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Oil and Gas Extraction

2003



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Statistics Canada
Manufacturing, Construction and Energy Division

Oil and Gas Extraction

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User information

Symbols

The following standard symbols are used in Statistics Canada publications:

- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- p preliminary
- r revised
- x suppressed to meet the confidentiality requirements of the *Statistics Act*
- E use with caution
- F too unreliable to be published

Note to users

Due to resource limitations, capital and operating expenditures estimates shown in text table 1, table 1, and table 3 are compiled from the largest operators. These businesses are believed to account for 98% of the total economic activity of the industry.

Acknowledgements

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Highlights

- The value of marketable production from crude oil, natural gas and natural gas liquids jumped 32.6% during the year, from a total of \$57.7 billion in 2002 to a new high of \$76.4 billion in 2003.
- After falling roughly 13% last year, total well completions reached a new record high in 2003 to 23,363, up 36.0%.
- Capital expenditures in the conventional sector leaped 32.5% in 2003 to reach \$23.8 billion, reflecting generally higher prices for all commodities.
- In Canada's oil sands region, despite the continuing development of non-conventional resources, through in-situ, mining and upgraders, overall capital expenditures fell roughly 25% to \$5.0 billion, after a high of \$6.8 billion in 2002. A number of major development projects came into production during the year.

Analysis

Volumes – Tables 7 and 8

During 2003, the marketable production of crude oil and equivalent in Canada increased by a further 5.7%, to 144.8 million cubic metres from 137.0 million cubic metres. The production of non conventional crude oil (synthetic and crude bitumen) continued to increase, as it has done for the past several years, supplementing and replacing conventional crude from older fields. Although the production of synthetic crude dipped slightly in 2003, crude bitumen production recorded a 43.2% increase over last year. The production of marketable natural gas fell slightly by 3.2%, to 166.7 billion cubic metres from 172.2 billion cubic metres in 2002.

Exports of Canadian natural gas to the U.S. declined again in 2003, falling to 101.5 billion cubic metres (-5.8%), after a decline of roughly 0.5% in 2002.

Exports of crude oil and equivalent to the U.S. again increased in 2003, rising by 5.1% to 89.1 million cubic metres from 84.8 million cubic metres in 2002.

Demand by Canadian refinery for domestically produced crude oil and equivalent increased marginally by 0.3% during 2003, to 53.2 million cubic metres from 53.1 million cubic metres in 2002. Crude oil imports increased by 3.1% during the year, rising to 52.7 million cubic metres from 51.1 million cubic metres in 2002.

Domestic sales of natural gas (including direct sales) rose by 3.6% in 2003, increasing to 72.8 billion cubic metres from 70.3 billion cubic metres in 2002. As noted above, field production in 2003 had fallen, but withdrawals from distributors' storage had increased in order to supplement demand. Similarly, natural gas imports rose 46.6% in 2003, to go from 6.6 billion cubic metres to 9.7 billion cubic metres.

Values – Tables 4 and 5-1

In 2003, the total value of marketable production of hydrocarbons (including synthetic crude oil, natural gas, natural gas liquids, and elemental sulphur) rose sharply by 32.6% to \$76.6 billion from \$57.7 billion recorded in 2002. World prices for all crude oil and natural gas commodities were on the upswing during the year.

The value of crude oil and condensate (including pentanes plus) increased by 12.2% to \$33.6 billion compared to \$30.0 billion in 2002 and natural gas rose to \$37.1 billion from \$23.7 billion last year. The value of natural gas processing plant products (propane, butane and ethane) increased sharply by 42.8% to \$5.7 billion from \$4.0 billion, and elemental sulphur (from natural gas) increased to \$152.6 million from last year's level of \$62.6 million (an increase of 143.8%).

The Province of Alberta continued to dominate the overall value of marketable production in 2003, accounting for 73.6%, or \$56.3 billion of the total \$76.6 billion.

Expenditures – Conventional sector (Table 3)

Operating expenditures (classified here as expenditures relating to field and well operations, natural gas processing and re-processing plant operations, taxes (excluding income taxes), other operating expenditures and royalties) increased by 18.9% in 2003, to \$20.7 billion from \$17.4 billion in 2002. This year, royalty payments accounted for 51.7%, field and well operations 39.0%, natural gas processing plants 7.4%, and taxes 1.9%.

The capital expenditures (classified as expenditures relating to geological and geophysical operations, exploration drilling, land acquisition and rentals, development drilling, production facilities, enhanced recovery and pressure maintenance, natural gas plants and other) increased markedly in 2003 to \$23.8 billion from \$18.0 billion in 2002.

Exploration expenditures increased by 25.6% and development spending rose by 35.6%, for an overall increase of 32.5% in capital spending this year compared to 2002. Higher commodities prices were the main drivers behind this jump in activity.

The above expenditures exclude the non-conventional regions of Alberta and Saskatchewan containing the heavy oils and oilsands. These locations require very high inputs of capital necessary to extract the oil. See Text Table 1 for expenditure details relating to this sector.

Drilling – Table 2

There was a substantial increase in the total number of well completions (oil, gas, dry and others) during 2003, rising by 36.0% to 23,363 wells from 17,182 completions recorded in 2002. Exploratory drilling rose by 25.5% during the year to 5,074 completions from 4,044 wells, and development drilling increased by 43.7% to 15,372 wells from 10,694 completions. During 2003, the number of successful oil wells completed rose to 4,845 wells compared to 4,319 completions last year, and successful gas well completions increased markedly by 42.9% to 12,951 wells compared to 9,061 gas wells completed last year.

Reserves – Table 6 and text table 2

Remaining established reserves of conventional crude oil and equivalent (excluding oilsands and bitumen) continued to decline by year-end 2003 to 749,911,000 cubic metres from 796,324,000 cubic metres in 2002. The reserves replacement, or gross additions, amounted to roughly 50% of the volume of crude and equivalent produced during 2003. At this current rate of production, Canada's reserves of conventional crude oil and equivalent have an estimated economic life (reserves life index) of 8.0 years, down slightly over 2002 due to the current production level.

Synthetic crude oil and developed bitumen reserves are currently estimated to be 1,151,440 000 cubic metres, an increase of 4.9% over 2002. The reserves replacement (gross additions versus production) amounted to 112%, and its reserves life index remains at 23.8 years, down marginally from 2002.

Marketable natural gas established reserves decreased by 4.2% in 2003, to 1,594 billion cubic metres from 1,664 billion cubic metres in the previous year. The volume of gross additions, by development drilling, replacing the production amounted to 59%. Based upon the amount of remaining established reserves and at the current level of production, the economic life of these reserves remains at 9.3 years, a marginal increase over 2002. Non-conventional natural gas prospects, such as coal bed methane and tight sands gas, continue to be extensive as field research heightens.

Text table 1
Non-conventional oil sector expenditures

	In-situ	Mining	Upgraders	Total non-conventional expenditures 2002	Cumulative 1947 to 2003
millions of dollars					
Capital expenditures Including land acquisition and retention costs, exploratory and delineation drilling, research and development, fixed installations, machinery and equipment, housing and pollution control equipment	1,180.0	3,535.3	332.9	5,048.2	41,531.6
Operating costs Including taxes, royalties, administration expense, other operating expenses	677.2	3,102.8	288.3	4,068.3	49,065.1
Total expenditures	1,857.2	6,638.1	621.2	9,116.5	90,596.7

Text table 2
Developed non-conventional oil reserves, 2003

	Mining – Integrated synthetic crude oil	In-situ bitumen
thousands of cubic metres		
Remaining reserves at 31st of December 2002	775,636	321,745
Gross additions in 2003	82,637	19,706
Reserves at 31 st of December 2002 plus 2003 gross additions	858,273	341,451
Less 2003 net production ¹	29,832	18,452
Remaining reserves at 31st of December 2003	828,441	322,999
Net change in reserves during 2003	52,805	1,254

1. Preliminary estimate.

Source(s): Canadian Association of Petroleum Producers.

Text table 3
Value added, non-conventional oil sector¹, 2003

	Value of marketable production	Cost of fuel, electricity, materials and supplies	Value added – Producing activity
millions of dollars			
Canada	11,173.9	..	..

1. Represents synthetic crude and crude bitumen producers.

Text table 4
Royalty allocation

	2003	2002	2001	2000	1999	1998
	millions of dollars					
Total royalties, Canada ¹	10,688.5	7,968.0	12,106.3	11,129.3	5,059.0	3,376.3
Federal crown royalties	30.0	21.8	42.9	18.9	9.3	7.0
Provincial crown royalties	9,008.2	6,642.9	9,628.3	8,854.8	3,990.1	2,616.7
Non-crown royalties and other	1,650.3	1,303.3	2,435.1	2,255.6	1,059.6	752.6

1. Net applicable incentive credits; excludes synthetic crude oil royalties.

Related products

Selected publications from Statistics Canada

45-004-X	The Supply and Disposition of Refined Petroleum Products in Canada
55-201-X	Pipeline Transportation of Crude Oil and Refined Petroleum Products
57-003-X	Report on Energy Supply-demand in Canada
57-205-X	Natural Gas Transportation and Distribution
57-601-X	Energy Statistics Handbook

Selected CANSIM tables from Statistics Canada

153-0001	Value of established natural gas reserves, annual
153-0002	Value of established crude oil reserves, annual
153-0013	Established crude oil reserves, annual
153-0014	Established natural gas reserves, annual

Selected surveys from Statistics Canada

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Statistical tables

Table 1
Principal statistics¹, oil and gas extraction, conventional sector

	Establishments	Producing activity			Value Added
		Cost of electricity	Cost of materials and supplies and fuel	Value of marketable production	
	number	thousands of dollars			
1992	634	418,896	1,445,037	16,992,802	15,128,869
1993	626	477,458	1,464,121	19,058,705	17,117,126
1994	671	513,980	1,547,755	21,871,403	19,809,668
1995	728	545,102	1,596,515	20,817,680	18,676,063
1996	703	584,824	1,672,073	26,707,674	24,450,777
1997	711	..	..	27,183,922	..
1998	761	..	..	22,628,989	..
1999	756	..	..	30,632,888	..
2000	738	..	..	55,967,429	..
2001	709	..	..	56,272,820	..
2002					
Newfoundland and Labrador	0	..	..	0	..
Prince Edward Island	1	..	..	0	..
Nova Scotia	2	..	..	0	..
New Brunswick	3	..	..	0	..
Quebec	2	..	..	0	..
Ontario	9	..	..	97,707	..
Manitoba	24	..	..	149,791	..
Saskatchewan	161	..	..	5,572,256	..
Alberta	333	..	..	32,621,954	..
British Columbia	103	..	..	4,451,117	..
Nunavut	0	..	..	0	..
Northwest Territories	22	..	..	471,251	..
Yukon	6	..	..	41,205	..
Arctic Islands	0	..	..	0	..
Offshore					
Newfoundland	12	..	..	4,079,812	..
Nova Scotia	19	..	..	1,028,515	..
West	0	..	..	0	..
Total	697	..	..	48,513,608	..
2003					
Newfoundland and Labrador	0	..	..	0	..
Prince Edward Island	1	..	..	0	..
Nova Scotia	3	..	..	0	..
New Brunswick	4	..	..	0	..
Quebec	5	..	..	0	..
Ontario	14	..	..	112,608	..
Manitoba	19	..	..	159,877	..
Saskatchewan	155	..	..	6,474,009	..
Alberta	310	..	..	45,131,722	..
British Columbia	106	..	..	6,507,099	..
Nunavut	0	..	..	0	..
Northwest Territories	20	..	..	515,037	..
Yukon	4	..	..	48,087	..
Arctic Islands	0	..	..	0	..
Offshore					
Newfoundland	12	..	..	5,030,215	..
Nova Scotia	17	..	..	1,398,234	..
West	0	..	..	0	..
Total	670	..	..	65,376,888	..
Percentage change					
2003/2002	-3.9	..	..	34.8	..
2002/2001	-5.6	..	..	-13.3	..

