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CANADA

DEPARTMENT OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS

CENSUS OF INDUSTRY

MINING, METALLURGICAL & CHEMICAL BRANCH

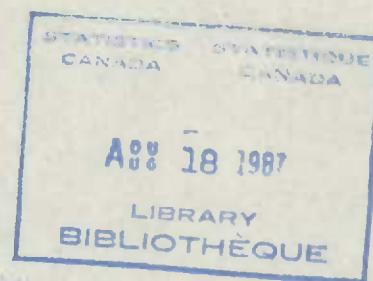
THE

**CLAY & CLAY PRODUCTS INDUSTRY**

IN

**CANADA**

**1943**



(including 1. Products from Domestic Clays  
2. Products from Imported Clays)



OTTAWA  
1945

Price 25 cents

402-44

THE GOVERNMENT OF CANADA  
DEPARTMENT OF TRADE AND COMMERCE  
COMMISSIONER OF TRADE OR STATEMENTS  
CENSUS OF INDUSTRY

MINISTER OF MUNICIPAL AFFAIRS - CHIEF INSPECTOR

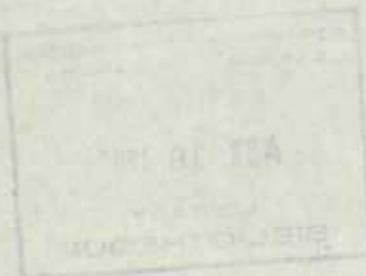
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CITY OF CALGARY PRODUCED IN

IN

CANADA

YEAR



1901

|   |   |
|---|---|
| <u>Dominion Statistician:</u>                             | S. A. Cudmore, M.A. (Oxon.), F.S.S., F.R.S.C. |
| <u>Chief - Mining, Metallurgical and Chemical Branch:</u> | W. H. Losee, B.Sc.                            |
| <u>Statistician - Metal and Chemical Products:</u>        | H. McLeod, B.Sc.                              |
| <u>Mining Statistician:</u>                               | R. J. McDowell, B.Sc.                         |

### THE CLAY AND CLAY PRODUCTS INDUSTRY, 1945

The industrial clays of Canada may be classified as common clays, stoneware clays, fireclays, and china clays. Statistically, the ceramic industry of Canada is conveniently classified into two divisions: (1) Production from domestic clays, which includes the production of building brick, structural tile, drain tile, roofing tile, stoneware, sewer pipe, pottery and refractories, and (2) production from imported clays, which includes the manufacture of electrical porcelains, sanitary ware, sewer pipe, table ware, pottery, ceramic floor and wall tile, and various kinds of fireclay refractories. Data relating to the production of glass, cement and artificial abrasives are contained in separate reports.

A total of 129 plants, representing in the aggregate, a capital investment of \$22,701,065, operated in the domestic and imported clay products industries in Canada during 1945. These two industries provided employment for 3,290 persons during the year; their earnings totalled \$4,678,202. The combined production in 1945 was valued at \$10,993,609 compared with \$12,478,951 in 1942.

#### I. PRODUCTION FROM DOMESTIC CLAYS, 1945

The gross value of Canadian producers' sales of domestic clays and products made from same totalled \$6,608,193 in 1945 compared with \$7,081,723 in 1942, and \$13,904,643—the all-time high record established in 1929. Commercial production of domestic clay products in 1945 was reported from every province except Prince Edward Island; no output of these materials has as yet been recorded for the Yukon and Northwest Territories. Of the total value of sales in 1945, Ontario and Quebec firms contributed \$2,453,829 and \$1,504,428, respectively.

Sales of building brick in 1945 totalled 138,678 M, valued at \$2,808,764. Sewer pipe shipments aggregated \$1,116,846; hollow blocks, roofing and floor tile \$847,311; drain tile \$390,377; pottery, including earthenware, \$701,144; bentonite \$117,047, and fireclay, firebrick and fireclay blocks \$491,595.

The number of firms reported as active in the Canadian domestic clay products industry during 1945 totalled 101; of these, 51 were located in Ontario, 15 in Quebec, 10 in Alberta, 7 in British Columbia and the remainder in Nova Scotia, New Brunswick, Saskatchewan and Manitoba. Capital employed by the industry was reported at \$17,162,747, employees numbered 2,173, and salaries and wages paid amounted to \$2,909,841. Fuel and electricity used in 1945 totalled \$1,157,471 and chemicals and various other process supplies consumed were valued at \$104,336.

Imports into Canada of clay and various clay products in 1945 were appraised at \$15,446,817 compared with \$14,918,358 in 1942. The value of clay products exported from Canada in 1945 was \$458,529 as against \$425,636 in the preceding year.

The following information is taken from a report "Clays and Clay Products 1945" as prepared by the Bureau of Mines, Ottawa:

"Compared to world production, the value of ceramic products manufactured in Canada is small, and large quantities of the various kinds are imported annually.

"Common clays suitable for the production of building brick and tile are found in all the provinces of Canada.

"The largest production in Canada of stoneware clay or semi-fireclays comes from the Eastend and Willows area, Saskatchewan. Large quantities of the clays from the area are selectively mined and shipped to Medicine Hat, Alberta, where, owing to the availability of cheap gas fuel, they are used extensively in the manufacture of stoneware, sewer pipe, pottery, tableware, etc.

"Stoneware clays and moderately refractory fireclays occur near Shubenacadie and Musquodoboit, Nova Scotia. Some of the Musquodoboit clay is used for the production of pottery, but it has not been extensively developed for ceramic use.

"Stoneware clays or low-grade fireclays occur near Williams Lake, and Chimney Creek Bridge in British Columbia; in the Cypress Hills of Alberta; and near Swan River, Manitoba; but they are difficult of access and have not been developed.

"Two large plants and a few small plants manufacture fireclay refractories from domestic clay. At one plant, about 50 miles south of Vancouver, a high-grade, moderately plastic fireclay is extracted by underground mining from the clay beds in the Sumas Mountain, and the plant manufactures firebrick and other refractory materials. Another plant at Claybank, Saskatchewan, by selective mining, utilizes the highly plastic refractory clays from the "White Mud" beds of southern Saskatchewan.

"A small amount of the most refractory clays in the deposits near Shubenacadie is mined and used by the steel plant at Sydney, Nova Scotia, for refractory purposes and some of the Musquodoboit clay is used for stove linings. Almost all other manufacturers of fireclay refractories (including high temperature cements, plastic refractories, etc.) use imported clay.

