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CANADA

# PETROLEUM REFINERIES

1961

The list of firms normally included in this report has been omitted from this issue, along with certain tables. See introductory text for details.

## ANNUAL CENSUS OF MANUFACTURES

*Published by Authority of*  
The Minister of Trade and Commerce

**DOMINION BUREAU OF STATISTICS**

Industry Division

November 1963  
6321-856

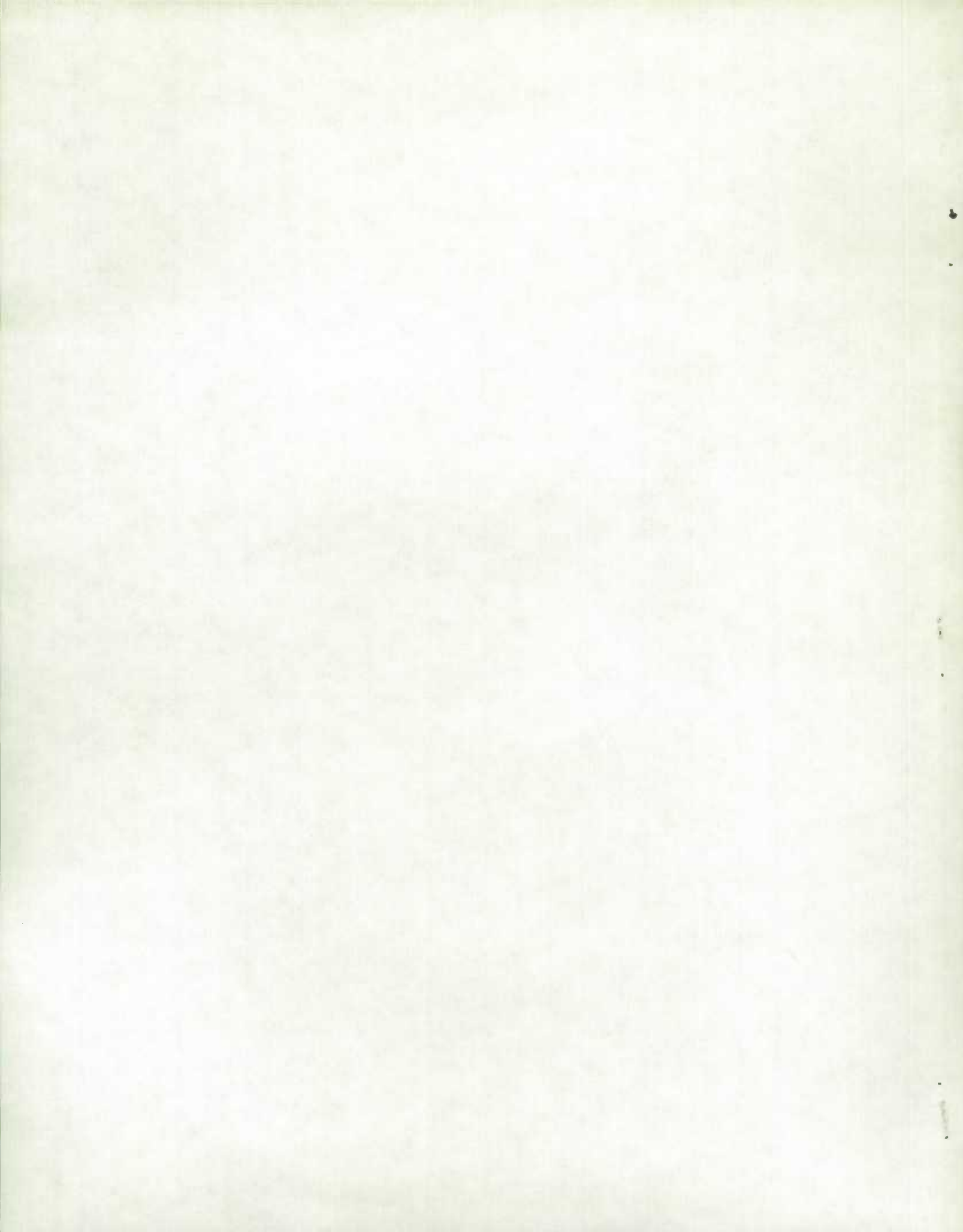
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### SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.



## EXPLANATORY NOTES

This report is one in a series of about 140 publications which present the results of the 1961 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and for major industry groups. Implementation of the new definition of the establishment in the 1961 Census has resulted in certain changes and necessitated some adjustments to the statistics for previous years in order to maintain comparability of the data. (See following note on "Establishment".)

Industry statistics given in these reports refer to number of establishments, employees, salaries and wages, cost of materials, supplies, fuel and electricity, gross value of shipments, inventories and value added by manufacturing. Details of materials used and products shipped are also given. Descriptions of the principal industry statistics, with special reference to 1961, are as follows:

### Period Covered

Firms are asked to submit figures for the calendar year, if at all possible, and most reports are on this basis. Financial year reports for periods differing from the calendar year are accepted in instances where the firms find it impossible to supply calendar year data from accounting records. However the data on employees, salaries and wages are requested on a calendar year basis in all cases.

### Establishment

The reporting unit in the Census of Manufactures is the **establishment**. Beginning with the 1961 Census, the establishment is defined as follows:

The smallest unit which is a separate operating entity capable of reporting all the following:

- Materials and supplies used,
- Goods purchased for resale as such,
- Fuel and power consumed,
- Number of employees and their pay,
- Inventories,
- Shipments or sales.

The establishment is to be distinguished from smaller subdivisions or departments which do not have records which permit them to report all items required of an establishment. Prior to 1961, some establishments were required to submit two or more separate reports when they were engaged in operations which were classifiable to different industries. Beginning with 1961, separate reports for such operations will be required only in cases where accounting records can provide all the elements of principal statistics enumerated above. Special reporting arrangements were made with respondents when the acceptance of combined reports would have seriously affected the statistics for particular industries or areas. Where continuity of industry statistics was affected by this change in reporting procedures, adjustments to the data were made back to 1957 in order to maintain comparability of the series for recent years.

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing operations. Prior to 1961, the Census of Manufactures attempted to cover the manufacturing activities of all establishments, whether or not they were principally engaged in manufacturing operations. Beginning with the 1961 Census, establishments (accounting entities) which are not primarily engaged in manufacturing are no longer included as manufacturing establishments in the basic industry statistics. Again adjustments to the industry statistics were made to reflect the removal of such reporting units for the period 1957-1960. These reporting units are now listed as establishments in other Bureau industry surveys, such as Wholesale Trade, Construction, etc. In order, however, to maintain complete coverage of certain commodity items produced mainly in manufacturing establishments, many non-manufacturing establishments are now surveyed for commodity shipments only and the latter are included in those tables of industry reports showing shipments of certain commodities "from all industries".

Many firms have more than one manufacturing establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements described earlier.

Prior to 1961, the main emphasis in the Census of Manufactures was on manufacturing activity whereas, beginning with 1961, each establishment reports on the total operations carried out within its accounting boundaries (except income from investments such as rent, interest and dividends). However, data on different activities (manufacturing, selling, construction by own labour force etc.) are requested separately. The 1961 statistics in this report are confined to manufacturing activity in order to maintain comparability with previous years. In the 1962 reports it is planned to show both 1961 and 1962 data on the "total activity" basis in addition to the data on manufacturing operations.

### Employees

Administrative and office employees include all executives and supervisory officials such as presidents, vice-presidents, secretaries, treasurers, etc., together with managers, professional and technical employees, superintendents and factory supervisors above the working foremen level, and clerical employees. Working owners and partners are also included in this category but will be shown separately in subsequent years.

Production and related workers include all other factory workmen whether paid on a monthly, weekly, hourly or piece-work basis. Working foremen doing work similar to that of the employees they supervise are included, as are maintenance, handling, warehousing and delivery staff. Employees on new construction work, in retail or wholesale operations, on outside piece work, etc, are not included.





Production workers are reported by months, an average for the year being obtained by summing the monthly figures and dividing by twelve. This procedure is followed even though the plant did not operate in all months. Figures on employment refer to the calendar year whether or not some establishments reported other data on a financial year basis.

### Salaries and Wages

Salaries and wages refer to gross earnings of the employees described above, including salaries, wages, commissions, bonuses, the value of room and board where provided, deductions for income tax and social services such as sickness and unemployment insurance, pensions, etc., as well as any other allowances forming part of the employees' wages. Payments for overtime are included.

Salaries refer to amounts paid to administrative and office employees. Withdrawals by working owners or partners for normal living expenses for self and family are included with salaries, but will be shown separately in subsequent years. Wages refer to the amounts paid to production and related workers as defined above. Data on earnings refer to the calendar year whether or not some establishments reported other data on a financial year basis.

### Cost of Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars and trucks), not to purchases unless the quantities are the same. Values refer to the laid-down cost at the establishment including freight, duty, etc.

