refrig.	12	11	380	(LPG mix)	280	-
Can. Homestead	Willesden Green 13-16-40-5 W5	Refrig.	5	5	-	-	44	-
Amerada	Wilson Creek 1-29-43-4 W5	Adsorp.-MEA	15	14	-	-	294	-
Mobil Oil	Wimborne 12-34-26 W4	Refrig.-Adsorp.-DEA	70	52	-	-	2,600	331
Amoco & Texas Gulf	Windfall 8-17-60-15 W5	Refrig.-DEA	371	136	-	-	16,481	1,940
Pan Canadian	Wintering Hills 1-18-25-17 W4	Adsorp.	14	13	-	-	50	-
Canex Gas	Wood River 16-9-43-23 W4	Adsorp.	5	5	-	-	25	-
Shell	Worsley 7-22-87-7 W6	Adsorp.	57	52	-	-	1,070	-
BRITISH COLUMBIA								
Amoco	Beaver River	Dehyd.	240	240	-	-	-	-
Gas Trunk of B.C.	Boundary Lake	Adsorp.-Desic.	10	10	-	-	20	-
Imperial Oil	Boundary Lake	Refrig.-Adsorp.	19	17	70	-	17	-
Westcoast	Fort Nelson	Adsorp.-Hot Pot	823	760	-	-	-	700
Mobil Oil	Sierra	Dehyd.	65	65	-	-	-	-
Westcoast & Jeff Lake	Taylor	Adsorp.-MEA	395	330	900	1,100	3,000	325
NORTHWEST TERRITORIES								
Amoco	Pointed Mountain	Dehyd.	188	188	-	-	-	-

Major Oil and Gas Pipelines¹

The table below briefly describes the major oil and gas pipelines, their owners/operators, their origins and destinations, and their capacities in the four western provinces. Over eighty percent of the oil and gas produced in Canada comes from Alberta. As a result most of the major pipelines originate there.

The major oil pipeline flowing east from Alberta fields is the Interprovincial Pipe Line while the major line to the west is the Trans Mountain Pipe Line. Both these pipelines also connect with other carriers which transport the crude to markets in the United States. The major gas lines are owned by Alberta Gas Trunk, with its extended gathering system throughout the Province of Alberta, and TransCanada PipeLines which carries the gas from the Alberta/Saskatchewan border to Eastern Canada and the United States. British Columbia's gas supply comes from within the province and is transported by Westcoast Transmission and Pacific Northern. The gas is gathered from fields primarily in the northeast of the province and transported south to markets both in British Columbia and the United States. In addition to the two main gas lines, B.C. also has an oil pipeline system operated by Westcoast Petroleum Limited. This pipeline has its origin in northeast British Columbia and feeds into Trans Mountain Pipe Line's system at Kamloops.

1. Prepared by DataMetrics Limited, Calgary, Alberta.

OIL & GAS PIPELINES IN THE FOUR WESTERN PROVINCES

OIL

<u>Name of Pipeline</u>	<u>Owners/Operators</u>	<u>Gathering Area/Origin</u>	<u>Description of Route</u>	<u>Destination</u>	<u>System Capacity</u> (1,000 b/d)
BRITISH COLUMBIA					
Westcoast Petroleum Pipe Line	Westcoast Petroleum Ltd.	Fort St. John, Taylor Boundary Lake	South through Prince George	Trans Mountain Pipeline at Kamloops	72
Trans Mountain Pipe Line	Trans Mountain Pipe Line Company Limited	Edmonton	West Through Yellowhead Pass	Vancouver and the U.S. border	400
ALBERTA					
Rainbow	Rainbow Pipe Line Company Ltd. controlled by/ affiliated with Mobil Oil Canada Ltd., Imperial Oil Ltd., Aquitaine Company of Canada Ltd., Banff Oil (1970) Ltd.	Rainbow, Zama fields	Southeast through Utikama Lake, Nipisi and Mitsue	Edmonton to feed into the Interprovincial Pipe Line and the Trans Mountain Pipe Line	241
Peace Pipe Line	Peace Pipe Line Ltd.	Red Earth, Loon and Utikama Lake fields	Southwest to Valleyview then southeast to Fox Creek and Kaybob	Edson to connect with Trans Mountain Pipe Line and to Edmonton to connect with Interprovincial Pipe Line	142
Federated Pipe Line	Federated Pipe Line Ltd., jointly owned by Texaco Canada Ltd., Home Oil Company Limited	Swan Hills, Judy Creek	Southeast to Edmonton	Edmonton to major trunk pipelines	410
Great Canadian Oil Sands Pipe Line	Great Canadian Oil Sands Limited, controlled by Sun Oil Company Limited	Fort McMurray	Southwest to Edmonton	Edmonton to major trunk pipelines	60-70
Trans Mountain Pipe Line	Trans Mountain Pipe Line Company Limited	Edmonton	West through the Yellowhead Pass	Vancouver and the U.S. border	400