"China clay (kaolin) has been produced commercially in Canada only from the vicinity of St. Remi d'Amherst, Papineau county, Quebec, where mining operations were carried on for several years prior to 1925. The large-scale operation of this deposit has been under consideration for a number of years and a company was organized a few years ago to extract the kaolinized material by underground mining, to refine it into high-grade china clay, and to recover washed silica sand as a by-product. Following its reorganization as Canada China Clay and Silica Products, Limited, the company constructed a modern plant equipped to carry out the washing process in accordance with the most up-to-date and scientific methods. The plant has been producing glass sand regularly. The Canadian production of grades of silica sand suitable for the glass trade is of importance, now that the Belgian source of supply has been cut off. Canadian Kaolin-Silica Products' property at Lac Remi, Quebec, which was operated chiefly for the production of high-grade silica sand, has been idle since the destruction of the plant by fire a few years ago.

"Several other interesting occurrences of kaolin have been discovered in Quebec in recent years. One of these, located on Thirty-One Mile Lake, near Point Comfort, Hull county, is being explored and portions of the deposit yield china clay of a high grade in the crude state. The extent and uniformity of the deposit is not as yet proved, but its possibilities as a source of high-grade fireclay are receiving attention. Kaolin has also been discovered near Brebeuf; on Lake Labelle; and near Chateau Richer in Quebec, but there has been little exploratory work on the deposits.

"Important deposits of high-grade, plastic, white-burning and buff-burning clays occur on the Mattagami, Abitibi, and Missinabi Rivers in northern Ontario. Some of these can be classed as china clays, others as fireclays, and still others as ball clays. The deposits have attracted considerable interest in recent years, but efforts to develop them have been handicapped owing to the distance of the deposits from industrial centres, and to the lack of transportation facilities.

"In British Columbia, along the Fraser River, about 25 miles above Prince George, is an extensive clay deposit, parts of which yield a high grade of china clay. As china clay from England is difficult to obtain on the West coast, owing to shipping risks, consideration is being given to the possibility of using material from this deposit as a source of china clay suitable for the pulp and paper trade.

"In the manufacture of porcelain, sanitary ware, dinner ware, ceramic floor and wall tile, etc., china clay and ball clay from England has been used almost entirely. Separate production figures are not published for these classes of ceramic ware as there are only one or two producers in each case. Canada also imports large quantities of china clay for use in the production of paper; in the rubber industry; and for other industrial purposes.

"Ball clays of high bond strength occur in the "White Mud" beds of southern Saskatchewan, but as yet they have not been developed.

"Activated clays for oil bleaching are largely imported. The value of such clays imported into Canada by oil refineries in 1943 was \$295,066, compared with \$348,068 in 1942. Fuller's and infusorial earths are also imported for use in sugar refineries, vegetable oil mills, etc. It has been reported that certain western bentonitic materials have been finding a market in Canada for oil bleaching purposes."

Table 1 - PRINCIPAL STATISTICS OF THE DOMESTIC CLAY PRODUCTS INDUSTRY IN CANADA, 1942 and 1943

|  | 1942          | 1943          |
|--|---------------|---------------|
| Number of plants .....                       | 124           | 105           |
| Capital employed .....                       | \$ 17,793,931 | \$ 17,162,747 |
| Number of employees - On salary .....        | 281           | 248           |
| On wages .....                               | 2,242         | 1,925         |
| Total .....                                  | 2,523         | 2,175         |
| Salaries and wages - Salaries .....          | \$ 590,545    | \$ 570,300    |
| Wages .....                                  | \$ 2,482,466  | \$ 2,339,541  |
| Total .....                                  | \$ 3,073,011  | \$ 2,909,841  |
| Selling value of products (gross) .....      | \$ 7,081,725  | \$ 6,608,193  |
| Cost of fuel and purchased electricity ..... | \$ 1,451,239  | \$ 1,157,471  |
| Cost of process supplies .....               | \$ 158,866    | \$ 104,536    |
| Net value of sales .....                     | \$ 5,630,484  | \$ 5,348,586  |

Table 2 - CAPITAL EMPLOYED IN THE DOMESTIC CLAY PRODUCTS INDUSTRY IN CANADA, BY PROVINCES, 1943

| Industry and Province                         | Capital Employed as Represented by: |   |  |   |   | \$         |
|---|-------------------------------------|---|--|---|---|------------|
|   | Present<br>value of<br>land (\$)    | Present<br>value of<br>buildings,<br>fixtures,<br>machinery,<br>tools and<br>other<br>equipment | Inventory<br>value of<br>materials<br>on hand,<br>stocks in<br>process,<br>fuel,<br>etc. | Inventory<br>value of<br>finished<br>products | Operating<br>capital,<br>including<br>cash,<br>bills and<br>accounts<br>receivable,<br>etc. |            |
|   | \$                                  | \$  | \$   | \$  | \$  | \$         |
| <u>By Industries</u>                          |                                     |   |  |   |   |            |
| <u>Brick and tile (x)</u> -                   |                                     |   |  |   |   |            |
| Nova Scotia .....                             | 113,006                             | 561,144   | 51,278   | 27,490  | 70,892  | 803,810    |
| New Brunswick .....                           | 19,568                              | 160,862   | 2,931  | 5,800   | 23,761  | 212,922    |
| Quebec .....                                  | 767,218                             | 2,153,389   | 99,048   | 204,683                                       | 809,697   | 4,034,035  |
| Ontario .....                                 | 1,157,979                           | 4,121,036   | 104,312  | 259,239                                       | 2,162,005   | 7,804,571  |
| Manitoba .....                                | 14,000                              | 14,500  | ...  | 3,100   | 60,000  | 91,600     |
| Saskatchewan .....                            | 227,840                             | 384,911   | 29,103   | 53,228  | 117,779   | 792,861    |
| Alberta .....                                 | 119,455                             | 1,537,451   | 17,245   | 51,079  | 262,875   | 1,988,085  |
| British Columbia ....                         | 120,725                             | 324,587   | 8,604  | 103,688                                       | 138,196   | 695,800    |
| TOTAL .....                                   | 2,539,791                           | 9,257,860   | 292,521  | 688,307                                       | 3,645,205   | 16,423,684 |
| <u>Stoneware and Pottery</u>                  |                                     |   |  |   |   |            |
| TOTAL .....                                   | 41,669                              | 471,458   | 15,818   | 45,220  | 164,898   | 759,063    |
| <u>By Provinces</u>                           |                                     |   |  |   |   |            |
| <u>Total for clay and clay<br/>products -</u> |                                     |   |  |   |   |            |
| Nova Scotia .....                             | 113,006                             | 561,144   | 51,278   | 27,490  | 70,892  | 803,810    |
| New Brunswick .....                           | 26,760                              | 174,517   | 7,149  | 8,402   | 35,721  | 252,349    |
| Quebec .....                                  | 768,418                             | 2,164,189   | 100,648  | 206,283                                       | 811,197   | 4,050,735  |
| Ontario .....                                 | 1,170,479                           | 4,141,036   | 105,112  | 264,988                                       | 2,177,705   | 7,859,320  |
| Manitoba .....                                | 14,000                              | 14,500  | ...  | 3,100   | 60,000  | 91,600     |
| Saskatchewan .....                            | 227,840                             | 384,911   | 29,103   | 53,228  | 117,779   | 792,861    |
| Alberta .....                                 | 140,232                             | 1,964,634   | 26,445   | 86,348  | 398,613   | 2,616,272  |
| British Columbia ....                         | 120,725                             | 324,587   | 8,604  | 103,688                                       | 138,196   | 695,800    |
| TOTAL .....                                   | 2,581,460                           | 9,729,318   | 308,339  | 733,527                                       | 3,810,103   | 17,162,747 |