### Materials and Supplies Used

Figures represent quantities and laid-down cost values, at the establishment, of materials, supplies and components actually used during the year whether purchased from others or received as transfers from other plants of the reporting company. Amounts paid to other manufacturers for work done on materials owned by the reporting company are included. Returnable containers or any other items charged to capital account are not included. Fuels are not included. Goods bought from others or received as transfers from other plants or reporting companies for resale without further processing are not included. Maintenance and repair supplies not chargeable to capital account are included.

### Factory Shipments

Factory shipments generally refer to shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishment for work done. All products and by-products shipped from the establishment are included whether for domestic use, export, or for government departments. Transfer shipments to sales outlets, distributing warehouses or to other manufacturing units of the reporting firm which are treated as separate establishments are included. Goods bought or received as transfers and resold without further processing are not included. Values are requested

on f.o.b. establishment basis, and do not include sales tax or excise duties. Values of containers not returnable are included. Amounts received in payment for work done on materials owned by others are included.

In a few industries such as shipbuilding, aircraft, etc., where work on principal products extend over a relatively long period, the value of production is recorded rather than the value of shipments. For those industries production is computed from the value of deliveries of complete units during the year plus the value of work done during the year on unfinished units less the value of work done in previous years on finished units delivered in the year under review.

### Inventories

Values represent the book value of manufacturing inventory. Figures consist of inventory at the plant and at warehouses or selling outlets which are treated as extensions of the plants for the purpose of reporting shipments.

### Value added by Manufacturing

Value added is compiled by deducting the cost of materials, fuel and electricity consumed from the value of production (value of shipments adjusted for changes in the value of inventories of finished goods and goods in process). Value added is sometimes referred to as net production.<sup>1</sup>

### Standard Industrial Classification

The revised Standard Industrial Classification which was introduced with the 1960 Census of Manufactures provides for a breakdown of the universe into 140 industries arranged in 20 major groups compared with 135 industries in 17 major groups in the old classification which was used in the compilations for the years 1949 to 1959 inclusive. Full details are contained in the Standard Industrial Classification Manual, Catalogue No. 12-501, which is available from either the Queen's Printer or the Dominion Bureau of Statistics. Reporting establishments are classified or allotted to specific industries on the basis of the value of principal products made or shipped.

Establishments engaged solely in repair work are not included in manufacturing industries (except in the case of furniture, shipbuilding, boat building, aircraft and railroad rolling stock industries) but establishments principally engaged in assembling parts into complete units are included.

<sup>1</sup> To arrive at the National Accounts concept of "gross domestic product at factor cost", it would be necessary to subtract also the cost of advertising, insurance and other business costs which are not collected in the annual Census of Manufactures. Value added figures for the primary industries, manufacturing and construction are published in D.B.S. publication 61-202, Survey of Production.





### Short Forms

Since 1949, in order to ease the reporting burden for smaller firms, a one-page short form has been used asking only for certain principal items of shipments. For purposes of publication, missing data were estimated on the basis of appropriate ratios. For the 1959 and 1960 censuses the general limit for short forms was raised from \$50,000 to \$100,000 value of shipments and a new intermediate form was used. This form is a shortened version of the long form in that some of the general questions were pared down and the detailed lists of materials and products were limited to the more important items. The general limits for firms in this category were set at between \$100,000-\$500,000 value of shipments, but in the case of both the short and inter-

mediate forms there are lower cut-offs for a number of industries in which the smaller firms account for a larger share of total shipments.

In the 1961 Census, in addition to the question on shipments of goods of own manufacture, questions on employment and payroll and on total revenue were added on all short forms. The other elements of principal statistics, viz. value of materials, fuel and electricity, and inventories, are generally estimated by using ratios based on the change in the value of shipments from year to year. This is to permit the complete compilation of basic industry statistics by industry and by geographic location. The proportion of the estimated data is generally less than 5 per cent of the total in each category of principal statistics.



# PETROLEUM REFINERIES

1961

Data presented in this report under the heading of Petroleum Refineries reflect implementation of the revised Standard Industrial Classification (S.I.C.) and the New Establishment Concept which are being used by the Dominion Bureau of Statistics in its compilation of 1961 industry statistics—see items "Standard Industrial Classification" and "Establishment" in the Explanatory Notes section of this report. For statistical purposes the industry titled Petroleum Refineries in the revised Standard Industrial Classification covers establishments primarily engaged in refining crude petroleum and in producing gasoline, fuel oils, lubricating oils, illuminating oils and other petroleum products. The industry also includes establishments primarily engaged in blending lubricating oils and greases which they have purchased. It might be noted that for purposes of presentation of statistics in this report recognition is being given to Petroleum Refining and to Manufacturers of Lubricating Oils and Greases as sub-classifications within this industry group. The former industry includes establishments primarily engaged in refining crude petroleum while the latter includes establishments primarily engaged in blending lubricating oils and greases which they have purchased.

**Note:** In addition to changes resulting from implementation of the new Standard Industrial Classification (S.I.C.) in 1960 and the New Establishment Concept in 1961 a number of changes in concept affecting the data for this industry, some of them major in scope, are reflected in the series of statistics presented in Tables 1A and 1B. For the most part these changes were introduced either concurrently with the implementation of the new Standard Industrial Classification and the New Establishment Concept or during the period covered in Table 1B. In the case of the "value added" figures and details relating to Absorption Gasoline Plants the period covered in the changes goes back to 1952. The following footnotes attempt to outline these changes in some detail.

## 1. Absorption Gasoline Plants

Absorption plants are designed to recover the naphtha content of natural gas. In addition, large quantities of propane, butane, dry gas and, in some cases, sulphur are recovered. These plants were not treated as a separate group prior to 1952 and, accordingly, data for earlier years are not available. Details presented in Table 1A for the period 1952-1958 reflect the inclusion of this group of plants. This situation obtained until 1960 at which time in accordance with the new Standard Industrial Classification these plants were transferred to a new industry in the Mineral Fuels group titled Natural

Gas Processing Plants. The figures in Table 1B reflect adjustments on account of the new concept changes and, therefore, exclude absorption plants.

## 2. Change in Basis of Valuation

Prior to 1954 several different methods were used to arrive at a selling value of products reported by petroleum refineries; however, starting in 1954 all firms reported on a uniform basis, namely, tank wagon prices, f.o.b. refinery for all products except heavy fuel oil for which the pipeline price was used. The net result of this change in reporting procedure was to exaggerate the gain in the value of products total for 1954 over that which would have been normal had the old basis been in effect. Naturally, these changes affected the figure for "value added" as well since the latter varies directly with the value of products. Figures for 1955-58 inclusive shown in Table 1A reflect the basis of valuation referred to above.

The method of valuation described above and in use since 1954 results in a value of products which is nearer the marketing (wholesale) level than a manufacturing (refining) value. In order to bring the level of valuation more in line with the manufacturing level as reported by other industries in the annual Census of Manufactures all firms classified to the Petroleum Refining Industry were asked in 1959 to report the value of their products at a level which would approximate as closely as possible a manufacturing (refining) selling value. This latter basis is the one used in developing the re-compiled figures in Table 1B.

## 3. Products for Own Use

Prior to 1961 petroleum refineries were asked to report on products made for own use. The value of these products was included in the total value of products for the Petroleum Refining Industry. The main products of this class were heavy fuel oil and still gas which are used as fuel for heating purposes. Most of these products were accounted for in the "Fuel and Electricity" section of the report so that the method of double recording resulted in a proper "value added" figure. On the other hand, of course, this practice tended to inflate the total for value of products for this industry. This procedure no doubt served some useful purpose particularly in calculations relating to "domestic disappearance" of petroleum products; however, it constituted an exception to the general treatment of "made for own use" products. Therefore, in order to bring the practice in this industry in line with usual statistical procedures, refineries in 1961 were asked to





exclude "made for own use" products from their calculations for value of products and from the "fuel and electricity" section. Table 1A reflects the inclusion of "made for own use" products while Table 1B reflects the exclusion of these products.

#### 4. New Standard Industrial Classification

Changes resulting from implementation of the new Standard Industrial Classification were generally of a relatively minor nature, the one exception being the effect of the transfer of Absorption Gasoline Plants which is covered in (1) above.

#### 5. New Establishment Concept

Implementation of the New Establishment Concept in 1961 affected the reporting procedures of a few firms. The major changes occurred as a result of combinations in reporting. Prior to 1961 some firms in this industry filed separate reports covering their blending of lubricating oils and greases in addition to the report for their refineries. The Standard Industrial Classification has always recognized two separate industries in the Petroleum and Coal Products Industries group one dealing with the refining of crude petroleum and the other dealing with establishments primarily engaged in blending lubricating oils and greases. As mentioned above some firms filed separate reports to these two industries even when the two divisions were at the same location. Starting in 1961, firms were asked to combine these operations conducted at the same location for statistical purposes and to file a consolidated report. The effect of this change in reporting procedures is reflected in the re-compiled figures shown in Table 1B.

#### 6. Value Added

Figures for value added by manufacture prior to 1952 were obtained by subtracting the cost of materials used, including fuel and electricity, from the value of production. In 1952 the gross value of

production was replaced by value of factory shipments f.o.b. plant for the Lubricating Oils and Greases portion of this group. The Petroleum Refining firms continued to report value of production (until 1959).