**OIL & GAS PIPELINES IN THE FOUR WESTERN PROVINCES
OIL (CONTINUED)**

<u>Name of Pipeline</u>	<u>Owners/Operators</u>	<u>Gathering Area Origin</u>	<u>Description of Route</u>	<u>Destination</u>	<u>System Capacity</u> (1,000 b/d)
ALBERTA (Cont'd)					
Interprovincial Pipe Line	Interprovincial Pipe Line Limited	Edmonton	Southeast to Hardisty, Regina and the U.S. border	Connects with Lakehead Pipeline at Canadian/U.S. border at Emerson, Manitoba	1,560
Pembina Pipe Line	Pembina Pipe Line Ltd.	Pembina, Drayton Valley	East to Edmonton	Edmonton	175
Gulf Alberta Pipe Line	Gulf Oil Canada Limited	Hussar, Drumheller	North through Stettler to Edmonton	Edmonton	108
Texaco Pipe Line	Texaco Canada Limited	Rimbey or Edmonton	Rimbey north to Edmonton or Edmonton south to Rimbey	Edmonton or the Hudson's Bay Oil & Gas Pipeline at Rimbey	n.a.*
Hudson's Bay Oil & Gas Pipe Line (Rangeland system)	Hudson's Bay Oil & Gas Company Limited	Rimbey, Texaco Pipe Line	South through Sundre, Cochrane, Turner Valley	U.S. border near Pincher Creek, Alberta connecting with Continental Pipe Line Company in Montana	70
Cremona Pipe Line	Home Oil Company Limited	Sundre or Calgary	Southeast through Crossfield	It either joins the Rangeland system at Sundre or flows to the Imperial Oil refinery in Calgary	48*
Bow River Pipe Line	Bow River Pipe Lines Ltd.	Taber	North through Bantry, Cessford, Coronation	Joins Interprovincial Pipeline at Hardisty	58
Husky Pipe Line	Husky Pipe Line Limited	Lloydminster	Southwest through Wainwright	Interprovincial Pipeline at Hardisty	50

* The capacity of this line varies according to how much crude is flowing in which direction

OIL & GAS PIPELINES IN THE FOUR WESTERN PROVINCES

OIL (CONTINUED)

<u>Name of Pipeline</u>	<u>Owners Operators</u>	<u>Gathering Area Origin</u>	<u>Description of Route</u>	<u>Destination</u>	<u>System Capacity</u> (1,000 b/d)
SASKATCHEWAN					
Interprovincial Pipe Line	(see Alberta)				
South Saskatchewan Pipe Line	South Saskatchewan Pipe Line Company, controlled by/affiliated with Mobil Oil Canada Ltd., Union Oil Co. and Koch Industries Inc.	Southwestern Saskatchewan	Serves a refinery in Moose Jaw	Connects with Interprovincial Pipe Line at Regina	70
Wascana Pipe Line	Wascana Pipe Line Ltd., affiliated with Gibson Petroleum Company Limited, Murphy Oil Company Ltd., Western Crude Oil, Inc.	Regina	South to U.S. border	Connects with U.S. carriers at Poplar, Montana	50
MANITOBA					
Interprovincial Pipe Line	(see Alberta)				