(x) Clay, sewer pipe, firebrick products and other clays included under brick and tile.

(/) Excluding unmined material.

Table 5 - PRINCIPAL STATISTICS, BY PROVINCES, DOMESTIC CLAY PRODUCTS INDUSTRY, 1939-1943

| Province and year         | Number of firms | Capital employed | Number of employees | Salaries and wages paid | Cost of process supplies used | Cost of fuel and electricity | Net value of sales |
|---------------------------|-----------------|------------------|---------------------|-------------------------|-------------------------------|------------------------------|--------------------|
| <u>Nova Scotia</u> -      |                 | \$               |                     | \$                      | \$                            | \$                           | \$                 |
| 1939 .....                | 6               | 935,708          | 142                 | 129,870                 | 5,270                         | 62,994                       | 275,688            |
| 1940 .....                | 5               | 904,821          | 139                 | 141,513                 | 6,256                         | 84,658                       | 399,629            |
| 1941 .....                | 6               | 893,152          | 200                 | 189,732                 | 5,755                         | 114,149                      | 409,531            |
| 1942 .....                | 5               | 875,627          | 207                 | 205,776                 | 6,876                         | 126,376                      | 485,189            |
| 1943 .....                | 5               | 803,810          | 176                 | 214,404                 | 4,656                         | 106,167                      | 367,768            |
| <u>New Brunswick</u> -    |                 | \$               |                     | \$                      | \$                            | \$                           | \$                 |
| 1939 .....                | 3               | 245,928          | 64                  | 46,556                  | 2,069                         | 29,906                       | 98,010             |
| 1940 .....                | 5               | 253,917          | 70                  | 58,245                  | 2,846                         | 38,360                       | 130,539            |
| 1941 .....                | 6               | 256,226          | 71                  | 67,885                  | 3,107                         | 52,279                       | 138,257            |
| 1942 .....                | 5               | 255,900          | 103                 | 78,721                  | 8,883                         | 52,223                       | 184,935            |
| 1943 .....                | 5               | 252,349          | 95                  | 81,308                  | 5,725                         | 50,260                       | 160,461            |
| <u>Quebec</u> -           |                 | \$               |                     | \$                      | \$                            | \$                           | \$                 |
| 1939 .....                | 18              | 4,307,156        | 498                 | 503,480                 | 43,686                        | 293,610                      | 937,480            |
| 1940 .....                | 19              | 3,864,494        | 570                 | 600,028                 | 49,409                        | 378,710                      | 1,118,127          |
| 1941 .....                | 24              | 4,131,649        | 680                 | 741,266                 | 67,276                        | 445,689                      | 1,431,393          |
| 1942 .....                | 19              | 3,954,826        | 492                 | 662,453                 | 55,286                        | 358,294                      | 1,327,757          |
| 1943 .....                | 16              | 4,050,735        | 455                 | 612,775                 | 17,502                        | 301,815                      | 1,185,111          |
| <u>Ontario</u> -          |                 | \$               |                     | \$                      | \$                            | \$                           | \$                 |
| 1939 .....                | 82              | 8,303,580        | 884                 | 930,217                 | 49,936                        | 497,052                      | 1,799,650          |
| 1940 .....                | 75              | 7,618,378        | 1,038               | 1,130,262               | 67,340                        | 626,659                      | 1,814,541          |
| 1941 .....                | 71              | 7,639,665        | 1,160               | 1,422,132               | 112,112                       | 791,912                      | 2,185,592          |
| 1942 .....                | 61              | 8,167,700        | 880                 | 1,185,093               | 62,526                        | 581,292                      | 1,905,868          |
| 1943 .....                | 54              | 7,859,320        | 717                 | 1,109,081               | 52,926                        | 579,647                      | 1,821,256          |
| <u>Manitoba</u> -         |                 | \$               |                     | \$                      | \$                            | \$                           | \$                 |
| 1939 .....                | 5               | 265,876          | 63                  | 46,780                  | 390                           | 13,557                       | 65,165             |
| 1940 .....                | 5               | 257,954          | 68                  | 56,582                  | 407                           | 19,634                       | 82,865             |
| 1941 .....                | 4               | 214,994          | 61                  | 51,894                  | 550                           | 16,693                       | 67,774             |
| 1942 .....                | 4               | 155,708          | 55                  | 60,261                  | 312                           | 13,327                       | 67,251             |
| 1943 .....                | 3               | 91,600           | 67                  | 80,103                  | 300                           | 7,751                        | 124,351            |
| <u>Saskatchewan</u> -     |                 | \$               |                     | \$                      | \$                            | \$                           | \$                 |
| 1939 .....                | 6               | 818,889          | 41                  | 55,774                  | 1,282                         | 11,536                       | 155,956            |
| 1940 .....                | 6               | 787,034          | 48                  | 59,864                  | 1,158                         | 18,219                       | 145,471            |
| 1941 .....                | 5               | 820,893          | 47                  | 75,582                  | 1,335                         | 22,465                       | 201,097            |
| 1942 .....                | 5               | 816,927          | 58                  | 81,685                  | 2,053                         | 22,705                       | 246,567            |
| 1943 .....                | 5               | 792,861          | 48                  | 80,842                  | 2,225                         | 24,126                       | 322,374            |
| <u>Alberta</u> -          |                 | \$               |                     | \$                      | \$                            | \$                           | \$                 |
| 1939 .....                | 10              | 2,153,477        | 263                 | 249,081                 | 1,725                         | 52,077                       | 427,277            |
| 1940 .....                | 12              | 2,509,514        | 411                 | 396,777                 | 4,435                         | 44,922                       | 789,499            |
| 1941 .....                | 12              | 2,570,548        | 441                 | 405,983                 | 6,430                         | 51,419                       | 914,295            |
| 1942 .....                | 12              | 2,480,734        | 468                 | 430,664                 | 7,976                         | 17,393                       | 988,128            |
| 1943 .....                | 10              | 2,616,272        | 475                 | 482,779                 | 12,745                        | 17,642                       | 948,262            |
| <u>British Columbia</u> - |                 | \$               |                     | \$                      | \$                            | \$                           | \$                 |
| 1939 .....                | 11              | 912,128          | 210                 | 200,130                 | 6,457                         | 58,171                       | 306,512            |
| 1940 .....                | 12              | 950,331          | 213                 | 232,180                 | 7,804                         | 71,431                       | 441,648            |
| 1941 .....                | 9               | 850,426          | 221                 | 273,511                 | 10,882                        | 86,720                       | 460,824            |
| 1942 .....                | 9               | 823,052          | 211                 | 298,300                 | 12,074                        | 83,557                       | 465,115            |
| 1943 .....                | 7               | 695,800          | 160                 | 248,549                 | 8,277                         | 70,083                       | 416,805            |
| <u>CANADA</u> -           |                 | \$               |                     | \$                      | \$                            | \$                           | \$                 |
| 1939 .....                | 141             | 17,940,742       | 2,165               | 2,161,688               | 108,815                       | 998,683                      | 4,043,758          |
| 1940 .....                | 139             | 17,146,443       | 2,557               | 2,675,251               | 139,635                       | 1,282,593                    | 4,322,519          |
| 1941 .....                | 137             | 17,377,553       | 2,881               | 3,227,785               | 207,247                       | 1,561,326                    | 5,806,763          |
| 1942 .....                | 120             | 17,510,474       | 2,474               | 3,000,953               | 155,766                       | 1,255,167                    | 5,670,790          |
| 1943 .....                | 105             | 17,162,747       | 2,173               | 2,909,841               | 104,356                       | 1,157,471                    | 5,346,386          |
| 1926 .....                | 194             | 28,152,062       | 4,395               | 4,346,587               | (x)                           | 2,080,054                    | (x)                |