1. Excludes establishments engaged in the non-conventional sector. See text table 2.

Table 2
Drilling completions

	Oil				Gas			
	2002		2003		2002		2003	
	number	metres	number	metres	number	metres	number	metres
Canada								
Exploratory wells ¹	528	709,980	570	715,274	2,088	2,650,778	2,622	2,853,918
Development wells	2,853	3,718,210	3,295	4,328,228	6,970	6,037,073	10,329	8,670,210
Other ²	938	979,703	980	1,035,075	3	1,416	0	0
Total	4,319	5,407,893	4,845	6,078,577	9,061	8,689,267	12,951	11,524,128
Eastern Canada								
Exploratory wells ¹	0	0	2	4,454	21	21,035	16	14,007
Development wells	15	45,723	18	71,051	29	20,735	24	23,202
Other ²	0	0	0	0	0	0	0	0
Total	15	45,723	20	75,505	50	41,770	40	37,209
Offshore Newfoundland								
Exploratory wells ¹	0	0	1	3,460	0	0	0	0
Development wells	4	24,350	14	63,459	0	0	0	0
Other ²	0	0	0	0	0	0	0	0
Total	4	24,350	15	66,919	0	0	0	0
Offshore Nova Scotia								
Exploratory wells ¹	0	0	0	0	2	11,201	2	7,302
Development wells	0	0	0	0	0	0	3	10,749
Other ²	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	11,201	5	18,051
Newfoundland and Labrador								
Exploratory wells ¹	0	0	0	0	0	0	0	0
Development wells	0	0	0	0	1	3,482	0	0
Other ²	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	3,482	0	0
Prince Edward Island								
Exploratory wells ¹	0	0	0	0	0	0	0	0
Development wells	0	0	0	0	0	0	0	0
Other ²	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Nova Scotia								
Exploratory wells ¹	0	0	0	0	0	0	0	0
Development wells	0	0	0	0	0	0	0	0
Other ²	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
New Brunswick								
Exploratory wells ¹	0	0	0	0	0	0	0	0
Development wells	0	0	0	0	2	5,656	1	3,260
Other ²	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	5,656	1	3,260
Quebec								
Exploratory wells ¹	0	0	0	0	0	0	0	0
Development wells	0	0	0	0	0	0	0	0
Other ²	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Ontario								
Exploratory wells ¹	0	0	1	994	19	9,834	14	6,705
Development wells	11	21,373	4	7,592	26	11,597	20	9,193
Other ²	0	0	0	0	0	0	0	0
Total	11	21,373	5	8,586	45	21,431	34	15,898
Western Canada								
Exploratory wells ¹	528	709,980	568	710,820	2,067	2,629,743	2,606	2,839,911
Development wells	2,838	3,672,487	3,277	4,257,177	6,941	6,016,338	10,305	8,647,008
Other ²	938	979,703	980	1,035,075	3	1,416	0	0
Total	4,304	5,362,170	4,825	6,003,072	9,011	8,647,497	12,911	11,486,919

See footnotes at the end of the table.

Table 2 – continued

Drilling completions

	Oil				Gas			
	2002	2002	2003	2003	2002	2002	2003	2003
Manitoba								
Exploratory wells ¹	7	6,244	14	13,135	0	0	0	0
Development wells	70	80,779	69	70,445	0	0	0	0
Other ²	0	0	0	0	0	0	0	0
Total	77	87,023	83	83,580	0	0	0	0
Saskatchewan								
Exploratory wells ¹	193	201,203	284	262,152	305	172,988	748	476,973
Development wells	1,296	1,533,435	1,339	1,484,812	1,408	811,126	1,539	896,659
Other ²	0	0	0	0	0	0	0	0
Total	1,489	1,734,638	1,623	1,746,964	1,713	984,114	2,287	1,373,632
Alberta								
Exploratory wells ¹	324	496,805	253	410,701	1,623	2,210,260	1,627	1,929,388
Development wells	1,383	1,936,305	1,789	2,585,722	5,323	4,830,909	8,315	6,889,706
Other ²	938	979,703	980	1,035,075	3	1,416	0	0
Total	2,645	3,412,813	3,022	4,031,498	6,949	7,042,585	9,942	8,819,094
British Columbia								
Exploratory wells ¹	4	5,728	16	23,250	137	241,455	227	423,522
Development wells	86	117,042	75	108,439	207	364,388	446	847,939
Other ²	0	0	0	0	0	0	0	0
Total	90	122,770	91	131,689	344	605,843	673	1,271,461
Northwest Territories								
Exploratory wells ¹	0	0	1	1,582	2	5,040	4	10,028
Development wells	3	4,926	5	7,759	3	9,915	5	12,704
Other ²	0	0	0	0	0	0	0	0
Total	3	4,926	6	9,341	5	14,955	9	22,732

See footnotes at the end of the table.

Table 2 – continued
Drilling completions

	Abandoned and suspended				Total			
	2002		2003		2002		2003	
	number	metres	number	metres	number	metres	number	metres
Canada								
Exploratory wells ¹	1,428	2,064,156	1,882	2,714,574	4,044	5,424,914	5,074	6,283,766
Development wells	871	1,038,758	1,748	2,455,009	10,694	10,794,041	15,372	15,453,447
Other ²	1	433	20	11,923	2,444	1,549,857	2,917	1,797,727
Total	2,300	3,103,347	3,650	5,181,506	17,182	17,768,812	23,363	23,534,940
Eastern Canada								
Exploratory wells ¹	14	27,199	30	46,786	35	48,234	48	65,247
Development wells	14	16,387	35	27,817	58	82,845	77	122,070
Other ²	0	0	0	0	9	27,897	12	23,675
Total	28	43,586	65	74,603	102	158,976	137	210,992
Offshore Newfoundland								
Exploratory wells ¹	1	3,100	2	6,726	1	3,100	3	10,186
Development wells	0	0	0	0	4	24,350	14	63,459
Other ²	0	0	0	0	5	22,912	7	21,584
Total	1	3,100	2	6,726	10	50,362	24	95,229
Offshore Nova Scotia								
Exploratory wells ¹	3	14,250	4	21,235	5	25,451	6	28,537
Development wells	0	0	1	4,116	0	0	4	14,865
Other ²	0	0	0	0	0	0	0	0
Total	3	14,250	5	25,351	5	25,451	10	43,402
Newfoundland and Labrador								
Exploratory wells ¹	0	0	1	500	0	0	1	500
Development wells	0	0	0	0	1	3,482	0	0
Other ²	0	0	0	0	0	0	0	0
Total	0	0	1	500	1	3,482	1	500
Prince Edward Island								
Exploratory wells ¹	0	0	2	3,206	0	0	2	3,206
Development wells	0	0	0	0	0	0	0	0
Other ²	0	0	0	0	0	0	0	0
Total	0	0	2	3,206	0	0	2	3,206
Nova Scotia								
Exploratory wells ¹	0	0	0	0	0	0	0	0
Development wells	0	0	0	0	0	0	0	0
Other ²	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
New Brunswick								
Exploratory wells ¹	2	4,623	1	1,100	2	4,623	1	1,100
Development wells	0	0	0	0	2	5,656	1	3,260
Other ²	0	0	0	0	0	0	0	0
Total	2	4,623	1	1,100	4	10,279	2	4,360
Quebec								
Exploratory wells ¹	0	0	0	0	0	0	0	0
Development wells	0	0	0	0	0	0	0	0
Other ²	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Ontario								
Exploratory wells ¹	8	5,226	20	14,019	27	15,060	35	21,718
Development wells	14	16,387	34	23,701	51	49,357	58	40,486
Other ²	0	0	0	0	4	4,985	5	2,091
Total	22	21,613	54	37,720	82	69,402	98	64,295
Western Canada								
Exploratory wells ¹	1,414	2,036,957	1,852	2,667,788	4,009	5,376,680	5,026	6,218,519
Development wells	857	1,022,371	1,713	2,427,192	10,636	10,711,196	15,295	15,331,377
Other ²	1	433	20	11,923	2,435	1,521,960	2,905	1,774,052
Total	2,272	3,059,761	3,585	5,106,903	17,080	17,609,836	23,226	23,323,948

See footnotes at the end of the table.

Table 2 – continued

Drilling completions

	Abandoned and suspended				Total			
	2002	2002	2003	2003	2002	2002	2003	2003
Manitoba								
Exploratory wells ¹	4	3,383	6	5,241	11	9,627	20	18,376
Development wells	6	5,218	7	6,372	76	85,997	76	76,817
Other ²	0	0	0	0	10	9,247	10	9,086
Total	10	8,601	13	11,613	97	104,871	106	104,279
Saskatchewan								
Exploratory wells ¹	60	61,069	114	115,148	558	435,260	1,146	854,273
Development wells	58	54,692	60	59,073	2,762	2,399,253	2,938	2,440,544
Other ²	0	0	0	0	81	103,198	95	115,101
Total	118	115,761	174	174,221	3,401	2,937,711	4,179	3,409,918
Alberta								
Exploratory wells ¹	1,257	1,789,560	1,617	2,326,793	3,204	4,496,625	3,497	4,666,882
Development wells	742	878,594	1,503	2,109,246	7,448	7,645,808	11,607	11,584,674
Other ²	1	433	20	11,923	2,337	1,401,084	2,769	1,604,246
Total	2,000	2,668,587	3,140	4,447,962	12,989	13,543,517	17,873	17,855,802
British Columbia								
Exploratory wells ¹	91	177,331	112	212,244	232	424,514	355	659,016
Development wells	51	83,867	125	219,549	344	565,297	646	1,175,927
Other ²	0	0	0	0	4	4,889	31	45,619
Total	142	261,198	237	431,793	580	994,700	1,032	1,880,562
Northwest Territories								
Exploratory wells ¹	2	5,614	3	8,362	4	10,654	8	19,972
Development wells	0	0	18	32,952	6	14,841	28	53,415
Other ²	0	0	0	0	3	3,542	0	0
Total	2	5,614	21	41,314	13	29,037	36	73,387

1. Includes new field wildcats, new pool wildcats, deeper pool tests, shallower pool tests and outposts.

2. Includes stratigraphic tests, project wells, bitumen wells, miscellaneous and service wells.

Source(s): Canadian Association of Petroleum Producers.