OIL & GAS PIPELINES IN THE FOUR WESTERN PROVINCES

GAS

<u>Name of Pipeline</u>	<u>Owners/Operators</u>	<u>Gathering Area/Origin</u>	<u>Description of Route</u>	<u>Destination</u>	<u>System Capacity</u> (1,000 b/d)
BRITISH COLUMBIA					
Westcoast Transmission	Westcoast Transmission Company Limited	Pointed Mountain, Fort Nelson, Fort St. John	South through Fort Nelson, Prince George	Vancouver and U.S.	1,320
Pacific Northern	Pacific Northern Gas Ltd., affiliated with Westcoast Transmission Company	Forty miles north of Prince George from Westcoast Transmission Line	West to Prince Rupert	Prince Rupert	52
ALBERTA					
Albersun	Albersun Oil & Gas Ltd., a subsidiary of Sun Oil Company Limited	Tweedie	North through Calling Lake field	Fort McMurray and Great Canadian Oil Sands extraction plant	60
Alberta Gas Trunk Lines	The Alberta Gas Trunk Line Company Limited	Province-wide gathering system and trunk lines		South to the U.S. to Pacific Gas Transmission and to the Montant Power Company; east to the TransCanada Pipe Line and to the Saskatchewan Power Corporation	
SASKATCHEWAN					
TransCanada Pipe Line	TransCanada Pipelines Limited	Alberta Gas Trunk Lines system at Alberta/Saskatchewan border	East across Saskatchewan to Manitoba	Ontario markets and the U.S. border at Emerson, Manitoba where it connects with Midwestern Gas Transmission Company	3,527**
MANITOBA					
TransCanada Pipe Line	(see Saskatchewan)				

* These figures are rough and are useful only to give the order of magnitude of the various pipe lines. The capabilities of the line can alter significantly as production at the various sources and demand levels along the routes change.

** Input capacity at Alberta-Saskatchewan border.

Hydro and Thermal Electricity Generation¹

The following table lists the thermal and hydro electricity generating plants for the larger utilities in the four western provinces.² Included are the major interconnected plants and transmission lines of 230 kilovolts or more.

The largest power company is the British Columbia Hydro and Power Authority with some 53 plants and 28 high voltage lines listed in the table.

In the table only the two major utilities are shown for Alberta; Calgary Power Ltd. and Alberta Power Ltd. As well, several plants owned by cities in the province are listed because of their higher installed capacities.

Between Saskatchewan and Manitoba there are two interconnecting high voltage lines, one from Yorkton, Saskatchewan to Roblin, Manitoba; the other between Estevan, Saskatchewan and Brandon, Manitoba.

Industry-owned plants are not shown for any of the provinces. These companies use almost all the electricity they generate for their own purposes and only rarely interconnect with the utility company lines.

1. Prepared by DataMetrics Limited, Calgary, Alberta.

2. Industrial plants are shown on the accompanying map.

**INTERCONNECTED HYDRO AND THERMAL ELECTRICITY GENERATION PLANTS
AND HIGH VOLTAGE TRANSMISSION LINES
FOUR WESTERN PROVINCES**