For 1954 and 1955 the "value added" adjustment for the Lubricating Oils and Greases group incorporated the increase or decrease in shipments' values resulting from changes in the value of inventories over the period. For these two years, the adjustments made used only the change in finished product inventory owned by manufacturers. Beginning with 1956 the calculation of the "value added" figure was further adjusted to take into account "goods in process" as well as "finished goods" held at plant or plant warehouse.

The "value added" figures for Petroleum Refining continued, to the end of 1958, to be calculated on the basis used prior to 1952. Commencing with 1959 the "value added" figure is adjusted as a result of a change which was instituted in the basis of valuation used by the refining companies in reporting the value of products. In 1959 firms were asked to report the value of their products at a level which would approximate as closely as possible their manufacturing (refining) selling value. That is, products are reported at a valuation which represents value of factory shipments rather than value of production. The "value added" figure is modified further by an adjustment which takes into account the changes in "Finished goods" and "Goods in process" inventories.

As a result of increased work loads and staff shortages, it has been necessary to suspend publication of certain tables normally contained in the reports issued in the Census of Manufactures. It is planned to resume publication of these tables in the 1962 reports. In general the tables affected are the following: Directory of Firms—Imports—Exports—Capital and Repair Expenditures.





**TABLE 1A. Principal Statistics of the Petroleum Products Industry, Significant Years 1929-58 and by Provinces, 1958**

(Basis: Standard Industrial Classification in use prior to 1960)

Year and province	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Gross selling value of products
	number			dollars			
1929 .....	25	4,978	8,153,625	3,754,655	76,861,939	18,791,720	99,408,314
1933 .....	47	4,628	6,141,945	3,137,719	49,187,757	17,942,789	70,268,265
1937 .....	57	5,137	8,246,843	4,450,005	80,401,880	13,602,129	98,454,014
1939 .....	53	4,766	7,890,247	4,578,699	74,465,600	25,534,218	104,578,517
1944 .....	48	6,809	14,317,939	9,002,567	153,558,664	47,986,185	210,547,416
1946 .....	43	7,145	14,849,141	10,159,025	155,818,744	57,447,611	223,425,380
1949 .....	47	9,413	26,142,276	16,852,060	336,973,056	82,971,097	436,796,213
1955 .....	61	13,340	57,892,387	32,593,790	642,872,134	373,368,531	1,048,834,455
1956 .....	61	13,925	66,341,638	43,127,224	766,375,257	444,427,813	1,253,798,979
1957 .....	64	14,308	73,887,074	52,598,424	827,470,815	497,029,225	1,376,558,762
1958 .....	71	14,490	76,643,818	51,052,196	829,920,509	487,676,382	1,368,649,087
<b>1958</b>							
Quebec .....	8	2,969	15,930,421	16,710,356	279,375,653	171,663,141	467,749,150
Ontario .....	14	5,337	29,374,546	16,904,326	255,695,530	120,861,674	393,461,530
Manitoba .....	4	703	2,910,954	2,124,043	34,189,442	20,749,388	57,062,873
Saskatchewan .....	11	1,183	5,872,466	2,911,856	50,255,873	29,241,309	82,409,038
Alberta .....	22	2,214	11,534,922	4,257,904	81,538,769	64,278,456	150,075,129
British Columbia .....	9	1,551	8,129,287	4,495,609	77,570,220	51,558,413	133,624,242
Nova Scotia .....	1	533	2,891,222	3,648,102	51,295,022	29,324,001	84,267,125
New Brunswick .....	1						
Northwest Territories ..	1						
<b>Canada .....</b>	<b>71</b>	<b>14,490</b>	<b>76,643,818</b>	<b>51,052,196</b>	<b>829,920,509</b>	<b>487,676,382</b>	<b>1,368,649,087</b>

**TABLE 1B. Principal Statistics: Petroleum Refineries, by Provinces, 1957-61**

(Basis: Revised Standard Industrial Classification and New Establishment Concept)

Year and province	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>1</sup>	Gross selling value of products
	number			dollars			
<b>1957</b>							
Quebec .....	8	2,852	15,693,245	1,377,200	300,825,529	..	361,281,713
Ontario .....	13	5,443	28,998,468	1,517,735	229,067,250	..	279,942,181
Manitoba .....	4	656	2,731,140	360,508	31,462,751	..	46,294,125
Saskatchewan .....	9	1,232	5,973,920	845,660	57,372,156	..	75,307,141
Alberta .....	11	1,943	9,517,650	1,718,376	77,732,506	..	103,472,932
British Columbia .....	5	1,384	6,745,008	742,337	76,996,178	..	99,411,882
Nova Scotia .....	1	544	2,971,653	473,298	48,492,647	..	57,116,859
New Brunswick .....	1						
Northwest Territories ..	1						
<b>Canada .....</b>	<b>53</b>	<b>14,054</b>	<b>72,631,084</b>	<b>7,035,114</b>	<b>821,949,017</b>	<b>..</b>	<b>1,022,826,833</b>

See footnote at end of table.



**TABLE 1B. Principal Statistics: Petroleum Refineries, by Provinces, 1957-61 - Concluded**  
(Basis: Revised Standard Industrial Classification and New Establishment Concept)

Year and province	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>1</sup>	Gross selling value of products
	number				dollars		
<b>1958</b>							
Quebec.....	8	2,969	15,930,421	1,497,637	279,375,653	59,422,277	338,575,587
Ontario.....	14	5,345	29,431,969	1,784,981	255,977,475	45,926,836	302,843,489
Manitoba.....	4	703	2,910,954	275,892	34,189,442	13,917,220	48,352,812
Saskatchewan.....	8	1,159	5,773,142	827,157	50,100,463	18,489,563	69,426,183
Alberta.....	11	1,901	9,875,492	1,818,148	75,460,750	27,861,274	105,061,598
British Columbia.....	7	1,470	7,766,284	985,446	73,576,866	19,296,992	93,859,304
Nova Scotia.....	1	} 533	2,891,222	383,359	51,295,022	7,199,509	58,877,890
New Brunswick.....	1						
Northwest Territories..	1						
<b>Canada.....</b>	<b>55</b>	<b>14,080</b>	<b>74,579,484</b>	<b>7,572,620</b>	<b>819,975,671</b>	<b>192,113,671</b>	<b>1,016,996,863</b>
<b>1959</b>							
Quebec.....	7	2,775	16,287,759	1,534,423	282,756,426	70,993,135	357,732,043
Ontario.....	14	5,498	33,164,260	2,220,035	283,850,566	58,688,469	343,716,858
Manitoba.....	4	674	3,101,435	404,663	33,857,528	14,977,197	48,275,962
Saskatchewan.....	6	1,042	5,604,234	927,301	53,296,177	22,759,197	75,963,254
Alberta.....	11	1,770	3,905,087	2,120,921	77,257,780	31,204,257	107,686,749
British Columbia.....	7	1,441	8,097,599	1,334,584	76,464,765	23,105,813	100,008,525
Nova Scotia.....	1	} 483	2,860,105	392,697	48,493,509	13,269,197	64,579,197
New Brunswick.....	1						
Northwest Territories..	1						
<b>Canada.....</b>	<b>52</b>	<b>13,683</b>	<b>79,020,479</b>	<b>8,934,624</b>	<b>855,976,751</b>	<b>234,997,265</b>	<b>1,097,962,588</b>
<b>1960</b>							
Quebec.....	8	2,859	17,032,051	1,741,756	278,546,597	85,665,124	360,853,564
Ontario.....	15	5,416	33,480,801	2,222,586	268,747,206	75,910,821	344,682,066
Manitoba.....	4	670	3,247,125	414,741	34,350,664	13,912,214	50,109,243
Saskatchewan.....	6	1,032	5,877,144	894,391	52,524,069	18,545,380	73,120,282
Alberta.....	12	1,702	9,913,323	2,114,912	73,831,917	31,849,476	107,591,036
British Columbia.....	7	1,379	8,440,519	1,129,800	78,556,066	22,679,958	103,319,918
Nova Scotia.....	1	} 721	3,877,922	661,023	71,295,087	25,720,324	94,185,010
New Brunswick.....	2						
Northwest Territories..	1						
<b>Canada.....</b>	<b>56</b>	<b>13,779</b>	<b>81,868,885</b>	<b>9,179,209</b>	<b>857,851,606</b>	<b>274,283,297</b>	<b>1,133,861,119</b>
<b>1961</b>							
Quebec.....	8	2,849	17,442,150	3,119,176	294,249,058	81,152,713	377,230,065
Ontario.....	15	5,582	35,451,209	2,414,741	287,205,381	85,501,137	376,702,487
Manitoba.....	4	495	2,692,533	455,577	35,693,367	13,422,715	49,079,029
Saskatchewan.....	6	938	5,540,028	940,729	51,351,093	18,137,709	68,993,227
Alberta.....	12	1,597	9,446,105	1,883,618	76,572,337	29,868,683	107,912,508
British Columbia.....	8	1,296	8,036,773	1,352,425	81,310,553	25,055,979	110,066,205
Nova Scotia.....	1	} 754	4,231,203	801,751	85,262,166	28,652,499	111,644,881
New Brunswick.....	2						
Northwest Territories..	1						
<b>Canada.....</b>	<b>57</b>	<b>13,511</b>	<b>82,840,001</b>	<b>10,968,017</b>	<b>911,643,955</b>	<b>281,791,435</b>	<b>1,201,628,402</b>

<sup>1</sup> Because of lack of inventory data "Value added" is not available for 1957.