Table 3-1
Net cash expenditures of the conventional petroleum industry — 2002

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta
thousands of dollars									
Exploration									
Geological and geophysical operations	0	108	146	356	0	2,434	587	34,763	657,595
Drilling	0	0	0	9,647	2,689	12,005	7,801	142,916	1,965,854
Land acquisitions and rentals ¹	0	8	41	10	150	2,443	711	158,509	766,541
Total	0	116	187	10,013	2,839	16,882	9,099	336,188	3,389,990
Development									
Drilling	0	0	0	0	0	25,932	40,509	758,972	4,769,915
Production facilities ²	0	0	0	0	0	12,412	15,599	324,453	2,787,188
Enhanced recovery and pressure maintenance	0	0	0	0	0	74	424	16,146	66,549
Natural gas plants	0	0	0	0	0	0	0	22,179	521,627
Non-production facilities	0	0	0	0	0	0	2	5,047	207,588
Total	0	0	0	0	0	38,418	56,534	1,126,797	8,352,867
Operating									
Field and well operations	0	0	0	0	0	14,198	21,707	1,165,290	5,206,237
Natural gas processing plants	0	0	0	0	0	27,037	3	41,095	1,051,290
Taxes (excluding income tax)	0	0	0	0	0	263	2,796	50,435	282,720
Other operating expenses	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	41,498	24,506	1,256,820	6,540,247
Royalties ³	0	0	0	0	0	13,399	22,404	845,465	6,084,464
Total expenditures	0	116	187	10,013	2,839	110,197	112,543	3,565,270	24,367,568
	British Columbia	Nunavut	Northwest Territories	Yukon	Arctic Islands	Offshore			Canada
						New- foundland	Hudson Bay	Nova Scotia	
thousands of dollars									
Exploration									
Geological and geophysical operations	178,098	0	160,455	226	0	57,752	0	66,584	1,159,104
Drilling	389,142	0	100,527	152	0	124,539	0	310,730	3,066,002
Land acquisitions and rentals ¹	334,666	0	2,563	6	0	14,000	0	477	1,280,125
Total	901,906	0	263,545	384	0	196,291	0	377,791	5,505,231
Development									
Drilling	783,044	0	8,693	7	0	274,657	0	87,988	6,749,717
Production facilities ²	507,759	0	15,665	489	0	619,663	0	276,721	4,559,949
Enhanced recovery and pressure maintenance	5,131	0	0	0	0	38,600	0	0	126,924
Natural gas plants	204,775	0	23,059	0	0	0	0	31,380	803,020
Non-production facilities	17,403	0	9,103	0	0	0	0	1,648	240,791
Total	1,518,112	0	56,520	496	0	932,920	0	397,737	12,480,401
Operating									
Field and well operations	762,317	0	51,416	6,861	0	320,012	0	139,974	7,688,012
Natural gas processing plants	173,880	0	3,417	4,824	0	0	0	51,429	1,352,975
Taxes (excluding income tax)	19,302	0	2,138	114	0	201	0	6,516	364,485
Other operating expenses	0	0	0	0	0	0	0	0	0
Total	955,499	0	56,971	11,799	0	320,213	0	197,919	9,405,472
Royalties ³	905,530	0	17,661	4,090	0	64,741	0	10,222	7,967,976
Total expenditures	4,281,047	0	394,697	16,769	0	1,514,165	0	983,669	35,359,080

1. Includes bonuses, legal fees, filing fees, producing and non-producing acreage retention costs, bonuses paid for acquisition of freeholders' mineral rights, relevant land department salaries and overhead.
2. Includes tangible well and lease equipment and pipelines and related facilities.
3. Net of applicable incentive credits; excludes synthetic crude oil royalties.

Table 3-2
Net cash expenditures of the conventional petroleum industry — 2003

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta
thousands of dollars									
Exploration									
Geological and geophysical operations	0	550	0	1,420	9,648	1,616	730	65,685	638,627
Drilling	0	1,345	2,245	1,505	4,727	18,801	15,508	288,566	2,153,961
Land acquisitions and rentals ¹	0	0	103	0	1,341	2,642	880	203,415	1,303,934
Total	0	1,895	2,348	2,925	15,716	23,059	17,118	557,666	4,096,522
Development									
Drilling	0	0	0	0	0	22,414	38,379	870,578	6,890,704
Production facilities ²	0	0	0	1,482	0	8,565	13,429	454,640	3,839,576
Enhanced recovery and pressure maintenance	0	0	0	0	0	0	0	31,518	80,072
Natural gas plants	0	0	0	2,680	0	92	0	30,723	440,598
Non-production facilities	0	0	0	0	0	343	16	17,524	152,914
Total	0	0	0	4,162	0	31,414	51,824	1,404,983	11,403,864
Operating									
Field and well operations	0	0	0	288	78	15,779	24,107	1,284,277	5,409,801
Natural gas processing plants	0	0	0	100	0	27,394	0	52,328	1,186,166
Taxes (excluding income tax)	0	0	0	0	0	580	3,122	67,442	284,324
Other operating expenses	0	0	0	0	0	0	0	0	0
Total	0	0	0	388	78	43,753	27,229	1,404,047	6,880,291
Royalties ³	0	0	0	204	0	20,012	22,651	1,121,534	7,943,347
Total expenditures	0	1,895	2,348	7,679	15,794	118,238	118,822	4,488,230	30,324,024
	British Columbia	Nunavut	Northwest Territories	Yukon	Arctic Islands	Offshore			Canada
						New- foundland	Hudson Bay	Nova Scotia	
thousands of dollars									
Exploration									
Geological and geophysical operations	200,275	0	35,577	1,255	0	62,244	0	88,394	1,106,021
Drilling	640,379	0	112,691	30	0	167,695	0	192,079	3,599,532
Land acquisitions and rentals ¹	689,327	0	800	10	0	3,613	0	2,051	2,208,116
Total	1,529,981	0	149,068	1,295	0	233,552	0	282,524	6,913,669
Development									
Drilling	1,388,063	0	34,140	452	0	442,062	0	195,423	9,882,215
Production facilities ²	657,402	0	51,634	388	0	666,155	0	292,484	5,985,755
Enhanced recovery and pressure maintenance	230	0	0	0	0	17,100	0	0	128,920
Natural gas plants	205,980	0	32,171	0	0	0	0	35,757	748,001
Non-production facilities	4,902	0	2,830	0	0	0	0	779	179,308
Total	2,256,577	0	120,775	840	0	1,125,317	0	524,443	16,924,199
Operating									
Field and well operations	763,961	0	52,394	5,807	0	375,342	0	121,390	8,053,224
Natural gas processing plants	214,318	0	4,848	2,497	0	0	0	42,817	1,530,468
Taxes (excluding income tax)	25,826	0	2,062	163	0	250	0	1,603	385,372
Other operating expenses	0	0	0	0	0	0	0	0	0
Total	1,004,105	0	59,304	8,467	0	375,592	0	165,810	9,969,064
Royalties ³	1,413,347	0	25,453	4,548	0	114,702	0	22,668	10,688,466
Total expenditures	6,204,010	0	354,600	15,150	0	1,849,163	0	995,445	44,495,398

1. Includes bonuses, legal fees, filing fees, producing and non-producing acreage retention costs, bonuses paid for acquisition of freeholders' mineral rights, relevant land department salaries and overhead.
2. Includes tangible well and lease equipment and pipelines and related facilities.
3. Net of applicable incentive credits; excludes synthetic crude oil royalties.

Table 4
Marketable production and values

	2000	2001	2002	2003
	thousands of cubic metres			
Crude oil	80,971.4	79,935.6	83,900.4	84,690.0
Synthetic crude oil	18,608.0	20,260.6	25,494.6	25,028.8
Crude bitumen	16,781.0	17,953.9	17,481.6	25,029.0
Condensate	916.0	1,134.8	1,196.9	1,180.8
Pentanes plus	10,493.1	9,665.6	8,896.3	8,884.6
Propane	10,850.8	10,165.4	8,811.5	9,123.8
Butanes	6,534.5	6,065.3	5,119.3	5,477.0
Ethane	13,157.3	13,090.5	14,932.8	14,838.9
	millions of cubic metres			
Natural gas	167,789.9	171,387.8	172,197.2	166,730.6
	thousands of metric tonnes			
Elemental sulphur	8,284.1	7,835.5	7,384.9	6,764.9
	thousands of dollars			
Crude oil	19,173,763	15,153,811	18,157,229	19,561,384
Synthetic crude oil	5,188,916	4,995,003	6,455,743	6,777,342
Crude bitumen	2,855,634	1,873,762	2,763,700	4,396,607
Condensate	253,716	287,533	298,315	322,928
Pentanes plus	3,040,040	2,601,844	2,281,093	2,552,213
Propane	2,235,898	1,930,190	1,151,165	1,860,994
Butanes	1,516,602	1,152,061	892,098	1,277,861
Ethane	1,908,157	1,493,032	1,951,418	2,563,782
Natural gas	27,827,727	33,677,530	23,719,717	37,085,144
Elemental sulphur	91,071	-23,181	62,573	152,582
Total value	64,091,524	63,141,585	57,733,051	76,550,837