<u>Name of Company</u>	<u>Location of Plant</u>	<u>Installed Capacity (megawatts)</u>	<u>Transmission Lines of 230,000 Volts or More No. Lines</u>	
Manitoba				
Manitoba Hydro-Electric Board (Interconnected capacities)	Hydro			
	Great Falls	132.0	1 Kettle through Grand Rapids and Ashern to Winnipeg	
	Seven Sisters	150.0		
	Pine Falls	82.0		
	McArthur Falls	56.0	2 Seven Sister to Kenora, Ontario	
	Kelsey	224.0	1 Winnipeg to Glenboro	
	Grand Rapids	472.0		
	Kettle	1,219.2	1 Selkirk to Brandon	
	Laurie River (2)	10.0	1 Brandon ties into Boundary Dam in Saskatchewan	
		Thermal		
	The Pas	3.15	1 Ashern to Dauphin	
	Brandon	237.0		
	Selkirk	157.0	1 Dauphin to Roblin	
Winnipeg Hydro	Hydro			
	Pointe du Bois	68.6	1 Roblin ties into Yorkton in Saskatchewan	
	Slave Falls	72.0	1 Raven Lake to Dauphin	
			1 Dauphin to The Pas	
			1 Grand Rapids ties into the system between The Pas and Dauphin.	
	Thermal			
	Amy Street	50.0		
Saskatchewan				
Saskatchewan Power Corporation	Hydro			
	Squaw Rapids	280.0	2 Sqaw Rapids to Beatty	
	Coteau Creek	187.5	2 Beatty to Saskatoon	
			2 Estevan to Regina	
			1 Estevan ties into Brandon in Manitoba	
			1 Yorkton ties into Dauphin in Manitoba	
		Thermal		
		A.L. Cole	108.0	
	Estevan	70.0		
	Swift Current	11.5		
	Kindersley	29.0		

**INTERCONNECTED HYDRO AND THERMAL ELECTRICITY GENERATION PLANTS
AND HIGH VOLTAGE TRANSMISSION LINES
FOUR WESTERN PROVINCES (CONTINUED)**

<u>Name of Company</u>	<u>Location of Plant</u>	<u>Installed Capacity (megawatts)</u>	<u>Transmission Lines of 230,000 Volts or More No. Lines</u>	
Saskatchewan (Cont'd)	Thermal (Cont'd)			
	Queen Elizabeth	232.0		
	Boundary Dam	582.0		
	Success (jet)	45.0		
	Regina "A"	65.0		
	Regina "B"	23.0		
Alberta				
Alberta Power Ltd.	Thermal		1	Big Bend to Banalto
	Grande Cache	140.0	3	Banalto to Calgary
	Drumheller	15.0	1	Calgary to Fort Macleod
	Sturgeon	18.0	1	Wabamum to Banalto
	Rainbow Lake	58.0	1	Sundance to Banalto
	Battle River	212.0	1	Wabamum to Edmonton
	Simonette	20.0	1	Sundance to Edmonton
	Vermillion	8.0	1	Battle River to Red Deer*
Calgary Power Ltd.	Hydro			
	Kananaskis	18.9		
	Ghost	50.9		
	Cascade	35.9		
	Barrier	12.9		
	Spray	102.8		
	Rundle	49.9		
	Horseshoe	13.9		
	Bearspaw	16.9		
	Pocaterra	14.9		
	Interlakes	5.0		
	Big Bend	355.0		
	Big Horne	120.0		
	Three Sisters	3.0		

*Will be 240 KV in 1975

**INTERCONNECTED HYDRO AND THERMAL ELECTRICITY GENERATION PLANTS
AND HIGH VOLTAGE TRANSMISSION LINES
FOUR WESTERN PROVINCES (CONTINUED)**