Note: Petroleum Refineries covered in Tables 1B-8 include the operations of two industries (a) Petroleum Refining (see Tables 9-14) which includes establishments primarily engaged in refining crude petroleum and (b) Manufacturers of Lubricating Oils and Greases (see Tables 19-24) which includes establishments primarily engaged in blending lubricating oils and greases.





TABLE 2. Principal Statistics: Petroleum Refineries, by Sub-groups, 1957-61

Group	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>1</sup>	Gross selling value of products
	number		dollars				
<b>1957</b>							
Petroleum refining .....	41	13,781	71,400,636	6,885,603	811,963,113	..	1,007,018,395
Manufacturers of lubricat- ing oils and greases .....	12	273	1,230,448	149,511	9,985,904	..	15,808,438
<b>Totals .....</b>	<b>53</b>	<b>14,054</b>	<b>72,631,084</b>	<b>7,035,114</b>	<b>821,949,017</b>	<b>..</b>	<b>1,022,826,833</b>
<b>1958</b>							
Petroleum refining .....	42	13,814	73,431,750	7,448,329	809,798,659	184,547,883	1,000,386,222
Manufacturers of lubricat- ing oils and greases .....	13	266	1,147,724	124,291	10,141,478	7,565,788	16,610,641
<b>Totals .....</b>	<b>55</b>	<b>14,080</b>	<b>74,579,474</b>	<b>7,572,620</b>	<b>819,940,137</b>	<b>192,113,671</b>	<b>1,016,996,863</b>
<b>1959</b>							
Petroleum refining .....	41	13,419	77,823,888	8,799,544	845,190,269	229,645,840	1,081,594,811
Manufacturers of lubricat- ing oils and greases .....	11	264	1,196,591	135,080	10,786,482	5,351,425	16,367,777
<b>Totals .....</b>	<b>52</b>	<b>13,683</b>	<b>79,020,479</b>	<b>8,934,624</b>	<b>855,976,751</b>	<b>234,997,265</b>	<b>1,097,962,588</b>
<b>1960</b>							
Petroleum refining .....	44	13,505	80,597,422	9,043,360	846,909,104	268,446,739	1,117,454,670
Manufacturers of lubricat- ing oils and greases .....	12	274	1,271,463	135,849	10,942,502	5,836,558	16,406,449
<b>Totals .....</b>	<b>56</b>	<b>13,779</b>	<b>81,868,885</b>	<b>9,179,209</b>	<b>857,851,606</b>	<b>274,283,297</b>	<b>1,133,861,119</b>
<b>1961</b>							
Petroleum refining .....	44	13,235	81,516,036	10,820,117	899,836,714	276,271,921	1,184,176,374
Manufacturers of lubricat- ing oils and greases .....	13	276	1,323,965	147,900	11,807,241	5,519,514	17,452,028
<b>Totals .....</b>	<b>57</b>	<b>13,511</b>	<b>82,840,001</b>	<b>10,968,017</b>	<b>911,643,955</b>	<b>281,791,435</b>	<b>1,201,628,402</b>

<sup>1</sup> Because of lack of inventory data "Value added" is not available for 1957.

Note: Petroleum Refineries covered in Tables 1B-8 include the operations of two sub-classifications of industries (a) Petroleum Refining (see Tables 9-14) which includes establishments primarily engaged in refining crude petroleum and (b) Manufacturers of Lubricating Oils and Greases (see Tables 19-24) which includes establishments primarily engaged in blending lubricating oils and greases.

TABLE 3. Inventories:<sup>1</sup> Petroleum Refineries<sup>2</sup>, 1961

	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
	dollars			
(a) By sub-groups				
Opening:				
Petroleum refining .....	57,687,590	18,403,540	112,843,168	188,934,298
Manufacturers of lubricating oils and greases .....	232,264	2,348,225	682,043	3,262,532
<b>Totals .....</b>	<b>57,919,854</b>	<b>20,751,765</b>	<b>113,525,211</b>	<b>192,196,830</b>
Closing:				
Petroleum refining .....	60,032,000	18,768,066	115,231,020	194,031,086
Manufacturers of lubricating oils and greases .....	302,284	2,345,201	707,694	3,355,179
<b>Totals .....</b>	<b>60,334,284</b>	<b>21,113,267</b>	<b>115,938,714</b>	<b>197,386,265</b>

See footnote at end of table.



TABLE 3. Inventories:<sup>1</sup> Petroleum Refineries,<sup>2</sup> 1961 — Concluded

	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
	dollars			
(b) By provinces				
Opening:				
Quebec .....	18,508,684	5,179,224	35,792,821	59,480,729
Ontario .....	23,539,272	8,533,390	33,984,081	66,056,743
Manitoba .....	941,303	306,997	5,094,077	6,342,377
Saskatchewan .....	2,253,294	858,231	8,381,771	11,493,296
Alberta .....	2,659,227	1,810,728	13,027,511	17,497,466
British Columbia .....	4,963,336	2,008,927	10,532,133	17,504,396
Other provinces .....	5,054,738	2,054,268	6,712,817	13,821,823
Canada .....	57,919,854	20,751,765	113,525,211	192,196,830
Closing:				
Quebec .....	19,739,468	7,503,618	34,759,309	62,002,395
Ontario .....	25,170,053	8,580,760	32,355,483	66,106,296
Manitoba .....	1,499,800	134,578	5,759,126	7,393,504
Saskatchewan .....	1,800,750	801,704	9,874,602	12,477,056
Alberta .....	2,115,323	1,456,513	13,793,856	17,365,692
British Columbia .....	4,847,846	1,230,312	8,963,500	15,041,658
Other provinces .....	5,161,044	1,405,782	10,432,838	16,999,664
Canada .....	60,334,284	21,113,267	115,938,714	197,386,265

<sup>1</sup> (a) Book value of all manufacturing inventories owned and held at plant and plant warehouses.

(b) The opening inventory for 1961 differs from the closing inventory for 1960 because of the receipt of revised data, the inclusion of new establishments, the removal of figures for establishments which did not operate during 1961, changes in classification, and the implementation of the New Establishment Concept.

<sup>2</sup> See note to Table 2.

TABLE 4. Principal Statistics classified according to Type of Ownership, Petroleum Refineries<sup>1</sup>, 1961

Type	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity	Cost at plant of materials used	Gross selling value of products
	number		dollars			
Partnership .....	1	} 13,511	82,840,001	10,968,017	911,643,955	1,201,628,402
Co-operatives .....	1					
Incorporated companies .....	55					
<b>Totals .....</b>	<b>57</b>	<b>13,511</b>	<b>82,840,001</b>	<b>10,968,017</b>	<b>911,643,955</b>	<b>1,201,628,402</b>

<sup>1</sup> See note to Table 2.





**TABLE 5. Principal Statistics grouped according to Selling Value of Factory Shipments, Petroleum Refineries,<sup>1</sup> 1961**

Establishments reporting a value of products	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity	Cost at plant of materials used	Gross selling value of products
\$ 10,000 to \$ 49,999 .....	3	11	43,033	4,359	62,821	140,581
50,000 " 99,999 .....	1					
100,000 " 499,999 .....	4	35	175,714	26,502	626,974	1,085,091
500,000 " 999,999 .....	3	44	163,631	11,788	1,256,170	1,909,748
1,000,000 " 4,999,999 .....	13	699	3,519,262	587,662	22,703,476	35,754,042
5,000,000 and over .....	33	9,828	59,250,843	10,337,706	886,994,514	1,162,738,940
Head offices .....	—	2,894	19,687,518	—	—	—
<b>Totals .....</b>	<b>57</b>	<b>13,511</b>	<b>82,840,001</b>	<b>10,968,017</b>	<b>911,643,955</b>	<b>1,201,628,402</b>

<sup>1</sup> See note to Table 2.

**TABLE 6. Employees and their Earnings: Petroleum Refineries,<sup>1</sup> 1961**

Province	Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
Quebec .....	749	114	1,979	7	2,849	6,048,630	11,393,520	17,442,150
Ontario .....	2,444	922	2,189	27	5,582	22,918,317	12,532,892	35,451,209
Manitoba .....	147	44	304	—	495	985,239	1,707,294	2,692,533
Saskatchewan .....	267	46	623	2	938	2,181,106	3,358,922	5,540,028
Alberta .....	495	111	987	4	1,597	3,987,209	5,458,896	9,446,105
British Columbia .....	456	100	740	—	1,296	3,782,240	4,254,533	8,036,773
Other provinces .....	134	26	582	12	754	1,078,860	3,152,343	4,231,203
<b>Canada .....</b>	<b>4,692</b>	<b>1,363</b>	<b>7,404</b>	<b>52</b>	<b>13,511</b>	<b>40,981,601</b>	<b>41,858,400</b>	<b>82,840,001</b>

<sup>1</sup> See note to Table 2.