Table 5-1
Commodity data, oil and gas extraction — Net production withdrawals

	Canada	Offshore Newfoundland	Offshore Nova Scotia	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories
thousands of cubic metres											
Crude oil											
2003	84,690.0	19,550.0	0.0	0.0	195.2	633.0	24,331.4	36,527.9	2,168.2	0.0	1,284.3
2002	83,900.4	16,587.3	0.0	0.0	218.0	650.8	24,415.9	38,228.7	2,423.7	0.0	1,376.0
Synthetic crude oil											
2003	25,028.8	0.0	0.0	0.0	0.0	0.0	0.0	25,028.8	0.0	0.0	0.0
2002	25,494.6	0.0	0.0	0.0	0.0	0.0	0.0	25,494.6	0.0	0.0	0.0
Crude bitumen											
2003	25,029.0	0.0	0.0	0.0	0.0	0.0	0.0	25,029.0	0.0	0.0	0.0
2002	17,481.6	0.0	0.0	0.0	0.0	0.0	0.0	17,481.6	0.0	0.0	0.0
Condensate											
2003	1,180.8	0.0	549.3	0.0	0.0	0.0	0.0	486.8	144.7	0.0	0.0
2002	1 196.9	0.0	629.0	0.0	0.0	0.0	0.0	448.1	119.8	0.0	0.0
Pentanes plus											
2003	8,884.6	0.0	0.0	0.0	0.0	0.0	29.0	8,238.9	526.7	0.0	90.0
2002	8,896.3	0.0	0.0	0.0	0.0	0.0	32.3	8,232.1	543.8	0.0	88.1
Propane											
2003	9,123.8	0.0	239.7	0.0	0.0	0.0	41.4	8,469.6	373.1	0.0	0.0
2002	8,811.5	0.0	246.4	0.0	0.0	0.0	38.2	8,149.9	377.0	0.0	0.0
Butanes											
2003	5,477.0	0.0	157.7	0.0	0.0	0.0	22.4	4,986.0	310.9	0.0	0.0
2002	5,119.3	0.0	160.0	0.0	0.0	0.0	21.5	4,629.2	308.6	0.0	0.0
Ethane 1											
2003	14,838.9	0.0	0.0	0.0	0.0	0.0	0.0	13,741.8	1,097.1	0.0	0.0
2002	14,932.8	0.0	0.0	0.0	0.0	0.0	0.0	13,746.8	1,186.0	0.0	0.0
millions of cubic metres											
Natural gas											
2003	200,199.0	281.0	4,662.2	0.0	295.7	0.0	7,839.3	156,399.9	29,483.4	254.0	984.4
2002	205,823.6	235.1	5,471.3	0.0	369.6	0.0	7,839.3	159,028.1	31,319.9	368.1	1,192.2
thousands of metric tonnes											
Elemental sulphur											
2003	6,764.9	0.0	0.0	0.0	0.0	0.0	0.0	6,006.3	758.6	0.0	0.0
2002	7,384.9	0.0	0.0	0.0	0.0	0.0	0.0	6,533.1	851.8	0.0	0.0

1. Estimated before solvent flood.

Table 5-2
Commodity data, oil and gas extraction — Marketable production

	Canada	Offshore Newfoundland	Offshore Nova Scotia	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories
thousands of cubic metres											
Crude oil	84,690.0	19,550.0	0.0	0.0	195.2	633.0	24,331.4	36,527.9	2,168.2	0.0	1,284.3
Synthetic crude oil	25,028.8	0.0	0.0	0.0	0.0	0.0	0.0	25,028.8	0.0	0.0	0.0
Crude bitumen	25,029.0	0.0	0.0	0.0	0.0	0.0	0.0	25,029.0	0.0	0.0	0.0
Condensate	1,180.8	0.0	549.3	0.0	0.0	0.0	0.0	486.8	144.7	0.0	0.0
Pentanes plus	8,884.6	0.0	0.0	0.0	0.0	0.0	29.0	8,238.9	526.7	0.0	90.0
Propane	9,123.8	0.0	239.7	0.0	0.0	0.0	41.4	8,469.6	373.1	0.0	0.0
Butanes	5,477.0	0.0	157.7	0.0	0.0	0.0	22.4	4,986.0	310.9	0.0	0.0
Ethane ¹	14,838.9	0.0	0.0	0.0	0.0	0.0	0.0	13,741.8	1,097.1	0.0	0.0
millions of cubic metres											
Natural gas	166,730.6	0.0	4,469.5	0.0	295.7	0.0	6,990.1	128,206.3	25,817.6	199.9	751.5
thousands cubic tonnes											
Elemental sulphur	6,764.9	0.0	0.0	0.0	0.0	0.0	0.0	6,006.3	758.6	0.0	0.0
thousands of dollars											
Crude oil	19,561,384	5,030,215	0	0	45,681	159,877	4,949,932	8,490,429	548,121	0	337,129
Synthetic crude oil	6,777,342	0	0	0	0	0	0	6,777,342	0	0	0
Crude bitumen	4,396,607	0	0	0	0	0	0	4,396,607	0	0	0
Condensate	322,928	0	149,234	0	0	0	0	138,818	34,876	0	0
Pentanes plus	2,552,213	0	0	0	0	0	8,079	2,384,406	135,878	0	23,850
Propane	1,860,994	0	47,589	0	0	0	7,716	1,729,387	76,302	0	0
Butanes	1,277,861	0	44,436	0	0	0	5,410	1,157,163	70,852	0	0
Ethane ¹	2,563,782	0	0	0	0	0	0	2,372,496	191,286	0	0
Natural gas	37,085,144	0	1,156,975	0	66,927	0	1,502,872	28,714,391	5,441,834	48,087	154,058
Elemental sulphur	152,582	0	0	0	0	0	0	144,632	7,950	0	0
Total value in dollars	76,550,837	5,030,215	1,398,234	0.0	112,608	159,877	6,474,009	56,305,671	6,507,099	48,087	515,037

1. Estimated before solvent flood.
2. Excludes volume of upgraded crude oil.
3. Excludes value of upgraded crude oil. See reconciliation table 10.

Table 5-3
Commodity data, oil and gas extraction — Shipments

	Canada	Offshore Newfoundland	Offshore Nova Scotia	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories
thousands of cubic metres											
Crude oil	84,690.0	19,550.0	0.0	0.0	195.2	633.0	24,331.4	36,527.9	2,168.2	0.0	1,284.3
Synthetic crude oil	25,028.8	0.0	0.0	0.0	0.0	0.0	0.0	25,028.8	0.0	0.0	0.0
Crude bitumen	25,029.0	0.0	0.0	0.0	0.0	0.0	0.0	25,029.0	0.0	0.0	0.0
Condensate	1,180.8	0.0	549.3	0.0	0.0	0.0	0.0	486.8	144.7	0.0	0.0
Pentanes plus	8,884.6	0.0	0.0	0.0	0.0	0.0	29.0	8,238.9	526.7	0.0	90.0
Propane	8,811.5	0.0	239.7	0.0	0.0	0.0	41.4	8,469.6	373.1	0.0	0.0
Butanes	5,119.3	0.0	157.7	0.0	0.0	0.0	22.4	4,986.0	310.9	0.0	0.0
Ethane ¹	14,838.9	0.0	0.0	0.0	0.0	0.0	0.0	13,741.8	1,097.1	0.0	0.0
millions of cubic metres											
Natural gas	172,197.2	0.0	4,469.5	0.0	295.7	0.0	6,990.1	128,206.3	25,817.6	199.9	751.5
thousands of metric tonnes											
Elemental sulphur	5,646.9	0.0	0.0	0.0	0.0	0.0	0.0	4,888.3	758.6	0.0	0.0
thousands of dollars											
Crude oil	19,561,384	5,030,215	0	0	45,681	159,877	4,949,932	8,490,429	548,121	0	337,129
Synthetic crude oil	6,777,342	0	0	0	0	0	0	6,777,342	0	0	0
Crude bitumen	4,396,607	0	0	0	0	0	0	4,396,607	0	0	0
Condensate	322,928	0	149,234	0	0	0	0	138,818	34,876	0	0
Pentanes plus	2,552,213	0	0.0	0	0	0	8,079	2,384,406	135,878	0	23,850
Propane	1,860,994	0	47,589	0	0	0	7,716	1,729,387	76,302	0	0
Butanes	1,277,861	0	44,436	0	0	0	5,410	1,157,163	70,852	0	0
Ethane ¹	2,563,782	0	0	0	0	0	0	2,372,496	191,286	0	0
Natural gas	37,085,144	0	1,156,975	0	66,927	0	1,502,872	28,714,391	5,441,834	48,087	154,058
Elemental sulphur	125,661	0	0	0	0	0	0	117,711	7,950	0	0
Total value in dollars	76,523,916	5,030,215	1,398,234	0	112,608	159,877	6,474,009	56,278,750	6,507,099	48,087	515,037

1. Estimated before solvent flood.
2. Excludes volume of upgraded crude oil.
3. Excludes value of upgraded crude oil. See reconciliation table 10.

Table 6
Conventional crude oil and equivalent and marketable natural gas remaining established reserves in Canada, 2003

	Canada	Eastcoast ¹ offshore	Arctic ² Islands	Mackenzie ² Delta-Beaufort Sea	Mainland ² territories	Eastern Canada
thousands of cubic metres						
Conventional crude oil						
Remaining reserves at the 31 st of December, 2002	713,977	134,415	0	53,950	8,988	0
Positive revisions	0	0	0	0	0	0
Negative revisions	0	0	0	0	0	0
Extensions	0	0	0	0	0	0
Gross additions	47,062	6,327	0	0	0	0
Total crude oil	761,039	140,742	0	53,950	8,988	0
2003 net production ³	84,752	19,545	0	0	1,255	0
Remaining reserves at the 31 st of December, 2003	676,287	121,197	0	53,950	7,733	0
Net change in reserves during 2003	-37,690	-13,218	0	0	-1,255	0
Pentanes plus						
Remaining reserves at 31 st of December, 2002	82,347	10,408	0	0	2,848	0
Positive revisions	0	0	0	0	0	0
Negative revisions	0	0	0	0	0	0
Extensions	0	0	0	0	0	0
Gross additions	-302	-2,540	0	0	0	0
Total pentanes plus	82,045	7,868	0	0	2,848	0
2003 net production ³	8,421	67	0	0	59	0
Remaining reserves at 31 st of December, 2003	73,624	7,801	0	0	2,789	0
Net change in reserves during 2003	-8,723	-2,607	0	0	-59	0
Total remaining conventional crude oil and equivalent reserves	749,911	128,998	0	53,950	10,522	0
millions of cubic metres						
Marketable natural gas						
Remaining reserves at 31 st of December, 2002	1,664,205	56,153	0	0	12,656	105
Positive revisions	0	0	0	0	0	0
Negative revisions	0	0	0	0	0	0
Extensions	0	0	0	0	0	0
Gross additions	100,782	-28,490	0	0	617	0
Total marketable natural gas	1,764,987	27,663	0	0	13,273	105
Net change in underground storage	0	0	0	0	0	0
2003 net production ^{3,4}	170,986	4,339	0	0	817	0
Remaining reserves at 31 st of December, 2003	1,594,001	23,324	0	0	12,456	105
Non-associated	1,325,444	23,324	0	0	11,300	105
Associated	268,557	0	0	0	1,156	0
Dissolved	0	0	0	0	0	0
Underground storage	0	0	0	0	0	0
Net change in reserves during 2003	-70,204	-32,829	0	0	-200	0

See footnotes at the end of the table.