(x) Information not available.

In 1913 there were 455 active firms in the Canadian domestic clay products industry; men employed numbered 11,193 and \$4,682,801 were distributed in salaries and wages. In 1918 the number of active firms was 230 and \$2,131,614 were paid in wages to 3,423 employees.

Table 4 - AVERAGE NUMBER OF WAGE-EARNERS, BY MONTHS, 1940-1943

| Month           | 1940  | 1941  | 1942  | Pit | 1 9 4 3 |             |
|-----------------|-------|-------|-------|-----|---------|-------------|
|                 |       |       |       |     | Plant   | Male Female |
| January .....   | 1,190 | 1,907 | 1,966 | 72  | 1,437   | 183         |
| February .....  | 1,051 | 1,792 | 1,811 | 72  | 1,404   | 187         |
| March .....     | 1,287 | 1,871 | 1,829 | 79  | 1,453   | 196         |
| April .....     | 1,733 | 2,427 | 2,106 | 94  | 1,449   | 207         |
| May .....       | 2,647 | 3,250 | 2,382 | 138 | 1,565   | 195         |
| June .....      | 3,143 | 3,369 | 2,570 | 179 | 1,685   | 208         |
| July .....      | 3,191 | 3,281 | 2,588 | 170 | 1,782   | 215         |
| August .....    | 3,027 | 3,070 | 2,560 | 168 | 1,789   | 212         |
| September ..... | 2,812 | 2,869 | 2,389 | 143 | 1,745   | 213         |
| October .....   | 2,530 | 2,628 | 2,326 | 128 | 1,672   | 221         |
| November .....  | 2,300 | 2,424 | 2,218 | 117 | 1,566   | 226         |
| December .....  | 2,151 | 2,153 | 1,920 | 103 | 1,502   | 225         |

Table 5 - NUMBER OF WAGE-EARNERS WHO WORKED THE NUMBER OF HOURS SPECIFIED, DURING ONE WEEK IN MONTH OF HIGHEST EMPLOYMENT (Overtime included)

| Hours                  | 1 9 4 3 |        | Hours                            | 1 9 4 3 |        |
|------------------------|---------|--------|----------------------------------|---------|--------|
|                        | Male    | Female |                                  | Male    | Female |
| No.                    | No.     |        |                                  |         |        |
| 30 hours or less ..... | 42      | 1      | 51-54 hours .....                |         |        |
| 31-45 hours .....      | 64      | ...    | 55 hours .....                   |         |        |
| 44 hours .....         | 142     | ...    | 56-64 hours .....                |         |        |
| 45-47 hours .....      | 59      | 7      | 65 hours and over .....          |         |        |
| 48 hours .....         | 251     | 186    | GRAND TOTAL .....                | 2,034   | 250    |
| 49-50 hours .....      | 217     | 21     | Total wages paid in that week \$ | 52,232  | 3,493  |

Table 6 - FUEL AND ELECTRICITY USED, 1942 and 1943

| Kind                                     | Unit of measure | Quantity   | 1 9 4 2       |    | 1 9 4 3       |           |
|--|-----------------|------------|---------------|----|---------------|-----------|
|  |                 |            | Cost at works | \$ | Cost at works | \$        |
| Bituminous coal—Canadian .....           | short ton       | 32,816     | 228,437       |    | 28,281        | 204,239   |
| Imported .....                           | short ton       | 76,138     | 643,950       |    | 71,115        | 645,112   |
| Anthracite coal—From United States ..... | short ton       | 228        | 2,229         |    | 84            | 1,281     |
| Other .....                              | short ton       | 375        | 2,526         |    | ...           | ...       |
| Lignite coal .....                       | short ton       | 1,961      | 4,814         |    | 1,183         | 5,062     |
| Coke .....                               | short ton       | 363        | 3,687         |    | 180           | 2,092     |
| Gasoline .....                           | Imp.gal.        | 137,239    | 41,199        |    | 110,766       | 32,642    |
| Kerosene or coal oil .....               | Imp.gal.        | 1,268      | 216           |    | 4,282         | 926       |
| Fuel oil .....                           | Imp.gal.        | 335,410    | 28,835        |    | 176,013       | 15,037    |
| Wood .....                               | cord            | 27,202     | 126,180       |    | 15,026        | 79,967    |
| Gas—Natural .....                        | M cu.ft.        | 475,584    | 15,720        |    | 758,138       | 15,971    |
| Manufactured .....                       | M cu.ft.        | 803        | 321           |    | 23,295        | 5,158     |
| Electricity purchased .....              | K.W.H.          | 11,483,046 | 156,518       |    | 10,748,575    | 148,925   |
| Other fuel .....                         | ...             | ...        | 555           |    | ...           | 1,061     |
| TOTAL .....                              | ...             | ...        | 1,255,167     |    | ...           | 1,157,471 |
| Electricity generated for own use..      | K.W.H.          | 564,768    | ...           |    | 258,910       | ...       |