**TABLE 7. Production Workers, by Months: Petroleum Refineries,<sup>1</sup> 1961**

Month	Male	Female	Total
January .....	7,390	52	7,442
February .....	7,378	51	7,429
March .....	7,393	51	7,444
April .....	7,451	53	7,504
May .....	7,564	54	7,618
June .....	7,620	53	7,673
July .....	7,633	52	7,685
August .....	7,576	53	7,629
September .....	7,351	51	7,402
October .....	7,262	48	7,310
November .....	7,177	48	7,225
December .....	7,075	48	7,123
<b>Averages .....</b>	<b>7,404</b>	<b>52</b>	<b>7,456</b>

<sup>1</sup> See note to Table 2.





TABLE 8. Fuel and Electricity Used: Petroleum Refineries,<sup>1</sup> 1961

Kind	Quantity	Cost at plant
		\$
Bituminous coal .....	ton 19	1,960
Gasoline (including gasoline used in cars and trucks) .....	Imp. gal. 75,887	25,128
Fuel oil (including kerosene or coal oil) .....	" 942,490	80,525
Natural gas .....	M cu. ft. 10,193,320	2,438,740
Other fuel .....	..	5,000
Electricity purchased .....	kwh. 1,191,245,042	8,178,485
Steam purchased .....	..	238,179
<b>Total</b> .....	...	<b>10,968,017</b>

<sup>1</sup> See note to Table 2.

Note: Own make products are not included in above table and, therefore, figures are not comparable with earlier years. See footnote 3 to text.

TABLE 9. Principal Statistics: Petroleum Refining,<sup>1</sup> by Provinces, 1957-1961

Province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>3</sup>	Gross selling value of products
1957							
Quebec .....	5	2,787	15,435,270	1,336,085	297,365,190	..	355,643,296
Ontario .....	6	5,245	28,057,037	1,415,434	222,788,441	..	270,154,099
Manitoba .....	3	650	2,714,618	356,463	31,253,292	..	46,032,825
Saskatchewan .....	9	1,232	5,973,920	845,660	57,372,156	..	75,307,141
Alberta .....	10	1,939	9,503,130	1,716,326	77,695,209	..	103,352,293
British Columbia .....	5	1,384	6,745,008	742,337	76,996,178	..	99,411,882
Other provinces <sup>3</sup> .....	3	544	2,971,653	473,298	48,492,647	..	57,116,859
<b>Canada</b> .....	<b>41</b>	<b>13,781</b>	<b>71,400,636</b>	<b>6,885,603</b>	<b>811,963,113</b>	<b>..</b>	<b>1,007,018,395</b>
1958							
Quebec .....	5	2,908	15,680,991	1,462,305	276,179,578	56,463,432	332,507,315
Ontario .....	6	5,149	28,566,529	1,702,657	249,274,346	41,449,686	292,683,689
Manitoba .....	3	697	2,892,610	271,857	33,988,332	13,826,223	48,053,412
Saskatchewan .....	8	1,159	5,773,142	827,157	50,100,463	18,489,563	69,426,183
Alberta .....	10	1,898	9,860,972	1,815,548	75,419,586	27,822,478	104,978,429
British Columbia .....	7	1,470	7,766,284	985,446	73,576,866	19,296,992	93,859,304
Other provinces <sup>3</sup> .....	3	533	2,891,222	383,359	51,295,022	7,199,509	58,877,890
<b>Canada</b> .....	<b>42</b>	<b>13,814</b>	<b>73,431,750</b>	<b>7,448,329</b>	<b>809,834,193</b>	<b>184,547,883</b>	<b>1,000,386,222</b>

See footnotes at end of table.



TABLE 9. Principal Statistics: Petroleum Refining,<sup>1</sup> by Provinces, 1959 - 1961 - Concluded

Province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>2</sup>	Gross selling value of products
	number			dollars			
1959							
Quebec .....	5	2,716	16,031,218	1,498,712	279,284,624	68,373,497	351,508,855
Ontario .....	7	5,302	32,258,394	2,127,557	276,785,781	56,096,496	333,967,453
Manitoba .....	3	668	3,082,613	400,523	33,651,185	14,879,260	47,968,771
Saskatchewan .....	6	1,042	5,604,234	927,301	53,296,177	22,759,197	75,963,254
Alberta .....	10	1,767	9,889,725	2,118,170	77,214,228	31,162,380	107,598,756
British Columbia .....	7	1,441	8,097,599	1,334,584	76,464,765	23,105,813	100,008,525
Other provinces <sup>3</sup> .....	3	483	2,860,105	392,697	48,493,509	13,269,197	64,579,197
<b>Canada .....</b>	<b>41</b>	<b>13,419</b>	<b>77,823,888</b>	<b>8,799,544</b>	<b>845,190,269</b>	<b>229,645,840</b>	<b>1,081,594,811</b>
1960							
Quebec .....	6	2,799	16,760,398	1,707,417	275,069,147	82,700,433	354,712,000
Ontario .....	7	5,209	32,509,291	2,127,776	261,472,154	73,176,222	334,764,623
Manitoba .....	3	666	3,234,125	410,741	34,200,664	13,819,085	49,848,643
Saskatchewan .....	6	1,032	5,877,144	894,391	52,524,069	18,545,380	73,120,282
Alberta .....	11	1,699	9,898,023	2,112,212	73,791,917	31,805,337	107,504,194
British Columbia .....	7	1,379	8,440,519	1,129,800	78,556,066	22,679,958	103,319,918
Other provinces <sup>4</sup> .....	4	721	3,877,922	661,023	71,295,087	25,720,324	94,185,010
<b>Canada .....</b>	<b>44</b>	<b>13,505</b>	<b>80,597,422</b>	<b>9,043,360</b>	<b>846,909,104</b>	<b>268,446,739</b>	<b>1,117,454,670</b>
1961							
Quebec .....	6	2,789	17,158,799	3,086,517	290,442,398	78,606,062	370,800,382
Ontario .....	7	5,377	34,461,611	2,305,607	279,408,911	82,686,414	366,040,747
Manitoba .....	3	491	2,672,420	452,339	35,530,577	13,311,676	48,810,115
Saskatchewan .....	6	938	5,540,028	940,729	51,351,093	18,137,709	68,993,227
Alberta .....	11	1,592	9,423,365	1,881,018	76,537,337	29,830,193	107,836,018
British Columbia .....	7	1,294	8,028,610	1,352,156	81,304,232	25,047,368	110,051,004
Other provinces <sup>4</sup> .....	4	754	4,231,203	801,251	85,262,166	28,652,499	111,644,881
<b>Canada .....</b>	<b>44</b>	<b>13,235</b>	<b>81,516,036</b>	<b>10,820,117</b>	<b>899,836,714</b>	<b>276,271,921</b>	<b>1,184,176,374</b>

<sup>1</sup> This industry includes establishments primarily engaged in refining crude petroleum. Establishments primarily engaged in blending lubricating oils and greases are covered in Tables 19-24.

<sup>2</sup> Because of lack of inventory data "Value added" is not available for 1957.

<sup>3</sup> Includes one refinery in each of Nova Scotia, New Brunswick and Northwest Territories.

<sup>4</sup> Includes one refinery in Nova Scotia and Northwest Territories and two in New Brunswick.





TABLE 10. Products Made: Petroleum Refining,<sup>1</sup> 1961

Product	Quantity made including amounts for own use	Quantity shipped	Gross selling value at plant
	barrels		\$
Gasoline (excluding imported casing head-blended):			
Aviation gasoline .....	1, 137, 454	1, 197, 645	9, 430, 864
Motor gasoline .....	106, 628, 143	104, 989, 448	542, 748, 616
Naphtha specialties .....	1, 321, 040	1, 035, 917	6, 694, 652
Aviation turbine fuel .....	6, 402, 396	6, 378, 206	23, 198, 106
Kerosene, stove oil (No. 1 fuel oil) and tractor fuel .....	17, 322, 773	17, 140, 083	76, 770, 420
Diesel fuel .....	27, 666, 151	28, 706, 609	113, 971, 927
Light fuel oils (Nos. 2 and 3) .....	53, 351, 498	52, 196, 858	209, 198, 143
Heavy fuel oils (Nos. 4, 5, and 6) .....	52, 323, 005	41, 319, 720	91, 392, 463
Lubricating oil and grease .....	2, 312, 803	2, 373, 017	33, 111, 032
Asphalt .....	9, 758, 327	9, 257, 845	27, 742, 071
Petroleum coke .....	..	964, 494	1, 906, 450
Petrochemical feed stocks .....	5, 131, 607	5, 114, 176	16, 146, 963
Liquefied petroleum gases .....	4, 992, 783	4, 246, 909	12, 078, 305
Other products <sup>2</sup> .....	..	..	21, 489, 846
<b>Total</b> .....	<b>...</b>	<b>...</b>	<b>1, 185, 879, 858</b>
Less adjustment for value of sales taxes, excise duties and outward transportation charges which were not deducted from individual commodity items detailed above. ....	...	...	1, 703, 484
<b>Total</b> .....	<b>...</b>	<b>...</b>	<b>1, 184, 176, 374</b>

<sup>1</sup> This industry includes establishments primarily engaged in refining crude petroleum. Establishments primarily engaged in blending lubricating oils and greases are covered in Tables 19-24.