Table 6 – continued

Conventional crude oil and equivalent and marketable natural gas remaining established reserves in Canada, 2003

	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia
thousands of cubic metres					
Conventional crude oil					
Remaining reserves at the 31 st of December, 2002	1,797	3,429	183,869	305,224	22,305
Positive revisions	0	0	0	0	0
Negative revisions	0	0	0	0	0
Extensions	0	0	0	0	0
Gross additions	276	1,846	25,107	9,852	3,654
Total crude oil	2,073	5,275	208,976	315,076	25,959
2003 net production ³	196	635	24,237	36,493	2,391
Remaining reserves at the 31 st of December, 2003	1,877	4,640	184,739	278,583	23,568
Net change in reserves during 2003	80	1,211	870	-26,641	1,263
Pentanes plus					
Remaining reserves at 31 st of December, 2002	0	0	295	62,900	5,896
Positive revisions	0	0	0	0	0
Negative revisions	0	0	0	0	0
Extensions	0	0	0	0	0
Gross additions	0	0	0	1,285	953
Total pentanes plus	0	0	295	64,185	6,849
2003 net production ³	0	0	0	7,320	975
Remaining reserves at 31 st of December, 2003	0	0	295	56,865	5,874
Net change in reserves during 2003	0	0	0	-6,035	-22
Total remaining conventional crude oil and equivalent reserves	1,877	4,640	185,034	335,448	29,442
millions of cubic metres					
Marketable natural gas					
Remaining reserves at 31 st of December, 2002	11,419	0	76,649	1,252,562	254,661
Positive revisions	0	0	0	0	0
Negative revisions	0	0	0	0	0
Extensions	0	0	0	0	0
Gross additions	561	0	18,186	78,463	31,445
Total marketable natural gas	11,980	0	94,835	1,331,025	286,106
Net change in underground storage	0	0	0	0	0
2003 net production ^{3, 4}	394	0	6,958	132,277	26,201
Remaining reserves at 31 st of December, 2003	11,586	0	87,877	1,198,748	259,905
Non-associated	11,586	0	85,707	945,801	247,621
Associated	0	0	2,170	252,947	12,284
Dissolved	0	0	0	0	0
Underground storage	0	0	0	0	0
Net change in reserves during 2003	167	0	11,228	-53,814	5,244

1. Crude oil reserves were booked for the eastcoast offshore for the first time in year-end 1981 reserves.

2. As with all other areas, reserves for frontier areas are carried in accordance with the definition of established reserves. However, reserves for frontier areas are only shown when a threshold volume has been determined to exist.

3. Preliminary estimate.

4. Before re-processing plant operations.

Source(s): Canadian Association of Petroleum Producers. (Excludes oil sands reserves, see text table 2).

Table 7-1
Supply and disposition of crude oil and equivalent by source, Canada — 2002

	Offshore Newfoundland	Offshore Nova Scotia	Ontario	Manitoba	Saskat. ¹ chewan	Alberta
thousands of cubic metres						
Supply						
Domestic production:						
Crude oil						
Light and medium	16,587.3	0.0	218.0	650.8	5,138.3	25,377.2
Heavy	0.0	0.0	0.0	0.0	19,277.6	12,851.5
Synthetic crude oil	0.0	0.0	0.0	0.0	0.0	25,494.6
Crude bitumen	0.0	0.0	0.0	0.0	0.0	17,481.6
Less returned to formation	0.0	0.0	0.0	0.0	0.0	0.0
Total	16,587.3	0.0	218.0	650.8	24,415.9	81,204.9
Condensate	0.0	629.0	0.0	0.0	0.0	448.1
Pentanes plus	0.0	0.0	0.0	0.0	32.3	8,232.1
Net withdrawals	16,587.3	629.0	218.0	650.8	24,448.2	89,885.1
Imports	...	...	...	...	...	...
Total supply	16,587.3	629.0	218.0	650.8	24,448.2	89,885.1
Disposition						
Deliveries to refineries:						
Atlantic provinces	2,943.3	0.0	0.0	0.0	0.0	0.0
Quebec	1,529.4	0.0	0.0	0.0	0.0	0.0
Ontario	2,949.9	50.6	218.0	147.7	3,670.6	8,944.2
Manitoba	0.0	0.0	0.0	0.0	0.0	0.0
Saskatchewan	0.0	0.0	0.0	0.0	1,959.2	1,607.5
Alberta	0.0	0.0	0.0	0.0	500.4	22,230.9
British Columbia	0.0	0.0	0.0	0.0	0.0	2,082.7
Northwest Territories	0.0	0.0	0.0	0.0	0.0	0.0
Total	7,422.6	50.6	218.0	147.7	6,130.2	34,865.3
Export to United States						
Petroleum administration						
East Coast	5,684.6	103.3	0.0	0.0	1,006.2	2,292.8
Midwest	0.0	0.0	0.0	591.1	16,182.7	32,870.9
Gulf Coast	3,327.5	394.3	0.0	0.0	0.0	300.2
Rocky Mountains	0.0	0.0	0.0	0.0	311.5	18,341.6
West Coast	0.0	0.0	0.0	0.0	0.0	3,197.5
Total United States	9,012.1	497.6	0.0	591.1	17,500.4	57,003.0
Other countries	0.0	0.0	0.0	0.0	0.0	154.8
Total exports	9,012.1	497.6	0.0	591.1	17,500.4	57,157.8
Net inventory changes	152.6	80.8	0.0	9.6	36.7	227.0
Deliveries to other purchasers	0.0	0.0	0.0	0.0	0.0	448.0
Losses and adjustments	0.0	0.0	0.0	-97.6	780.9	-2,813.0
Total disposition	16,587.3	629.0	218.0	650.8	24,448.2	89,885.1

See footnotes at the end of the table.

Table 7-1 – continued

Supply and disposition of crude oil and equivalent by source, Canada — 2002

	British Columbia	Northwest Territories	Total Canadian sources	Total foreign sources	Total all sources
thousands of cubic metres					
Supply					
Domestic production:					
Crude oil					
Light and medium	2,423.7	1,376.0	51,771.3	0.0	51,771.3
Heavy	0.0	0.0	32,129.1	0.0	32,129.1
Synthetic crude oil	0.0	0.0	25,494.6	0.0	25,494.6
Crude bitumen	0.0	0.0	17,481.6	0.0	17,481.6
Less returned to formation	0.0	0.0	0.0	0.0	0.0
Total	2,423.7	1,376.0	126,876.6	0.0	126,876.6
Condensate	119.8	0.0	1,196.9	0.0	1,196.9
Pentanes plus	543.8	88.1	8,896.3	0.0	8,896.3
Net withdrawals	3,087.3	1,464.1	136,969.8	0.0	136,969.8
Imports	0.0	0.0	0.0	51,073.4	51,073.4
Total supply	3,087.3	1,464.1	136,969.8	51,073.4	188,043.2
Disposition					
Deliveries to refineries:					
Atlantic provinces	0.0	0.0	2,943.3	20,185.0	23,128.3
Quebec	0.0	0.0	1,529.4	21,331.8	22,861.2
Ontario	0.0	1,462.2	17,443.2	9,556.6	26,999.8
Manitoba	0.0	0.0	0.0	0.0	0.0
Saskatchewan	0.0	0.0	3,566.7	0.0	3,566.7
Alberta	1,710.8	0.0	24,442.1	0.0	24,442.1
British Columbia	1,092.5	0.0	3,175.2	0.0	3,175.2
Northwest Territories	0.0	0.0	0.0	0.0	0.0
Total	2,803.3	1,462.2	53,099.9	51,073.4	104,173.3
Export to United States					
Petroleum administration					
East Coast	0.0	0.0	9,086.9	0.0	9,086.9
Midwest	158.0	0.0	49,802.7	0.0	49,802.7
Gulf Coast	0.0	0.0	4,022.0	0.0	4,022.0
Rocky Mountains	0.0	0.0	18,653.1	0.0	18,653.1
West Coast	0.0	0.0	3,197.5	0.0	3,197.5
Total United States	158.0	0.0	84,762.2	0.0	84,762.2
Other countries	0.0	0.0	154.8	0.0	154.8
Total exports	158.0	0.0	84,917.0	0.0	84,917.0
Net inventory changes	5.9	1.8	514.4	-12.1	502.3
Deliveries to other purchasers	0.0	0.0	448.0	0.0	448.0
Losses and adjustments	120.1	0.1	-2,009.5	12.1	-1,997.4
Total disposition	3,087.3	1,464.1	136,969.8	51,073.4	188,043.2

1. Total supply excludes volume of upgraded crude oil.

Note(s): This table is not restricted to NAICS 211; it includes certain statistics of Petroleum refineries (NAICS 324) and of Oil Pipeline Transport (NAICS 4861).

Table 7-2
Supply and disposition of crude oil and equivalent by source, Canada — 2003

	Offshore Newfoundland	Offshore Nova Scotia	Ontario	Manitoba	Saskat. ¹ chewan	Alberta
thousands of cubic metres						
Supply						
Domestic production:						
Crude oil						
Light and medium	19,550.0	0.0	195.2	633.0	5,084.9	24,019.3
Heavy	0.0	0.0	0.0	0.0	19,246.5	12,508.6
Synthetic crude oil	0.0	0.0	0.0	0.0	0.0	25,028.8
Crude bitumen	0.0	0.0	0.0	0.0	0.0	25,029.0
Less returned to formation	0.0	0.0	0.0	0.0	0.0	0.0
Total	19,550.0	0.0	195.2	633.0	24,331.4	86,585.7
Condensate	0.0	549.3	0.0	0.0	0.0	486.8
Pentanes plus	0.0	0.0	0.0	0.0	29.0	8,238.9
Net withdrawals	19,550.0	549.3	195.2	633.0	24,360.4	95,311.4
Imports	...	...	...	...	...	...
Total supply	19,550.0	549.3	195.2	633.0	24,360.4	95,311.4
Disposition						
Deliveries to refineries:						
Atlantic provinces	3,781.4	0.0	0.0	0.0	0.0	0.0
Quebec	2,784.6	0.0	0.0	0.0	0.0	0.0
Ontario	3,217.4	0.0	195.2	28.0	1,982.4	9,386.6
Manitoba	0.0	0.0	0.0	0.0	0.0	0.0
Saskatchewan	0.0	0.0	0.0	0.0	2,753.5	1,693.6
Alberta	0.0	0.0	0.0	0.0	736.2	20,707.5
British Columbia	0.0	0.0	0.0	0.0	0.0	1,959.4
Northwest Territories	0.0	0.0	0.0	0.0	0.0	0.0
Total	9,783.4	0.0	195.2	28.0	5,472.1	33,747.1
Export to United States						
Petroleum administration						
East Coast	7,045.8	103.3	0.0	6.9	1,835.4	1,701.0
Midwest	205.8	0.0	0.0	687.5	17,008.2	34,614.0
Gulf Coast	2,514.5	98.1	0.0	0.0	0.0	218.1
Rocky Mountains	0.0	0.0	0.0	0.0	416.2	18,650.4
West Coast	0.0	0.0	0.0	0.0	0.0	3,883.7
Total United States	9,766.1	201.4	0.0	694.4	19,259.8	59,067.2
Other countries	87.9	0.0	0.0	0.0	0.0	298.8
Total exports	9,854.0	201.4	0.0	694.4	19,259.8	59,366.0
Net inventory changes	-87.4	347.9	0.0	0.4	152.6	644.3
Deliveries to other purchasers	0.0	0.0	0.0	0.0	0.0	0.0
Losses and adjustments	0.0	0.0	0.0	-89.8	-524.1	1,554.0
Total disposition	19,550.0	549.3	195.2	633.0	24,360.4	95,311.4

See footnotes at the end of the table.