Table 7 - POWER EQUIPMENT IN THE DOMESTIC CLAY PRODUCTS INDUSTRY, 1943

| Description  | Ordinarily in Use |                       | In Reserve or Idle |                       |
|--|-------------------|-----------------------|--------------------|-----------------------|
|  | Number of units   | Total horse power (x) | Number of units    | Total horse power (x) |
| Steam engines .....  | 33                | 3,128                 | 6                  | 647                   |
| Steam turbines .....   | 2                 | 250                   | 4                  | 20                    |
| Diesel engines .....   | 7                 | 560                   | ...                | ...                   |
| Gasoline, gas and oil engines, other than diesel engines ..... | 49                | 1,418                 | 11                 | 600                   |
| Hydraulic turbines or water wheels .....                       | 17                | 712                   | ...                | ...                   |
| Electric motors -  |                   |                       |                    |                       |
| (a) Operated by purchased power .....                          | 405               | 12,185                | 39                 | 1,928                 |
| TOTAL .....  | 515               | 18,253                | 60                 | 5,195                 |
| (b) Operated by power generated by the establishment .....     | 26                | 267                   | ...                | ...                   |
| Stationary boilers .....                                       | 53                | 5,114                 | 9                  | 690                   |
| Motor generator sets .....                                     | 2                 | 13                    | ...                | ...                   |

(x) According to manufacturers' rating.

Table 8 - PRODUCTION (SALES) OF DOMESTIC CLAY AND CLAY PRODUCTS IN CANADA, 1942 and 1943

| Product  | Unit of measure | Sales or Shipments |           |        |           |
|--|-----------------|--------------------|-----------|--------|-----------|
|  |                 | 1942               | \$        | 1943   | \$        |
| Quantity   |                 | Quantity           |           |        |           |
| Clay—Bentonite .....   | ton             | 1,616              | 44,204    | (x)    | 117,047   |
| Fireclay .....   | ton             | 5,601              | 40,722    | 5,653  | 42,122    |
| Kaolin .....   | ton             | 408                | 6,130     | 93     | 1,531     |
| Other clay .....   | ton             | 24,803             | 71,826    | 20,638 | 101,036   |
| Fireclay blocks and shapes .....   | ...             | ...                | 210,246   | ...    | 256,655   |
| Firebrick .....  | M               | 3,816              | 197,830   | 3,644  | 192,618   |
| Brick—Soft mud process—Face .....  | M               | 11,385             | 235,251   | 9,260  | 206,826   |
| Common .....   | M               | 20,587             | 325,762   | 14,195 | 209,508   |
| Stiff mud process—Face .....   | M               | 39,104             | 872,287   | 34,623 | 867,630   |
| (wire cut) Common .....  | M               | 59,901             | 893,488   | 51,000 | 829,365   |
| Brick—Dry press—Face .....   | M               | 12,871             | 278,701   | 10,504 | 256,362   |
| Common .....   | M               | 25,145             | 404,730   | 15,681 | 243,446   |
| Fancy or ornamental brick (including special shapes, embossed and enamelled brick) .....                                       | M               | 11                 | 676       | 3,190  | 191,424   |
| Sewer brick .....  | M               | 513                | 9,480     | 225    | 4,203     |
| Paving brick .....   | M               | 153                | 9,353     | 151    | 8,967     |
| Structural tile -  |                 |                    |           |        |           |
| Hollow blocks (including fireproofing and load-bearing tile) .....   | ton             | 109,905            | 1,082,573 | 84,469 | 819,535   |
| Roofing tile .....   | ...             | ...                | 32        | ...    | 827       |
| Floor tile (quarries) .....  | ...             | ...                | 23,705    | ...    | 26,949    |
| Drain tile .....   | M               | 11,659             | 329,035   | 15,001 | 390,377   |
| Sewer pipe (including copings, flue linings, conduits, etc.) .....   | ...             | ...                | 1,592,545 | ...    | 1,116,846 |
| Pottery, glazed or unglazed (including coarse earthenware, sanitary ware, stoneware, flower pots, and all other pottery) ..... | ...             | ...                | 646,088   | ...    | 701,144   |
| Other products .....   | ...             | ...                | 9,059     | ...    | 23,775    |
| TOTAL .....  | ...             | ...                | 7,081,723 | ...    | 6,608,193 |

In addition to the clays recorded in the above table, there were 165,345 tons of ordinary clay consumed in Canada during 1943 in the production of Portland cement; the corresponding consumption in 1942 was 188,202 tons. Also consumed by the Canadian cement industry in 1943 were 75,460 tons of shale.

(x) Not published.

Table 9 - PRODUCTION (TOTAL SALES) OF CLAY PRODUCTS FROM DOMESTIC CLAYS, 1913-1945

| Year       | \$         | Year       | \$         |
|------------|------------|------------|------------|
| 1913 ..... | 9,504,314  | 1929 ..... | 15,904,645 |
| 1914 ..... | 6,871,957  | 1930 ..... | 10,535,578 |
| 1915 ..... | 3,914,488  | 1931 ..... | 7,841,288  |
| 1916 ..... | 4,120,805  | 1932 ..... | 3,650,218  |
| 1917 ..... | 4,779,038  | 1933 ..... | 2,262,835  |
| 1918 ..... | 4,583,489  | 1934 ..... | 2,680,410  |
| 1919 ..... | 7,906,366  | 1935 ..... | 3,012,563  |
| 1920 ..... | 10,664,929 | 1936 ..... | 3,471,027  |
| 1921 ..... | 8,857,818  | 1937 ..... | 4,516,859  |
| 1922 ..... | 11,458,456 | 1938 ..... | 4,536,084  |
| 1923 ..... | 10,483,016 | 1939 ..... | 5,151,236  |
| 1924 ..... | 9,215,077  | 1940 ..... | 6,344,547  |
| 1925 ..... | 9,529,691  | 1941 ..... | 7,575,336  |
| 1926 ..... | 10,557,525 | 1942 ..... | 7,081,723  |
| 1927 ..... | 11,173,189 | 1943 ..... | 6,608,193  |
| 1928 ..... | 12,581,718 |            |            |