<sup>2</sup> Includes candles, alkylate, naphthenic acid, etc. These items were reported by fewer than three companies, so in accordance with the provisions of the Statistics Act, the figures cannot be shown separately.

Note: Shipments data in above table exclude "Made for own use" products previously included. See footnote 3 to text.

TABLE 11. Materials Used: Petroleum Refining,<sup>1</sup> 1961

Material	Quantity	Cost at plant
		\$
Crude oil in its natural state, from Canadian wells .....	barrel 159, 074, 576	450, 757, 680
Absorption gasoline, etc., from Canadian wells (run to stills) .....	" 3, 526, 549	10, 538, 598
Crude oil, in its natural state, imported, (run to stills):		
From United States .....	..	..
From South America .....	barrel 84, 461, 025	229, 214, 054
From other countries .....	" 47, 394, 195	128, 035, 246
Crude oil, not in its natural state (run to stills) .....	" 613, 885	3, 591, 228
Benzol .....	" 55, 601	1, 325, 851
Alkylate and cumene .....	" 673, 396	5, 264, 052
Phenol .....	lb. 1, 114, 176	189, 325
Sulphuric acid, 100% .....	" 27, 552, 442	438, 594
Ammonia, anhydrous .....	" 697, 833	80, 595
Sulphur .....	" 241, 079	9, 092
Caustic soda .....	" 21, 853, 020	905, 225
Soda ash .....	" 1, 440, 979	38, 981
Litharge .....	" 244, 167	34, 473
Fuller's earth, bentonite and other clays .....	ton 2, 122	170, 817
Tetraethyl fluid .....	lb. 44, 971, 426	16, 359, 585
Dyes for gasoline .....	..	105, 797
Inhibitor .....	..	766, 286
Fluid catalytic cracking unit catalysts (Aerocat, Nalcat, Filtrol 100, FCCU catalysts, etc.) .....	..	4, 665, 028
Reforming or polymerization catalysts .....	..	1, 475, 391
Additives .....	..	2, 858, 671
Other materials .....	..	34, 409, 015
Shipping containers .....	..	8, 603, 130
<b>Total</b> .....	<b>...</b>	<b>899, 836, 714</b>

<sup>1</sup> This industry includes establishments primarily engaged in refining crude petroleum. Establishments primarily engaged in blending lubricating oils and greases are covered in Tables 19-24.

Note: Data in above table reflect implementation of New Establishment Concept and, therefore, in some particulars are not exactly comparable with previous years. For the most part differences have been accommodated in the "Other materials" item so that any differences between the other materials for earlier years are minimal.



**TABLE 12. Employees and their Earnings: Petroleum Refining,<sup>1</sup> 1961**

Province	Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
Quebec.....	738	110	1,934	7	2,789	5,976,866	11,181,933	17,158,799
Ontario.....	2,397	902	2,051	27	5,377	22,541,804	11,919,807	34,461,611
Manitoba.....	146	43	302	—	491	975,647	1,696,773	2,672,420
Saskatchewan.....	267	46	623	2	938	2,181,106	3,358,922	5,540,028
Alberta.....	493	109	986	4	1,592	3,968,429	5,454,936	9,423,365
British Columbia.....	454	100	740	—	1,294	3,774,077	4,254,533	8,028,610
Other provinces.....	134	26	582	12	754	1,078,860	3,152,343	4,231,203
<b>Canada.....</b>	<b>4,629</b>	<b>1,336</b>	<b>7,218</b>	<b>52</b>	<b>13,235</b>	<b>40,496,789</b>	<b>41,019,247</b>	<b>81,516,036</b>

<sup>1</sup> This industry includes establishments primarily engaged in refining crude petroleum. Establishments primarily engaged in blending lubricating oils and greases are covered in Tables 19-24.

**TABLE 13. Production Workers, by Months: Petroleum Refining,<sup>1</sup> 1961**

Month	Male	Female	Total
	number		
January.....	7,206	52	7,258
February.....	7,196	51	7,247
March.....	7,215	51	7,266
April.....	7,269	53	7,322
May.....	7,371	54	7,425
June.....	7,429	53	7,482
July.....	7,435	52	7,487
August.....	7,381	53	7,434
September.....	7,166	51	7,217
October.....	7,076	48	7,124
November.....	6,995	48	7,043
December.....	6,890	48	6,938
<b>Averages.....</b>	<b>7,218</b>	<b>52</b>	<b>7,270</b>

<sup>1</sup> This industry includes establishments primarily engaged in refining crude petroleum. Establishments primarily engaged in blending lubricating oils and greases are covered in Tables 19-24.

**TABLE 14. Fuel and Electricity Used: Petroleum Refining,<sup>1</sup> 1961**

Kind	Quantity	Cost at plant
		\$
Gasoline (including gasoline used in cars and trucks).....	Imp. gal. 21,408	6,892
Fuel oil (including kerosene or coal oil).....	" 8,558	1,566
Natural gas.....	M cu. ft. 10,192,222	2,437,454
Electricity purchased.....	kwh. 1,188,033,715	8,136,475
Steam purchased.....	..	237,730
<b>Total.....</b>	<b>...</b>	<b>10,820,117</b>

<sup>1</sup> This industry includes establishments primarily engaged in refining crude petroleum. Establishments primarily engaged in blending lubricating oils and greases are covered in Tables 19-24.

Note: Own make products are not included in above table and, therefore, figures are not comparable with earlier years. See footnote 3 to text.





TABLE 15. Number and Total Capacity of Petroleum Refineries in Operation,  
December 31, 1958 - 61

Province	1958		1959		1960		1961	
	Number	Capacity, in barrels of crude per day	Number	Capacity, in barrels of crude per day	Number	Capacity, in barrels of crude per day	Number	Capacity, in barrels of crude per day
Nova Scotia .....	1	45,000	1	45,000	1	45,000	1	45,000
New Brunswick .....	1	300	1	300	2	41,800	2	41,800
Quebec .....	5	265,800	5	268,800	6	292,000	6	303,000
Ontario .....	6	207,850	7	264,850	7	265,900	7	267,900
Manitoba .....	3	33,200	3	33,200	3	33,200	3	38,100
Saskatchewan .....	8	69,000	6	64,000	6	63,950	6	70,390
Alberta .....	10	80,550	10	90,200	11	92,200	11	91,620
British Columbia .....	7	100,000	7	100,600	7	99,500	7	101,000
Northwest Territories .....	1	1,350	1	1,350	1	1,350	1	1,500
<b>Canada .....</b>	<b>42</b>	<b>803,050</b>	<b>41</b>	<b>868,300</b>	<b>44</b>	<b>934,900</b>	<b>44</b>	<b>960,310</b>

Note: 1 barrel = 35 Imperial gallons.

TABLE 16. Consumption of Crude Oil in Petroleum Refineries, showing Canadian and  
Imported Separately, 1952 - 61

Year	Canadian <sup>1</sup>	Imported	Total
	barrels		
1952 .....	56,658,575	82,656,498	139,315,073
1953 .....	71,655,079	82,759,842	154,414,921
1954 .....	93,237,497	77,797,198	171,034,695
1955 .....	108,336,326	86,719,894	195,056,220
1956 .....	125,576,963	105,738,257	231,315,220
1957 .....	128,017,186	110,836,969	238,854,155
1958 .....	133,547,168	106,458,959	240,006,127
1959 .....	152,143,029	115,599,492	267,742,521
1960 .....	152,033,834	125,851,879	277,885,713
1961 .....	162,601,125	132,469,105	295,070,230

<sup>1</sup> Includes the crude naphtha and absorption gasoline from Canadian wells which were run to refinery stills.

TABLE 17. Stocks on Hand at the Refineries at the End of December 31, 1961

	Quantity
	barrels
Crude oil and naphtha, in its natural state, from Canadian wells .....	4,327,479
Absorption gasoline, etc., from Canadian wells .....	79,226
Crude oil, imported:	
In its natural state .....	5,386,410
Not in its natural state .....	179,233
<b>Total crude .....</b>	<b>9,972,348</b>
Naphtha specialties .....	290,353
Aviation gasoline .....	586,326
Motor gasoline .....	11,189,688
Aviation turbine fuel .....	686,065
Kerosene, stove oil (No. 1 fuel oil) and tractor fuel .....	2,267,725
Diesel fuel .....	2,256,666
Light fuel oils (Nos. 2 and 3) .....	8,638,244
Heavy fuel oils (Nos. 4, 5 and 6) .....	4,689,840
Lubricating oils and greases .....	736,972
Liquefied petroleum gases (propane, butane, etc.) .....	267,263
Petroleum coke .....	77,513





TABLE 18. Refinery Production<sup>1</sup> of Gasoline, 1952 - 61

Year	Motor gasoline	Aviation gasoline	Total
	barrels		
1952 .....	57,901,710	470,560	58,372,270
1953 .....	63,753,525	601,755	64,355,280
1954 .....	68,535,671	493,790	69,029,461
1955 .....	76,674,069	735,706	77,409,775
1956 .....	85,846,938	758,826	86,605,764
1957 .....	86,290,914	593,253	86,884,167
1958 .....	89,329,101	675,870	90,004,971
1959 .....	95,519,002	677,963	96,196,965
1960 .....	101,397,928	1,280,440	102,678,368
1961 .....	106,628,143	1,137,454	107,765,597

<sup>1</sup> Includes production made for own use.