Table 7-2 – continued

Supply and disposition of crude oil and equivalent by source, Canada — 2003

	British Columbia	Northwest Territories	Total Canadian sources	Total foreign sources	Total all sources
thousands of cubic metres					
Supply					
Domestic production:					
Crude oil					
Light and medium	2,168.2	1,284.3	52,934.9	0.0	52,934.9
Heavy	0.0	0.0	31,755.1	0.0	31,755.1
Synthetic crude oil	0.0	0.0	25,028.8	0.0	25,028.8
Crude bitumen	0.0	0.0	25,029.0	0.0	25,029.0
Less returned to formation	0.0	0.0	0.0	0.0	0.0
Total	2,168.2	1,284.3	134,747.8	0.0	134,747.8
Condensate	144.7	0.0	1,180.8	0.0	1,180.8
Pentanes plus	526.7	90.0	8,884.6	0.0	8,884.6
Net withdrawals	2,839.6	1,374.3	144,813.2	0.0	144,813.2
Imports	0.0	0.0	0.0	52,652.6	52,652.6
Total supply	2,839.6	1,374.3	144,813.2	52,652.6	197,465.8
Disposition					
Deliveries to refineries:					
Atlantic provinces	0.0	0.0	3,781.4	20,878.3	24,659.7
Quebec	0.0	0.0	2,784.6	21,189.0	23,973.6
Ontario	0.0	1,343.7	16,153.3	10,585.3	26,738.6
Manitoba	0.0	0.0	0.0	0.0	0.0
Saskatchewan	0.0	0.0	4,447.1	0.0	4,447.1
Alberta	1,331.7	0.0	22,775.4	0.0	22,775.4
British Columbia	1,341.3	0.0	3,300.7	0.0	3,300.7
Northwest Territories	0.0	0.0	0.0	0.0	0.0
Total	2,673.0	1,343.7	53,242.5	52,652.6	105,895.1
Export to United States					
Petroleum administration					
East Coast	0.0	0.0	10,692.4	0.0	10,692.4
Midwest	71.1	0.0	52,586.6	0.0	52,586.6
Gulf Coast	0.0	0.0	2,830.7	0.0	2,830.7
Rocky Mountains	0.0	0.0	19,066.6	0.0	19,066.6
West Coast	65.7	0.0	3,949.4	0.0	3,949.4
Total United States	136.8	0.0	89,125.7	0.0	89,125.7
Other countries	0.0	0.0	386.7	0.0	386.7
Total exports	136.8	0.0	89,512.4	0.0	89,512.4
Net inventory changes	-36.0	0.8	1,022.6	0.0	1,022.6
Deliveries to other purchasers	0.0	0.0	0.0	0.0	0.0
Losses and adjustments	65.8	29.8	1,035.7	0.0	1,035.7
Total disposition	2,839.6	1,374.3	144,813.2	52,652.6	197,465.8

1. Total supply excludes volume of upgraded crude oil.

Note(s): This table is not restricted to NAICS 211; it includes certain statistics of Petroleum refineries (NAICS 324) and of Oil Pipeline Transport (NAICS 4861).

Table 8-1
Supply and disposition of natural gas, by source, Canada — 2002

	Newfoundland and Labrador	Nova Scotia	Ontario	Saskat- chewan	Alberta	British Columbia
millions of cubic metres at 101.325 kPa and 15°C.						
Field and processing plants						
Supply						
Gross new production	3,328.2	5,474.9	369.6	8,278.4	170,019.1	31,431.8
Less field flared and waste	563.8	3.6	0.0	439.1	1,062.6	107.9
Net new production	2,764.4	5,471.3	369.6	7,839.3	168,956.5	31,323.9
Reproduced	0.0	0.0	0.0	0.0	0.0	0.0
Less injected and stored	2,529.3	0.0	0.0	0.0	9,928.4	4.0
Net withdrawals	235.1	5,471.3	369.6	7,839.3	159,028.1	31,319.9
Disposition						
Field disposition and uses	235.1	11.1	0.0	912.1	3,364.4	895.2
Gathering system disposition and uses	0.0	0.0	0.0	371.9	3,647.3	0.0
Processing plant disposition and uses						
Processing and re-processing shrinkage	0.0	404.9	0.0	70.0	15,120.8	2,217.9
Other disposition and uses	0.0	0.0	0.0	83.2	5,192.6	831.5
Other uses	0.0	0.0	0.0	0.0	0.0	0.0
Adjustment	0.0	-154.0	0.0	98.9	373.2	-410.0
Deliveries of marketable gas to transport and distribution systems	0.0	5,209.3	369.6	6,303.2	131,329.8	27,785.3
Total disposition	235.1	5,471.3	369.6	7,839.3	159,028.1	31,319.9
Gas utilities						
Supply						
Total marketable gas	0.0	5,209.3	369.6	6,303.2	131,329.8	27,785.3
Receipts from distributor storage	0.0	0.0	0.0	796.0	21,296.7	1,919.2
Imports	0.0	0.0	0.0	0.0	0.0	0.0
Other receipts ¹	0.0	0.0	0.0	0.0	0.0	0.0
Total supply of marketable gas	0.0	5,209.3	369.6	7,099.2	152,626.5	29,704.5
Disposition						
Utility sales (excluding direct sales)						
British Columbia	0.0	0.0	0.0	0.0	544.6	2,022.1
Alberta	0.0	0.0	0.0	0.0	16,424.0	5,382.0
Saskatchewan	0.0	0.0	0.0	1,777.5	0.0	0.0
Manitoba	0.0	0.0	0.0	0.0	1,386.0	0.0
Ontario	0.0	0.0	369.6	2,715.2	10,680.8	1,144.3
Quebec	0.0	0.0	0.0	0.0	4,124.4	0.0
New Brunswick	0.0	0.0	0.0	0.0	0.0	0.0
Northwest Territories	0.0	0.0	0.0	0.0	0.0	0.0
Total utility sales	0.0	0.0	369.6	4,492.7	33,159.8	8,548.4
Exports	0.0	4,220.3	0.0	16.1	91,567.2	11,924.8
Direct sales ^{2, 3}	0.0	1,008.0	0.0	1,107.0	16,728.3	3,693.4
Delivered to distributor storage	0.0	0.0	0.0	1,139.1	8,609.2	4,454.6
Line pack fluctuation	0.0	-24.8	0.0	1.7	-196.7	-1.9
Pipeline fuel	0.0	0.0	0.0	77.3	4,955.8	542.5
Pipeline losses and unaccounted volumes	0.0	5.8	0.0	265.3	-2,197.1	542.7
Total disposition of marketable gas	0.0	5,209.3	369.6	7,099.2	152,626.5	29,704.5

See footnotes at the end of the table.

Table 8-1 – continued

Supply and disposition of natural gas, by source, Canada — 2002

	Yukon	Northwest Territories	Total Canadian sources	Total foreign sources	Total all sources
millions of cubic metres at 101.325 kPa and 15°C.					
Field and processing plants					
Supply					
Gross new production	370.0	1,197.0	220,469.0	0.0	220,469.0
Less field flared and waste	1.9	4.8	2,183.7	0.0	2,183.7
Net new production	368.1	1,192.2	218,285.3	0.0	218,285.3
Reproduced	0.0	0.0	0.0	0.0	0.0
Less injected and stored	0.0	0.0	12,461.7	0.0	12,461.7
Net withdrawals	368.1	1,192.2	205,823.6	0.0	205,823.6
Disposition					
Field disposition and uses	0.0	0.0	5,417.9	0.0	5,417.9
Gathering system disposition and uses	0.0	0.0	4,019.2	0.0	4,019.2
Processing plant disposition and uses					
Processing and re-processing shrinkage	61.5	173.7	18,048.8	0.0	18,048.8
Other disposition and uses	19.3	105.8	6,232.4	0.0	6,232.4
Other uses	0.0	0.0	0.0	0.0	0.0
Adjustment	0.0	0.0	-91.9	0.0	-91.9
Deliveries of marketable gas to transport and distribution systems	287.3	912.7	172,197.2	0.0	172,197.2
Total disposition	368.1	1,192.2	205,823.6	0.0	205,823.6
Gas utilities					
Supply					
Total marketable gas	287.3	912.7	172,197.2	0.0	172,197.2
Receipts from distributor storage	0.0	0.0	24,011.9	0.0	24,011.9
Imports	0.0	0.0	0.0	6,604.1	6,604.1
Other receipts ¹	0.0	0.0	0.0	0.0	0.0
Total supply of marketable gas	287.3	912.7	196,209.1	6,604.1	202,813.2
Disposition					
Utility sales (excluding direct sales)					
British Columbia	287.3	830.5	3,684.5	0.0	3,684.5
Alberta	0.0	0.0	21,806.0	0.0	21,806.0
Saskatchewan	0.0	0.0	1,777.5	0.0	1,777.5
Manitoba	0.0	0.0	1,386.0	0.0	1,386.0
Ontario	0.0	0.0	14,909.9	0.0	14,909.9
Quebec	0.0	0.0	4,124.4	0.0	4,124.4
New Brunswick	0.0	0.0	0.0	0.0	0.0
Northwest Territories	0.0	82.2	82.2	0.0	82.2
Total utility sales	287.3	912.7	47,770.5	0.0	47,770.5
Exports	0.0	0.0	107,728.4	0.0	107,728.4
Direct sales ^{2, 3}	0.0	0.0	22,536.7	0.0	22,536.7
Delivered to distributor storage	0.0	0.0	14,202.9	6,604.1	20,807.0
Line pack fluctuation	0.0	0.0	-221.7	0.0	-221.7
Pipeline fuel	0.0	0.0	5,575.6	0.0	5,575.6
Pipeline losses and unaccounted volumes	0.0	0.0	-1,383.3	0.0	-1,383.3
Total disposition of marketable gas	287.3	912.7	196,209.1	6,604.1	202,813.2

1. Liquefied petroleum gas for gas enrichment, peak shaving or temporary supply.

2. Direct deliveries for industrial consumption and miscellaneous utility deliveries.

3. Data presented for Alberta as direct sales are intended to represent direct sales volumes actually consumed in the provinces of Saskatchewan, Manitoba, Ontario, and Quebec. Spacing constraints within the table does not allow for the allocation by province.

Note(s): This table is not restricted to NAICS 211; it includes certain statistics of Gas Distribution (NAICS 2212) and of Pipeline Transport (NAICS 4862).