Table 10 - PRODUCTION (TOTAL SALES) OF CLAY PRODUCTS, BY PROVINCES, 1939-1945 (Gross Values)

| Province               | 1939      | 1940      | 1941      | 1942      | 1943      |
|------------------------|-----------|-----------|-----------|-----------|-----------|
|                        | \$        | \$        | \$        | \$        | \$        |
| Nova Scotia .....      | 359,952   | 490,543   | 529,455   | 618,441   | 478,571   |
| New Brunswick .....    | 129,985   | 171,745   | 193,643   | 246,041   | 216,448   |
| Quebec .....           | 1,274,776 | 1,546,246 | 1,944,358 | 1,741,297 | 1,504,428 |
| Ontario .....          | 2,546,638 | 2,508,540 | 3,087,616 | 2,549,486 | 2,453,829 |
| Manitoba .....         | 78,892    | 102,906   | 84,817    | 80,890    | 132,382   |
| Saskatchewan .....     | 148,774   | 164,823   | 224,897   | 271,325   | 348,725   |
| Alberta .....          | 461,079   | 838,856   | 952,144   | 1,013,497 | 978,649   |
| British Columbia ..... | 371,140   | 520,883   | 558,426   | 560,746   | 495,163   |
| CANADA .....           | 5,151,236 | 6,344,547 | 7,575,336 | 7,081,723 | 6,608,193 |

Table 11 - PRODUCTION (SALES) OF BUILDING BRICK (a) - DOMINION TOTALS FOR YEARS SPECIFIED, 1905-1945

| Year       | M       | \$        | Average<br>value<br>per M (b) | Year       | M       | \$        | Average<br>value<br>per M (b) |
|------------|---------|-----------|-------------------------------|------------|---------|-----------|-------------------------------|
|            |         |           | \$                            |            |         |           |                               |
| 1905 (x).. | 525,820 | 3,953,925 | 7.51                          | 1935 ..... | 100,538 | 1,555,167 | 15.47                         |
| 1914 ..... | 551,149 | 4,769,417 | 8.65                          | 1936 ..... | 115,732 | 1,748,772 | 15.11                         |
| 1927 ..... | 398,459 | 6,941,151 | 17.42                         | 1937 ..... | 153,770 | 2,375,276 | 15.45                         |
| 1928 ..... | 421,301 | 7,281,777 | 17.28                         | 1938 ..... | 148,807 | 2,341,443 | 15.73                         |
| 1929 ..... | 458,630 | 8,005,358 | 17.45                         | 1939 ..... | 165,024 | 2,676,634 | 16.22                         |
| 1930 ..... | 519,858 | 5,581,501 | 17.45                         | 1940 ..... | 191,213 | 3,277,187 | 17.14                         |
| 1931 ..... | 257,143 | 4,289,119 | 18.09                         | 1941 ..... | 208,871 | 3,785,493 | 18.00                         |
| 1932 ..... | 100,477 | 1,779,534 | 17.71                         | 1942 ..... | 169,517 | 3,018,375 | 17.85                         |
| 1933 ..... | 67,700  | 1,124,517 | 16.61                         | 1943 ..... | 158,678 | 2,808,764 | 20.25                         |
| 1934 ..... | 86,072  | 1,585,929 | 16.08                         |            |         |           |                               |

(a) Totals comparable with those in Table 13.

(b) Based on shipments of all grades and the value per M should be interpreted as the value of pressed, common and other varieties 'en masse' and not the value of any one particular type of brick.

(x) Quantity not recorded prior to 1905.

Table 12 - PRODUCTION OF BUILDING BRICK IN CANADA, PER CAPITA OF POPULATION, FOR YEARS SPECIFIED

| Year       | M per capita | Year       | M per capita |
|------------|--------------|------------|--------------|
| 1905 ..... | 0.087        | 1936 ..... | 0.010        |
| 1914 ..... | 0.070        | 1937 ..... | 0.014        |
| 1929 ..... | 0.046        | 1938 ..... | 0.013        |
| 1930 ..... | 0.031        | 1939 ..... | 0.015        |
| 1932 ..... | 0.010        | 1940 ..... | 0.017        |
| 1933 ..... | 0.006        | 1941 ..... | 0.018        |
| 1934 ..... | 0.008        | 1942 ..... | 0.014        |
| 1935 ..... | 0.009        | 1943 ..... | 0.012        |

Table 13 - PRODUCTION (SALES) OF BUILDING BRICK (x) IN CANADA, BY PROVINCES, 1941-1943

| Province                | 1 9 4 1 |           | 1 9 4 2 |           | 1 9 4 3 |           |
|-------------------------|---------|-----------|---------|-----------|---------|-----------|
|                         | M       | \$        | M       | \$        | M       | \$        |
| Nova Scotia .....       | 5,402   | 84,394    | 7,086   | 129,679   | 6,411   | 108,965   |
| New Brunswick .....     | 7,219   | 119,570   | 7,580   | 146,335   | 6,856   | 121,359   |
| Quebec .....            | 78,700  | 1,384,875 | 61,300  | 1,067,253 | 52,428  | 976,370   |
| Ontario .....           | 88,484  | 1,786,717 | 69,960  | 1,359,817 | 56,389  | 1,381,796 |
| Manitoba .....          | 4,686   | 79,260    | 2,753   | 42,090    | 1,546   | 21,954    |
| Saskatchewan .....      | 921     | 10,864    | 494     | 6,494     | 296     | 5,558     |
| Alberta .....           | 15,441  | 152,827   | 13,991  | 145,579   | 12,026  | 130,534   |
| British Columbia .....  | 8,018   | 147,186   | 6,153   | 121,328   | 2,726   | 62,430    |
| CANADA .....            | 208,871 | 5,765,493 | 169,517 | 5,018,375 | 138,678 | 2,808,764 |
| Average value per M ... | ...     | \$18.00   | ...     | \$17.85   | ...     | \$20.25   |

(x) Includes fancy and sewer brick.