TABLE 19. Principal Statistics; Manufacturers of Lubricating Oils and Greases,<sup>1</sup> by Provinces, 1957 - 1961

Province	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>2</sup>	Value of factory shipments
	number		dollars				
1957							
Ontario .....	7	198	941,431	102,301	6,278,809	..	9,788,082
Quebec .....	3	} 75	289,017	47,210	3,707,095	..	6,020,356
Manitoba .....	1						
Alberta .....	1						
Canada .....	12	273	1,230,448	149,511	9,985,904	..	15,808,438
1958							
Ontario .....	8	196	865,440	82,324	6,703,129	4,477,250	10,159,800
Quebec .....	3	} 70	282,284	41,967	3,438,349	3,088,538	6,450,841
Manitoba .....	1						
Alberta .....	1						
Canada .....	13	266	1,147,724	124,291	10,141,478	7,565,788	16,610,641
1959							
Ontario .....	7	196	905,866	92,478	7,064,785	2,591,973	9,749,405
Quebec .....	2	} 68	290,725	42,602	3,721,697	2,759,452	6,618,372
Manitoba .....	1						
Alberta .....	1						
Canada .....	11	264	1,196,591	135,080	10,786,482	5,351,425	16,367,777
1960							
Ontario .....	8	207	971,510	94,810	7,275,052	2,734,599	9,917,443
Quebec .....	2	} 67	299,953	41,039	3,667,450	3,101,959	6,489,006
Manitoba .....	1						
Alberta .....	1						
Canada .....	12	274	1,271,463	135,849	10,942,502	5,836,558	16,406,449
1961							
Ontario .....	8	205	989,598	109,134	7,796,470	2,814,723	10,661,740
Quebec .....	2	} 71	334,367	38,766	4,010,771	2,704,791	6,790,288
Manitoba .....	1						
Alberta .....	1						
British Columbia .....	1						
Canada .....	13	276	1,323,965	147,900	11,807,241	5,519,514	17,452,028

<sup>1</sup> This industry includes establishments primarily engaged in blending lubricating oils and greases. Establishments primarily engaged in refining crude petroleum are covered in Tables 9 - 14.

<sup>2</sup> Because of lack of inventory data "Value added" is not available for 1957.



TABLE 20. Products Made: Manufacturers of Lubricating Oils and Greases,<sup>1</sup> 1961

Product	Quantity	Value of factory shipments
		\$
Greases, lubricating .....	lb. 17,411,614	2,154,036
Oils, lubricating .....	gal. 19,411,614	14,892,810
All other products .....	..	405,182
<b>Total</b> .....	...	<b>17,452,028</b>

<sup>1</sup> See footnote 1 to Table 19.

TABLE 21. Materials Used: Manufacturers of Lubricating Oils and Greases,<sup>1</sup> 1961

Material	Quantity	Cost at plant
		\$
Oils for blending—Canadian .....	Imp. gal. 7,421,557	2,280,206
Imported .....	“ 11,640,372	3,687,293
Grease for blending—Imported .....	lb. 464,580	61,809
Additives for lube oils and greases .....	..	1,764,734
All other materials <sup>2</sup> .....	..	1,198,110
Shipping containers .....	..	2,815,089
<b>Total</b> .....	...	<b>11,807,241</b>

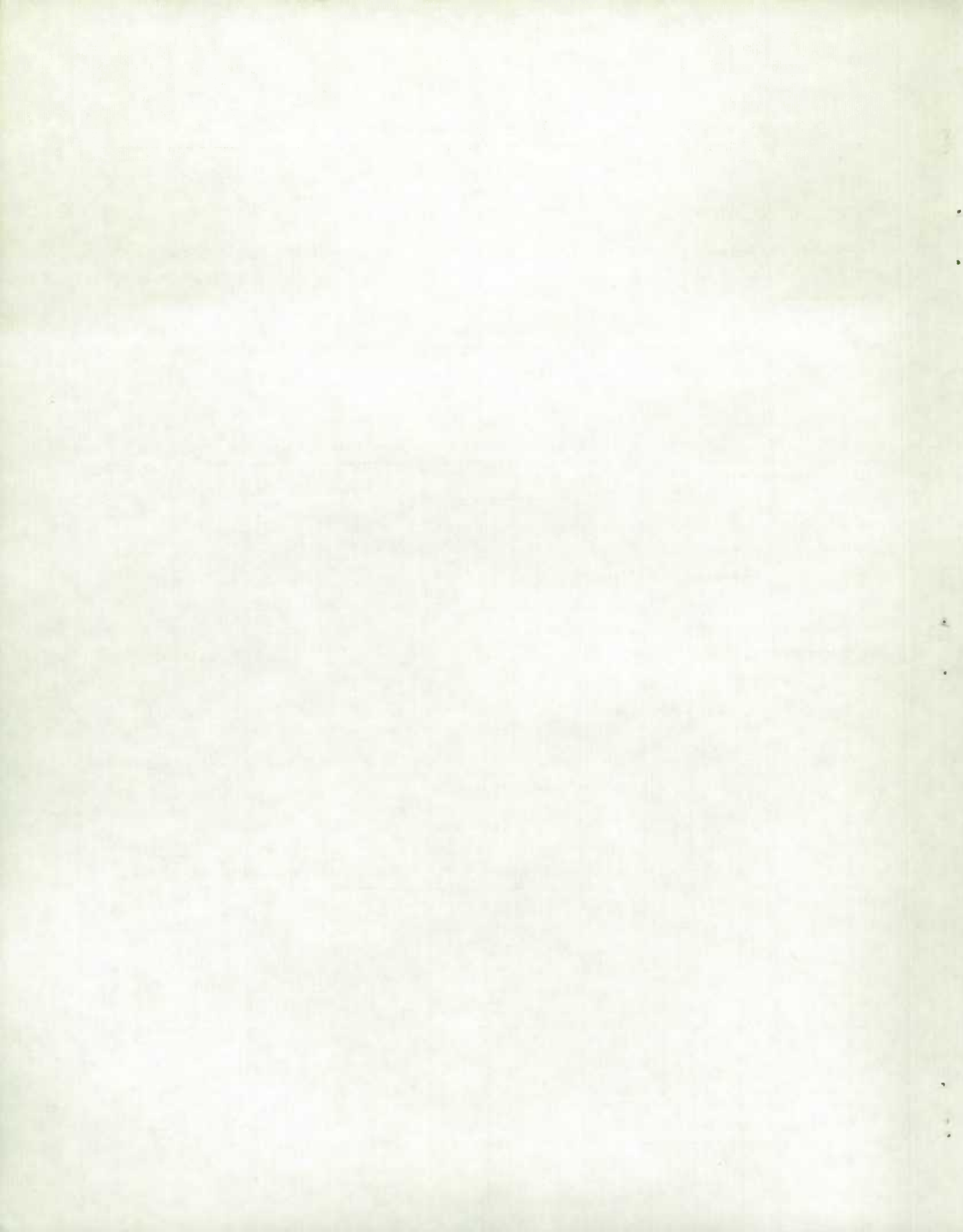
<sup>1</sup> See footnote 1 to Table 19.

<sup>2</sup> No detailed information on materials used was collected from small establishments. The estimated value of materials used by these establishments was \$166,000 in 1961 and this amount is included in "All other materials". The value of shipments actually reported by these small establishments was \$298,846

TABLE 22. Employees and their Earnings: Manufacturers of Lubricating Oils and Greases,<sup>1</sup> 1961

Province	Employees				Total	Earnings		
	Supervisory and office		Production workers			Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
Ontario .....	47	20	138	—	205	376,513	613,085	989,598
Other provinces .....	16	7	48	—	71	108,299	226,068	334,367
<b>Canada</b> .....	<b>63</b>	<b>27</b>	<b>186</b>	<b>—</b>	<b>276</b>	<b>484,812</b>	<b>839,153</b>	<b>1,323,965</b>

<sup>1</sup> See footnote 1 to Table 19.





**TABLE 23. Production Workers, by Months: Manufacturers of Lubricating Oils and Greases,<sup>1</sup> 1961**

Month	Establishments reporting monthly detail <sup>2</sup>	
	Male	Female
January .....	184	—
February .....	182	—
March .....	178	—
April .....	182	—
May .....	193	—
June .....	191	—
July .....	198	—
August .....	195	—
September .....	185	—
October .....	186	—
November .....	182	—
December .....	185	—
<b>Average</b> .....	<b>186</b>	<b>—</b>

<sup>1</sup> See footnote 1 to Table 19.