Table 8-2
Supply and disposition of natural gas, by source, Canada — 2003

	Newfoundland and Labrador	Nova Scotia	Ontario	Saskat- chewan	Alberta	British Columbia
millions of cubic metres at 101.325 kPa and 15°C.						
Field and processing plants						
Supply						
Gross new production	3,913.6	4,665.8	295.7	9,030.5	166,671.8	29,627.4
Less field flared and waste	352.0	3.6	0.0	489.3	1,171.5	144.0
Net new production	3,561.6	4,662.2	295.7	8,541.2	165,500.3	29,483.4
Reproduced	0.0	0.0	0.0	0.0	0.0	0.0
Less injected and stored	3,280.6	0.0	0.0	0.0	9,100.4	0.0
Net withdrawals	281.0	4,662.2	295.7	8,541.2	156,399.9	29,483.4
Disposition						
Field disposition and uses	281.0	0.0	0.0	1,013.5	3,970.0	945.8
Gathering system disposition and uses	0.0	10.3	0.0	412.5	4,302.1	0.0
Processing plant disposition and uses						
Processing and re-processing shrinkage	0.0	404.4	0.0	76.8	15,394.6	2,095.3
Other disposition and uses	0.0	0.0	0.0	90.9	6,115.2	954.4
Other uses	0.0	0.0	0.0	0.0	0.0	0.0
Adjustment	0.0	-222.0	0.0	-42.6	-1,588.3	-329.7
Deliveries of marketable gas to transport and distribution systems	0.0	4,469.5	295.7	6,990.1	128,206.3	25,817.6
Total disposition	281.0	4,662.2	295.7	8,541.2	156,399.9	29,483.4
Gas utilities						
Supply						
Total marketable gas	0.0	4,469.5	295.7	6,990.1	128,206.3	25,817.6
Receipts from distributor storage	0.0	0.0	0.0	863.6	28,181.5	1,181.2
Imports	0.0	0.0	0.0	0.0	0.0	0.0
Other receipts ¹	0.0	0.0	0.0	0.0	0.0	0.0
Total supply of marketable gas	0.0	4,469.5	295.7	7,853.7	156,387.8	26,998.8
Disposition						
Utility sales (excluding direct sales)						
British Columbia	0.0	0.0	0.0	0.0	287.1	2,294.2
Alberta	0.0	0.0	0.0	0.0	19,206.9	4,837.5
Saskatchewan	0.0	0.0	0.0	1,725.5	0.0	0.0
Manitoba	0.0	0.0	0.0	0.0	1,372.9	0.0
Ontario	0.0	0.0	295.7	2,408.4	11,679.9	1,530.7
Quebec	0.0	0.0	0.0	0.0	4,103.8	0.0
New Brunswick	0.0	0.0	0.0	0.0	0.0	0.0
Northwest Territories	0.0	0.0	0.0	0.0	0.0	0.0
Total utility sales	0.0	0.0	295.7	4,133.9	36,650.6	8,662.4
Exports	0.0	3,814.1	0.0	7.9	85,979.1	11,671.3
Direct sales ^{2, 3}	0.0	631.0	0.0	2,454.9	15,634.1	3,426.2
Delivered to distributor storage	0.0	0.0	0.0	662.1	13,157.8	2,163.5
Line pack fluctuation	0.0	10.7	0.0	0.1	-267.9	22.2
Pipeline fuel	0.0	6.1	0.0	70.5	4,121.1	450.4
Pipeline losses and unaccounted volumes	0.0	7.6	0.0	524.3	1,113.0	602.8
Total disposition of marketable gas	0.0	4,469.5	295.7	7,853.7	156,387.8	26,998.8

See footnotes at the end of the table.

Table 8-2 – continued

Supply and disposition of natural gas, by source, Canada — 2003

	Yukon	Northwest Territories	Total Canadian sources	Total foreign sources	Total all sources
millions of cubic metres at 101.325 kPa and 15°C.					
Field and processing plants					
Supply					
Gross new production	255.2	990.2	215,450.2	...	215,450.2
Less field flared and waste	1.2	5.8	2,167.4	...	2,167.4
Net new production	254.0	984.4	213,282.8	...	213,282.8
Reproduced	0.0	0.0	0.0	...	0.0
Less injected and stored	0.0	0.0	12,381.0	...	12,381.0
Net withdrawals	254.0	984.4	200,901.8	...	200,901.8
Disposition					
Field disposition and uses	0.0	0.0	6,210.3	...	6,210.3
Gathering system disposition and uses	0.0	0.0	4,724.9	...	4,724.9
Processing plant disposition and uses					
Processing and re-processing shrinkage	43.3	143.5	18,157.9	...	18,157.9
Other disposition and uses	10.8	89.4	7,260.7	...	7,260.7
Other uses	0.0	0.0	0.0	...	0.0
Adjustment	0.0	0.0	-2,182.6	...	-2,182.6
Deliveries of marketable gas to transport and distribution systems	199.9	751.5	166,730.6	...	166,730.6
Total disposition	254.0	984.4	200,901.8	...	200,901.8
Gas utilities					
Supply					
Total marketable gas	199.9	751.5	166,730.6	...	166,730.6
Receipts from distributor storage	0.0	0.0	30,226.3	0.0	30,226.3
Imports	0.0	0.0	0.0	9,680.4	9,680.4
Other receipts ¹	0.0	0.0	0.0	0.0	0.0
Total supply of marketable gas	199.9	751.5	196,956.9	9,680.4	206,637.3
Disposition					
Utility sales (excluding direct sales)					
British Columbia	199.9	677.4	3,458.6	0.0	3,458.6
Alberta	0.0	0.0	24,044.4	0.0	24,044.4
Saskatchewan	0.0	0.0	1,725.5	0.0	1,725.5
Manitoba	0.0	0.0	1,372.9	0.0	1,372.9
Ontario	0.0	0.0	15,914.7	0.0	15,914.7
Quebec	0.0	0.0	4,103.8	0.0	4,103.8
New Brunswick	0.0	0.0	0.0	0.0	0.0
Northwest Territories	0.0	74.1	74.1	0.0	74.1
Total utility sales	199.9	751.5	50,694.0	0.0	50,694.0
Exports	0.0	0.0	101,472.4	0.0	101,472.4
Direct sales ^{2, 3}	0.0	0.0	22,146.2	0.0	22,146.2
Delivered to distributor storage	0.0	0.0	15,983.4	9,680.4	25,663.8
Line pack fluctuation	0.0	0.0	-234.9	0.0	-234.9
Pipeline fuel	0.0	0.0	4,648.1	0.0	4,648.1
Pipeline losses and unaccounted volumes	0.0	0.0	2,247.7	0.0	2,247.7
Total disposition of marketable gas	199.9	751.5	196,956.9	9,680.4	206,637.3

1. Liquefied petroleum gas for gas enrichment, peak shaving or temporary supply.

2. Direct deliveries for industrial consumption and miscellaneous utility deliveries.

3. Data presented for Alberta as direct sales are intended to represent direct sales volumes actually consumed in the provinces of Saskatchewan, Manitoba, Ontario, and Quebec. Spacing constraints within the table does not allow for the allocation by province.

Note(s): This table is not restricted to NAICS 211; it includes certain statistics of Gas Distribution (NAICS 2212) and of Pipeline Transport (NAICS 4862).

Table 9
Total sales of natural gas, by province

	Gas Utility Sales ¹				Direct ² sales	Total sales
	Residential	Commercial	Industrial	Total		
millions of cubic metres						
2003						
Nova Scotia	0.0	0.0	0.0	0.0	55.1	55.1
New Brunswick	0.0	0.0	0.0	0.0	575.8	575.8
Quebec	737.5	1,953.6	1,412.8	4,103.9	1,496.4	5,600.3
Ontario	9,133.0	5,901.5	935.0	15,969.5	11,939.0	27,908.5
Manitoba	577.2	701.8	93.8	1,372.8	782.2	2,155.0
Saskatchewan	985.6	726.8	13.0	1,725.4	3,982.9	5,708.3
Alberta	4,289.6	2,907.0	16,847.5	24,044.1	0.0	24,044.1
British Columbia	1,987.4	1,279.2	192.0	3,458.6	3,337.0	6,795.6
Canada	17,710.3	13,469.9	19,494.1	50,674.3	22,168.4	72,842.7
2002						
Nova Scotia	0.0	0.0	0.0	0.0	543.9	543.9
New Brunswick	0.0	0.0	0.0	0.0	464.1	464.1
Quebec	685.8	1,863.1	1,575.6	4,124.5	1,704.5	5,829.0
Ontario	8,391.4	5,683.4	835.0	14,909.8	11,927.4	26,837.2
Manitoba	593.5	722.7	69.8	1,386.0	837.6	2,223.6
Saskatchewan	989.8	773.5	14.2	1,777.5	3,365.2	5,142.7
Alberta	4,245.0	2,687.7	14,873.3	21,806.0	0.0	21,806.0
British Columbia	2,096.9	1,367.0	218.7	3,682.6	3,694.0	7,376.6
Canada	17,002.4	13,097.4	17,586.6	47,686.4	22,536.7	70,223.1

1. Represents sales of natural gas by natural gas utilities.

2. Represents direct, non-utility sales of natural gas.

Table 10
Reconciliation table – Saskatchewan value of crude oil production, 2003

	Value
	thousands of dollars
Marketable production of Saskatchewan conventional crude oil – Table 5 ¹	4,949,932
Add: Value of sales of upgraded crude oil ²	1,013,000
Total value of marketable production of Saskatchewan crude oil ³	5,962,932

1. Represents value of marketable conventional crude oil as published by Saskatchewan Industry and Resources.

2. Represents estimate of value of sales of Saskatchewan upgraded crude oil.

3. Represents the value of Saskatchewan crude oil, including upgraded crude oil. This valuation is consistent with NAICS based industry statistics as published by the System of National Accounts, Input-Output Division.

Data quality and methodology

This publication presents data on the Crude Petroleum and Natural Gas Industry (NAICS 211 of the North American Industry Classification System, catalogue no.12-501-X). This industry includes establishments primarily engaged in exploration for and/or production of petroleum or natural gas from wells or tar sands, and natural gas plants processing the natural gas. In this publication, the oil sands industry is excluded from the tables which present principal statistics and labour data. However, the operating and capital expenditures of the oil sands industry are shown in text table 1 and the synthetic crude produced is included in commodity tables 4, 5 and 6.

Data presented in this publication on the supply and disposition of crude oil and equivalents and natural gas are compiled from information provided by agencies or departments of the provinces and territories responsible for the regulation of crude oil and natural gas production. As a result, 100% of oil and natural gas production by conventional or other means, whether offshore or on land, is accounted for.

Data on operating and capital expenditures are compiled from an annual survey of approximately 500 companies engaged in oil and natural gas exploration, development and production. Companies with annual capital expenditures of less than \$50,000 are excluded from the survey. The response rate for the survey is very high — over 95%. As a consequence, minimal imputation is required and minimal bias resulting from non-response is introduced in these data.

Data on drilling completions and crude oil and natural gas reserves are obtained from the Canadian Association of Petroleum Producers (formerly Canadian Petroleum Association).

Data published in this publication are subject to a certain degree of error, be it in differences in the interpretation of the questions, or mistakes introduced during processing. Reasonable efforts are made to ensure these errors are kept within acceptable limits through careful questionnaire design, liaison with major respondents, editing of data for inconsistencies and subsequent follow-up and quality control of manual processing operations. Historically, experience has indicated that the data rarely contain a serious error.