Table 14 - VALUE (x) OF DRAIN TILE AND SEWER PIPE PRODUCED (SALES) IN CANADA FROM DOMESTIC CLAYS, BY PROVINCES, 1941-1943

| Province               | 1 9 4 1   |    | 1 9 4 2   |    | 1 9 4 3   |    |
|------------------------|-----------|----|-----------|----|-----------|----|
|                        | \$        | \$ | \$        | \$ | \$        | \$ |
| Nova Scotia .....      | 336,450   |    | 351,053   |    | 255,757   |    |
| New Brunswick .....    | 5,729     |    | 4,448(x)  |    | 7,346     |    |
| Quebec .....           | 210,390   |    | 230,128   |    | 209,852   |    |
| Ontario .....          | 705,370   |    | 644,631   |    | 628,447   |    |
| Manitoba .....         | ...       |    | ...       |    | ...       |    |
| Saskatchewan .....     | 400(x)    |    | ...       |    | 5,625(x)  |    |
| Alberta .....          | 334,318   |    | 343,141   |    | 281,008   |    |
| British Columbia ..... | 163,096   |    | 148,179   |    | 141,208   |    |
| CANADA .....           | 1,755,753 |    | 1,721,580 |    | 1,507,225 |    |

(x) Includes value of copings, flue linings, etc.

(x) Drain tile only.

Table 15 - VALUE (x) OF DRAIN TILE AND SEWER PIPE PRODUCED IN CANADA FOR YEARS SPECIFIED

| Year       | Value     | Year       | Value     | Year       | Value     |
|------------|-----------|------------|-----------|------------|-----------|
| 1912 ..... | 1,242,503 | 1924 ..... | 2,003,649 | 1935 ..... | 686,895   |
| 1914 ..... | 1,470,859 | 1926 ..... | 1,876,794 | 1937 ..... | 1,089,180 |
| 1916 ..... | 1,075,674 | 1928 ..... | 2,379,698 | 1938 ..... | 1,100,881 |
| 1918 ..... | 1,199,114 | 1929 ..... | 2,726,203 | 1939 ..... | 1,167,181 |
| 1920 ..... | 2,111,742 | 1931 ..... | 1,837,215 | 1940 ..... | 1,430,154 |
| 1922 ..... | 2,173,735 | 1933 ..... | 577,287   |            |           |

(x) Includes value of copings, flue linings, etc.

Clay

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Table 16 - PRODUCTION (SALES) OF FIRECLAY BLOCKS AND SHAPES AND FIREBRICK FROM DOMESTIC CLAYS, BY PROVINCES, 1945

| Province             | Fireclay (x) |        | Fireclay Blocks and Shapes | Firebrick |         |
|----------------------|--------------|--------|----------------------------|-----------|---------|
|                      | Short tons   | \$     |                            | M         | \$      |
| Nova Scotia .....    | 2,542        | 9,944  | 1,220                      | ...       | ...     |
| New Brunswick .....  | ...          | ...    | 2,308                      | ...       | ...     |
| Ontario .....        | 508          | 2,247  | ...                        | ...       | ...     |
| Saskatchewan .....   | 1,497        | 15,173 | 218,151                    | ...       | ...     |
| British Columbia ... | 1,106        | 14,758 | 34,976                     | 5,644     | 192,618 |
| CANADA .....         | 5,653        | 42,122 | 256,655                    | 5,644     | 192,618 |

(x) Does not include the entire quantity of clay shipped from Saskatchewan to Alberta for the manufacture of clay products.

Table 17 - PRODUCTION (SALES) OF FIRECLAY, FIRECLAY BLOCKS AND SHAPES, AND FIREBRICK FROM DOMESTIC CLAY, 1934-1945

| Year       | Fireclay   |        | Fireclay Blocks and Shapes | Firebrick |         |
|------------|------------|--------|----------------------------|-----------|---------|
|            | Short tons | \$     |                            | M         | \$      |
| 1934 ..... | 1,043      | 12,598 | 62,388                     | 2,109     | 101,218 |
| 1935 ..... | 2,272      | 15,574 | 71,344                     | 1,817     | 90,149  |
| 1936 ..... | 2,457      | 17,639 | 65,171                     | 2,548     | 118,923 |
| 1937 ..... | 4,125      | 26,081 | 75,431                     | 2,950     | 142,827 |
| 1938 ..... | 2,344      | 17,243 | 73,512                     | 2,213     | 113,581 |
| 1939 ..... | 3,785      | 22,504 | 95,256                     | 2,531     | 119,346 |
| 1940 ..... | 4,881      | 30,564 | 85,127                     | 3,167     | 165,825 |
| 1941 ..... | 5,431      | 35,475 | 190,497                    | 3,643     | 183,897 |
| 1942 ..... | 5,601      | 40,722 | 210,246                    | 3,816     | 197,830 |
| 1943 ..... | 5,653      | 42,122 | 256,655                    | 5,644     | 192,618 |

NOTE: Firebrick and fireclay blocks and shapes are made also from imported clays; see Table 58.

Table 18 - PRODUCTION (SALES) OF POTTERY FROM DOMESTIC CLAYS FOR YEARS SPECIFIED

| Year       | Value   | Year       | Value       |
|------------|---------|------------|-------------|
|            |         |            | \$          |
| 1888 ..... | 27,750  | 1931 ..... | 257,125     |
| 1898 ..... | 214,675 | 1932 ..... | 244,861     |
| 1908 ..... | 200,541 | 1933 ..... | 202,500     |
| 1915 ..... | 55,533  | 1934 ..... | 223,735     |
| 1918 ..... | 150,242 | 1935 ..... | 220,711     |
| 1924 ..... | 238,242 | 1936 ..... | 218,402     |
| 1925 ..... | 267,255 | 1937 ..... | 232,209     |
| 1926 ..... | 320,135 | 1938 ..... | 235,890     |
| 1927 ..... | 307,057 | 1939 ..... | 282,712 (x) |
| 1928 ..... | 356,095 | 1940 ..... | 474,452     |
| 1929 ..... | 325,194 | 1941 ..... | 502,212     |
| 1930 ..... | 294,866 |            |             |

(x) Includes value of sanitaryware.