<u>Name of Company</u>	<u>Location of Plant</u>	<u>Installed Capacity (megawatts)</u>	<u>Transmission Lines of 230,000 Volts or More No. Lines</u>	
Alberta (Cont'd)	Thermal			
	Wabamum	569.0		
	Sundance	572.0		
	Lethbridge	31.0		
City of Medicine Hat	Thermal			
	Medicine Hat	41.0		
City of Edmonton	Edmonton	732.0		
British Columbia				
British Columbia Hydro and Power Authority	Hydro		1	Kettle through Grand Rapids and Ashern to Winnipeg
	Jordan River	150.0	1	Selkirk to Brandon
	Stave Falls	52.5	2	Squaw Rapids to Beatty
	Coquitlam-Buntzen No. 2	26.7	3	Ingledow to Arnott
	Aberfeldie	5.0	2	Arnott to Kidd #2 Substation
	Elko	9.6	1	Ingledow to Kidd #2 Substation
	Alouette	8.0	2	Ingledow to Bonneville Power Administration system
	Shuswap Falls	5.2	1	Ingledow to Bridge River
	Ruskin	105.6	2	Ingledow to W.A.C. Bennett Dam
	Falls River	9.6	1	Ingledow to Burrard Thermal Power Plant
	John Hart	120.0	1	Murrin to Ingledow
	Bridge River No. 1	180.0	1	Murrin to Horne Payne
	Coquitlam-Buntzen No. 1	50.0	2	Horne Payne to Burrard
	Wahleach	60.0	1	Burrard to Murrin
	Puntledge	27.0	1	Horne Payne to Walters
	Ladore Falls	54.0	2	Walters to Bridge River
	Seton	42.0	2	D.C. (underwater, Arnott to between Nanaimo and Victoria)
	Cheakamus	140.0	1	Prince George (Willeston Substation) to Houston
	La Joie	22.0	1	Kitimat to Skeena
	Strathcona	67.5	1	Skeena to Prince Rupert
	Clowhom Falls	30.0	1	Willeston to Salmon Valley
		2	Kelly Lake to Savona Substation (Clinton)	

**INTERCONNECTED HYDRO AND THERMAL ELECTRICITY GENERATION PLANTS
AND HIGH VOLTAGE TRANSMISSION LINES
FOUR WESTERN PROVINCES (CONTINUED)**

<u>Name of Company</u>	<u>Location of Plant</u>	<u>Installed Capacity</u> (megawatts)	<u>Transmission Lines of 230,000 Volts or More</u> No. Lines
British Columbia (Cont'd)	Hydro (Cont'd)		
	Bridge River No. 2	248.0	
	Ash River	25.2	
	Gordon N. Shrum	2,091.0	
	Clayton Falls	.7	
	Shawatians	1.3	
	Spilljmacheen	4.0	
	Walter Hardman	8.0	
	Whatshan	50.0	
	Thermal		
	Georgia	75.5	
	Port Mann	100.0	
	Burrard	750.0	
	Smithers	6.9	
	Prince Rupert	28.6	
	Alert Bay/Port Hardy	3.2	
	Atlin	.3	
	Bellabella	1.2	
	Bellacoola	1.4	
	Blue River	.6	
	Boston Bar	.9	
	Fort Nelson	9.1	
	Hazelton	2.0	
	Lytton	.9	
	McBride	1.8	
	Masset	2.5	
	Mica	14.2	
	Port Clements	.3	
	Prince Rupert	6.4	
	Revelstoke	1.9	
	Sandpit	2.7	
	Stewart	3.7	
	Tofino	.4	
	Valemount	1.6	
	Wells	.5	



WESTERN CANADA

MAIN OIL AND GAS PIPELINES, REFINERIES, COAL AND URANIUM MINES 1973

CANADA WEST FOUNDATION



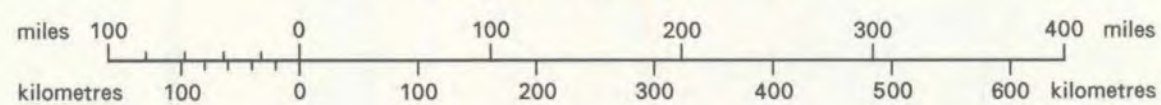
REGIONAL ECONOMIC EXPANSION

- Oil Pipeline

Petroleum Refinery
- Gas Pipeline

Coal Mine
Number of plants in area indicated.
- Uranium Mine

Scale: One Inch Equals Approximately 100 Miles





WESTERN CANADA

MAIN ELECTRIC TRANSMISSION SYSTEMS AND PRINCIPAL POWER GENERATING STATIONS

1974

TRANSMISSION LINES
 — Existing
 - - - Under Construction

Scale: One Inch Equals Approximately 100 Miles

miles 100 0 100 200 300 400 miles
 kilometres 100 0 100 200 300 400 500 600 kilometres

POWER STATIONS
 ■ Hydro - Electric
 ● Thermal - Electric