Concepts

Establishments in the crude petroleum and natural gas industry explore for and produce crude petroleum, natural gas, propane, butanes, ethane, and sulphur, either directly from the fields or from processing plants. That is, the establishment boundary includes within it the facilities of the processing plants, the oil and gas fields, geological and geophysical exploration, and head office functions supporting such activities, and any other ancillary services as are required to maintain such exploration or producing programmes. Although a company may be engaged in all phases of the industry, it may not necessarily be engaged in all phases in anyone province. Refining and marketing activities of oil companies are not included in NAICS 211, but are coded to separate industries. It should also be carefully noted that the companies engaged in geological and geophysical consulting, or as contractors, are not included in the NAICS 211, Crude Petroleum and Natural Gas Industry.

In our statistical publications, expenditures of the industry are segregated between exploration, development, operating and royalties. The primary purpose of this publication is to make available operational type data, while the basic statistics on capital expenditures are published by the Investment and Capital Stock Division in **Private and Public Investment in Canada** (catalogue no. 61-205-X).

Producing activity is defined as activity in which capital and operating expenditures are made by the establishment for the purpose of producing crude petroleum and natural gas. This includes expenditures on gas processing and re-processing plants and production facilities.

Total activity includes the producing activity plus an extension of the data for other non-producing activities in which the establishment might be engaged. Generally speaking, these are the geological and geophysical activities plus capital additions produced by own labour force for own use and charged to Fixed Assets Accounts.

Periodically, Statistics Canada, undertakes a special survey of the exploration, and production activities of 25 major oil and gas companies operating in Canada. Detailed data are collected from these selected companies for each operating and capital function, breaking the expenditures down into salaries and wages, materials and supplies and payments to contractors. These breakdowns of expenditures are considered as representative of the industry, and the total expenditures collected from all respondents in the annual survey are broken down in the same proportion as indicated by the special survey.

Definitions

Production and expenditures

Gross new production: All new production as measured at the first well head metering point.

Net new production: "Gross new production" after the deduction of flared field production. It is the production that is available for further processing, sale, storage and field uses.

Production net withdrawals: "Net new production" plus reproduction from field storage, less the amount of gas or oil that is reinjected into field pools or storage.

Marketable production: The production of gas, oil, propane, butanes, ethane and pentanes which are produced and available for market; in other words, the production of natural gas products produced by gas processing plants after processing and reprocessing plant uses, losses and shrinkage, the sales of natural gas from dry gas fields after field use, losses, reinjection or the production for sale of crude oil after field use and losses, reinjection but before inventory changes.

Crude oil: A mixture mainly of pentanes and heavier hydrocarbons that may be contaminated with sulphur compounds, that is recovered or is recoverable at a well from an underground reservoir and that is liquid at the conditions under which its volume is measured or estimated. It includes all other hydrocarbon mixtures so recovered or recoverable except raw gas or condensate.

Conventional crude oil: Crude oil recoverable from a well using standard production methods.

Heavy crude oil: Oil with high viscosity, recoverable only to a very limited extent by using standard production methods.

Synthetic crude oil: A mixture of mainly pentanes and heavier hydrocarbons that may contain sulphur compounds, that is derived from crude bitumen and that is liquid at the conditions under which its volume is measured or estimated, and includes all other hydrocarbon mixtures so derived.

Crude bitumen: A naturally occurring viscous mixture, mainly of hydrocarbons heavier than pentane, that may contain sulphur compounds and that, in its naturally occurring viscous state, will not flow to a well.

Condensate: A mixture of mainly pentanes and heavier hydrocarbons that may be contaminated with sulphur compounds, that is recoverable at a well from an underground reservoir and that is gaseous in its virgin reservoir state but is liquid at the conditions under which its volume is measured or estimated.

Pentanes plus: A mixture of mainly pentanes and heavier hydrocarbons which ordinarily may contain some butanes and which is obtained from the processing of raw gas, condensate or crude oil.

In-Situ recovery: Refers to recovery methods applicable in heavy oil and oil sands formations without the removal of conglomerates from the location.

Oil sands: Deposits of sands and clays (excluding oil shales) heavily impregnated with semi-solid or solid bitumen, also known as tar sands. Athabasca, Peace River, Wabasca, Cold Lake and Buffalo Head Hills are the main Canadian resource areas.

Natural gas: A mix of hydrocarbon compounds and small quantities of various non-hydrocarbons existing in a gaseous phase or in solution with crude oil at reservoir conditions.

Natural gas liquids (NGL): That portion of reservoir gas which is liquefied at the surface in lease separators, field facilities, or gas processing plants. Includes ethane, propane, butanes and pentanes.

Propane: In addition to its normal scientific meaning, a mixture mainly of propane which ordinarily may contain some ethane or butanes.

Butanes: In addition to its normal scientific meaning, a mixture mainly of butanes which ordinarily may contain some propane or pentanes plus.

Ethane: In addition to its normal scientific meaning, a mixture mainly of ethane which ordinarily may contain some methane or propane.

Upstream segment: Activities and operations related to the search for, development, production, extraction and recovery of crude oil, natural gas, natural gas liquids and sulphur, as well as the production of synthetic oil.

Downstream segment: Includes refining and marketing, transportation and petrochemical operations.

Geological and geophysical (G&G) expenses: Costs associated with the undertaking of geological and geophysical studies, including salaries and supplies for geologists and geophysical crews as well as outlays for equipment and rights of access.

Exploration costs: Costs associated with the search for oil or natural gas deposits, including all lease fees and land acquisition costs, geological and geophysical expenditures, and exploratory drilling costs whether capitalized or expensed. Exploratory drilling is generally defined as the drilling of a well outside a proven area, or within a proven area but in a previously untested zone, to determine whether oil or gas reserves exist. Also included are costs of dry wells, casing and other materials and equipment abandoned in place.

Production expenditures: All spending related to the production of crude oil and natural gas, including expenditures on natural gas processing plants.

Gas utilities

Total marketable gas: Receipt of gas from fields, processing or reprocessing plants after re-injection, field uses, processing plant or reprocessing plant shrinkage, plant use losses have been deducted.

Imports: Receipts of gas, by pipeline, into Canada.

Other receipts: Includes liquified petroleum gases for peak shaving and receipts from non-reporting companies.

Exports: Export of gas, by pipeline, to the United States.

Direct sales: Represents direct, non-utility delivery for consumption.

Drilling completions

New field wildcat: A new field wildcat is a test located on a structural feature or other type of trap which has not previously produced oil or gas. In regions where local geological conditions have little or no control over accumulations, these tests are generally at least three kilometres from the nearest productive area. Distance, however, is not the determining factor. Of greater importance is the degree of risk assumed by the operator, and his intention to test a structure or stratigraphic condition not previously proved productive.

New pool wildcat: A new pool wildcat is a test located to explore for a new pool on a structural feature of other type of trap already producing oil or gas, but outside the known limits of the presently producing area. In some regions where local geological conditions exert an almost negligible control, exploratory holes of this type may be called "near wildcats". Such wells will usually be less than three kilometres from the nearest productive area.

Deeper pool test: A deeper pool test is an exploratory hole located within the productive area of a pool, or pools, already partly or wholly developed. It is drilled below the deepest productive pool in order to explore for deeper unknown prospects. All metres drilled are assigned to the exploratory category. This practise was adopted commencing with the 1979 data. Previously, metres drilled were split between the exploratory and development category.

Shallower pool test: A shallower pool test is an exploratory test drilled in search of a new productive reservoir, unknown but possibly suspected from data secured from other wells, and shallower than known productive pools. This test is located within the productive area of a pool or pools previously developed.

Outposts: An outpost is a test located and drilled with the expectation of extending for a considerable distance the productive area of a partly developed pool. It is usually two or more locations distant from the nearest productive site.

Development well: A development well is a well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive. If the well is completed for production, it is classified as an oil or gas development well. If the well is not completed for production and is abandoned, it is classified as a dry development hole.

Stratigraphic test: A stratigraphic test is a drilling effort, geologically directed, to obtain information pertaining to a specific geological condition that might lead toward the discovery of an accumulation of hydrocarbons. Such tests are customarily drilled without the intention of being completed for hydrocarbon production. This classification also includes tests identified as score tests and all types of expendable holes related to hydrocarbon exploration.

Service well: A service well is a well drilled or completed for the purpose of supporting production in an existing field. Wells of this class are drilled for the following specific purposes: Gas injection (natural gas, propane, butane), water injection, air injection, steam injection, salt water disposal, water supply for injection, observation, injection for in situ combustion.

Miscellaneous wells: This classification includes storage wells (natural gas, propane, butane), salt brine wells and other wells not classified under categories above.

Project wells: A project well is a well drilled within a designated oil sands area or like deposit for the purpose of producing raw bitumen from the deposit. Such wells may be drilled for pilot, experimental or commercial projects.

Reserves

Established reserves: Those reserves recoverable under current technology and present and anticipated economic conditions, specifically proved by drilling, testing or production, plus that judgement portion of contiguous recoverable reserves that are interpreted to exist, from geological, geophysical or similar information, with reasonable certainty.

Value added

By production activities: Is defined as the value of marketable production less materials and supplies purchased and fuel and electricity consumed in the production of hydrocarbons and sulphur.

Components of value added — Producing activity

Electricity: Data refer to amounts purchased and used, with costs being delivered costs at plant and/or field. Electricity produced by establishments for internal consumption is not included in electricity purchases.

Shipments: The quantity and value of the marketable production that has actually been shipped. The differences between shipments and marketable production are inventory changes which may occur because a company may produce and accumulate or draw down inventories.

Materials and supplies used in producing activities: Data provided in table 6 represent quantities at laid down cost to the establishment of materials, supplies, chemicals, explosives and components consumed during the year in producing activities. In the oil and gas industry it is not practical to estimate the amount of materials that are used as fuel, since this amount represents only a small part of the total energy requirements of the industry and company accounting records do not provide this breakdown. For this reason the amount of fuel purchased and used is shown as a component of materials and supplies. The statistics represent only commodity items or physical goods (costs of

services or overhead charges such as advertising, insurance and depreciation are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Respondents were requested to report materials and supplies purchased and used. Included are repair and maintenance supplies not chargeable to fixed assets accounts. Also included is the cost of office supplies not chargeable to fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment operated cafeterias and lunch counters, first aid medical supplies, laboratory supplies and other general supplies and materials used.

Employment, person-hours, salaries and wages: Employees include salaried management, professional, technical and administrative personnel, plus production, field, plant and related workers, and relate both to producing and non-producing activities.

"Production and related workers" are reported as those receiving pay during the last pay period in the respective month. The numbers are somewhat affected by turnover, in that employment may be overstated when an employee changes employment in the middle of a pay period.

Man-hours of production and related workers in producing activities represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave and statutory holidays). In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in average hourly earnings and does not represent hourly wage rates which are collected and published by the Department of Labour.