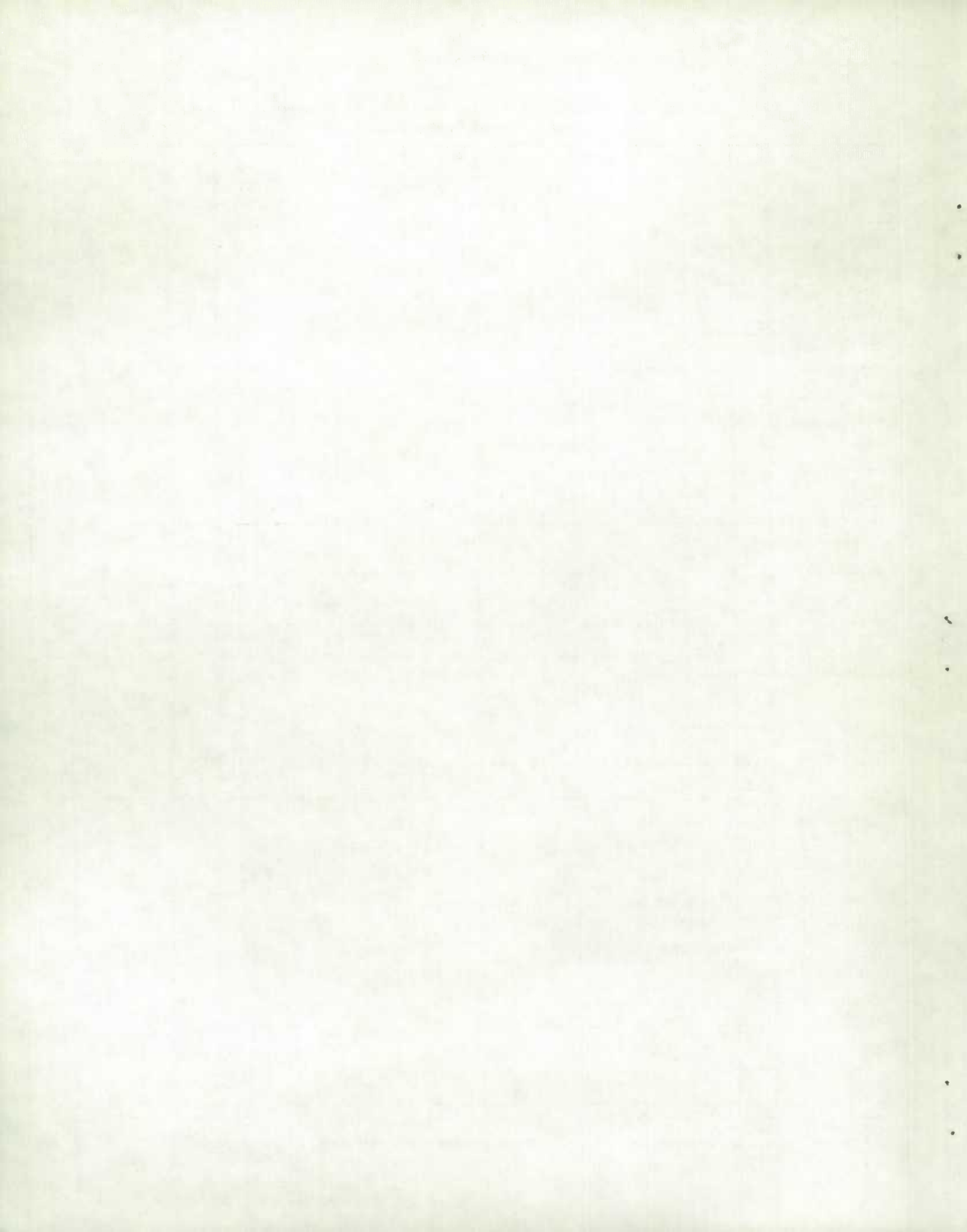
<sup>2</sup> The monthly detail of production workers was not collected from small establishments. Only annual averages were collected from these establishments.

**TABLE 24. Fuel and Electricity Used: Manufacturers of Lubricating Oils and Greases,<sup>1</sup> 1961**

Kind	Quantity	Cost at plant
		\$
Bituminous coal — imported .....	ton 19	1,960
Gasoline (including gasoline used in cars and trucks).....	Imp. gal. 54,479	18,236
Fuel oil including kerosene or coal oil .....	" 933,932	78,959
Natural gas .....	M cu. ft. 1,098	1,286
Electricity purchased.....	kwh. 3,211,327	42,010
Steam purchased .....	..	449
Other fuel .....	..	5,000
<b>Total</b> .....	<b>...</b>	<b>147,900</b>

<sup>1</sup> See footnote 1 to Table 19.

Note: No detailed information on fuel and electricity used was collected from small establishments.



**TABLE 25. Sales of Lubricating Oils, 1960 and 1961**  
(As reported by Principal dealers)

	Crankcase oils for all internal combustion engines except aircraft	Aircraft crankcase oils	Other oils except auto gear oils	Auto gear oils excluding automotive transmission oils	Total sales
barrels of 35 Imperial gallons					
1960					
Atlantic Provinces <sup>1</sup> .....	151,142	7,297	82,894	9,424	250,757
Quebec.....	412,557	11,166	235,002	34,337	693,062
Ontario.....	583,416	8,235	546,871	88,400	1,226,922
Manitoba.....	111,692	4,982	44,945	10,607	172,226
Saskatchewan.....	166,920	1,058	22,552	13,943	204,473
Alberta <sup>2</sup> .....	228,228	4,515	79,710	20,228	332,681
British Columbia <sup>3</sup> .....	205,612	7,297	60,612	12,553	286,074
<b>Canada.....</b>	<b>1,859,567</b>	<b>44,550</b>	<b>1,072,586</b>	<b>189,492</b>	<b>3,166,195</b>
1961					
Atlantic Provinces <sup>1</sup> .....	155,470	10,770	78,520	10,866	255,626
Quebec.....	404,871	7,900	245,313	49,119	707,203
Ontario.....	583,926	8,718	527,067	130,829	1,250,540
Manitoba.....	114,974	3,562	47,054	11,885	177,475
Saskatchewan.....	163,346	702	19,314	15,903	199,265
Alberta <sup>2</sup> .....	229,999	3,847	116,257	21,080	371,183
British Columbia <sup>3</sup> .....	218,796	4,478	70,878	19,640	313,792
<b>Canada.....</b>	<b>1,871,382</b>	<b>39,977</b>	<b>1,104,403</b>	<b>259,322</b>	<b>3,275,084</b>

<sup>1</sup> Includes Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick.

<sup>2</sup> Includes Northwest Territories.

<sup>3</sup> Includes Yukon Territory.

**TABLE 26. Sales of Lubricating Oils and Greases by Class of Trade, 1961**

Product	Retail gasoline pump outlets	Other	Total sales
barrels of 35 Imperial gallons			
<b>Lubricating oil:</b>			
Atlantic Provinces <sup>1</sup> .....	90,001	154,759	244,760
Quebec.....	228,767	429,317	658,084
Ontario.....	315,523	804,188	1,119,711
Manitoba.....	42,120	123,470	165,590
Saskatchewan.....	52,576	130,786	183,362
Alberta <sup>2</sup> .....	78,819	271,284	350,103
British Columbia <sup>3</sup> .....	78,629	215,523	294,152
<b>Canada.....</b>	<b>886,435</b>	<b>2,129,327</b>	<b>3,015,762</b>
<b>Grease:<sup>4</sup></b>			
Atlantic Provinces <sup>1</sup> .....	4,087	6,779	10,866
Quebec.....	13,566	35,553	49,119
Ontario.....	25,693	105,136	130,829
Manitoba.....	4,021	7,864	11,885
Saskatchewan.....	4,126	11,777	15,903
Alberta <sup>2</sup> .....	5,766	15,314	21,080
British Columbia <sup>3</sup> .....	4,245	15,395	19,640
<b>Canada.....</b>	<b>61,504</b>	<b>197,818</b>	<b>259,322</b>
<b>Gear oil (including automatic transmission oils):</b>			
Atlantic Provinces <sup>1</sup> .....	4,868	6,334	11,202
Quebec.....	8,232	20,705	28,937
Ontario.....	10,564	36,212	46,776
Manitoba.....	1,289	7,724	9,013
Saskatchewan.....	2,672	11,451	14,123
Alberta <sup>2</sup> .....	3,212	14,712	17,924
British Columbia <sup>3</sup> .....	2,623	10,436	13,059
<b>Canada.....</b>	<b>33,460</b>	<b>107,574</b>	<b>141,034</b>

<sup>1</sup> Includes Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick.

<sup>2</sup> Includes North West Territories.

<sup>3</sup> Includes Yukon Territory.

<sup>4</sup> Includes greases at 10 pounds to a gallon.

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