Table 19 - PRODUCTION (SALES) OF POTTERY FROM DOMESTIC CLAYS, BY PROVINCES, 1942 and 1943

| Province               | 1942 |         | 1943 |         |
|------------------------|------|---------|------|---------|
|                        |      |         |      |         |
| New Brunswick .....    |      | 51,699  |      | 68,058  |
| Quebec .....           |      | 39,400  |      | 54,591  |
| Ontario .....          |      | 75,700  |      | 63,600  |
| Alberta .....          |      | 476,183 |      | 512,178 |
| British Columbia ..... |      | 5,106   |      | 2,917   |
| CANADA .....           |      | 646,088 |      | 701,144 |

Table 20 - PRODUCTION OF STRUCTURAL TILE IN CANADA, BY PROVINCES, 1943

| Province               | Hollow Blocks (x) |         | Roofing Tile<br>Number | Floor Tile (Quarries) |     |
|------------------------|-------------------|---------|------------------------|-----------------------|-----|
|                        | Short tons        | \$      |                        |                       | \$  |
| Nova Scotia .....      | 11,875            | 124,687 | ...                    | ...                   | ... |
| New Brunswick .....    | 1,610             | 15,536  | ...                    | ...                   | ... |
| Quebec .....           | 25,578            | 261,874 | ...                    | ...                   | ... |
| Ontario .....          | 35,980            | 353,256 | 744                    | 26,864                |     |
| Manitoba .....         | ...               | ...     | ...                    | ...                   | ... |
| Saskatchewan .....     | 725               | 6,055   | ...                    | ...                   | ... |
| Alberta .....          | 6,353             | 49,667  | ...                    | ...                   | ... |
| British Columbia ..... | 2,548             | 28,460  | 83                     | 85                    |     |
| CANADA .....           | 84,469            | 819,535 | 827                    | 26,849                |     |

(x) Including fireproofing and load-bearing tile.

Table 21 - PRODUCTION OF STRUCTURAL TILE IN CANADA, 1934-1943

| Year       | Hollow Blocks (x) |           | Roofing Tile<br>Number | Floor Tile (Quarries) |                |
|------------|-------------------|-----------|------------------------|-----------------------|----------------|
|            | Short tons        | \$        |                        |                       | Sq.ft.         |
| 1934 ..... | 31,136            | 244,122   | 44,115                 | 1,852                 | 80,556 17,491  |
| 1935 ..... | 47,195(4)         | 344,608   | 82,015                 | 5,669                 | 51,765 7,629   |
| 1936 ..... | 58,501            | 467,860   | 52,730                 | 2,139                 | 97,758 15,798  |
| 1937 ..... | 64,526            | 533,843   | 60,542                 | 3,502                 | 75,191 12,169  |
| 1938 ..... | 70,648            | 591,416   | 150,504                | 5,196                 | 100,958 15,330 |
| 1939 ..... | 86,120            | 714,291   | 148,291                | 4,964                 | 90,812 15,255  |
| 1940 ..... | 105,073           | 788,478   | 41,772                 | 1,839                 | ...            |
| 1941 ..... | 117,530           | 1,063,120 | ...                    | 750                   | ...            |
| 1942 ..... | 109,905           | 1,082,573 | ...                    | 32                    | ...            |
| 1943 ..... | 84,469            | 819,535   | ...                    | 827                   | ...            |

(x) Including fireproofing and load-bearing tile.

(4) In addition, there was produced \$615 worth of ceramic tile.

Table 22 - PRODUCTION (SALES) OF BENTONITE AND KAOLIN IN CANADA, BY PROVINCES, 1933-1943

| Year       | Bentonite        |                 |                          |                | Kaolin (a) |                  |
|------------|------------------|-----------------|--------------------------|----------------|------------|------------------|
|            | Manitoba<br>Tons | Alberta<br>Tons | British Columbia<br>Tons | CANADA<br>Tons | Tons       | \$               |
| 1933 ..... | ...              | ...             | ...                      | 55             | 1,365      | 55 1,365         |
| 1934 ..... | ...              | ...             | ...                      | 63             | 1,578      | 63 1,578         |
| 1935 ..... | ...              | ...             | ...                      | 41             | 781        | 41 781           |
| 1936 ..... | ...              | ...             | ...                      | 120(b)         | 180        | 120(b) 180       |
| 1937 ..... | 132 1,154        | ...             | ...                      | 51             | 817        | 163 1,971        |
| 1938 ..... | ...              | 1,136           | 5,444                    | 43             | 215        | 1,179 3,659      |
| 1939 ..... | 99               | 591             | 889 2,850                | ...            | ...        | 988 3,441        |
| 1940 ..... | 710              | 2,023           | 714 2,240                | 45             | 225        | 1,469 4,488      |
| 1941 ..... | 760              | 1,330           | 1,317 5,882              | 95             | 618        | 2,172 7,850      |
| 1942 ..... | 660              | 58,800          | 956 5,404                | ...            | ...        | 1,616 44,204     |
| 1943 ..... | ...              | 110,428         | 5,262                    | ...            | 1,357 (c)  | 117,047 93 1,551 |

(a) All from Quebec.

(b) Partly for experimental purposes.

(c) Quantity not available for publication.

Bentonite is a variety of clay derived from volcanic ash. Known commercial deposits in Canada are confined to the Prairie Provinces and British Columbia. All the clay is of the highly-colloidal or swelling variety.

In southern Manitoba, deposits have been under development for several years in the Morden area. In southern Saskatchewan numerous occurrences of bentonite exist in the Willowbunch-St. Victor-Eastend district, but so far there has been very little development there. Most of the production in Alberta has come from the Red Deer Valley region in the vicinity of Drumheller. In southern British Columbia, bentonite occurs in beds of considerable thickness near Merritt and Princeton. Canada exports little or no bentonite. Substantial quantities of activated clay are imported from the United States for bleaching in oil refineries and for packing house products, and possibly also some ground natural bentonite for similar use.

The chief uses for bentonite are as a bonding ingredient in foundry sands; for the bleaching of mineral and vegetable oils and packing-house products; and to control the viscosity of oil-well drilling muds. In the United States, in 1942, 84 per cent of total bentonite sales went to these three major uses. For bleaching purposes, both natural and activated clay are employed.

In 1943, Wyoming dried and granulated clay continued to sell for \$7.50 per ton f.o.b. mines, in carload lots, and air-floated 200-mesh material for \$9.50, bagged. Special-grade, selected, air-floated clay was priced at \$26 per ton, f.o.b. Chicago. Freight rates from Wyoming points to Montreal are about \$14 per ton. Imported activated (Filtrol-type) bentonite has been costing \$75 to \$80 per ton, in carload lots, delivered eastern Canadian points, and American natural bleaching clay has sold for \$25 per ton laid down. Alberta oil-drilling bentonite sold in 1943 for \$40.75 per ton, f.o.b. Calgary plant, or \$42.75 delivered at Turner Valley, inclusive of 8 per cent sales tax. Effective January 1, 1944, the sales tax was cancelled, and 1944 prices have been reduced to \$38 and \$40, respectively.

Table 23 - FULLER'S EARTH USED IN CANADA IN THE MANUFACTURE OF SOAPS AND WASHING COMPOUNDS AND IN THE PETROLEUM PRODUCTS INDUSTRY, 1932-1943

| Year       | Petroleum Products Industry |         | Soaps and Washing Compounds |        |
|------------|-----------------------------|---------|-----------------------------|--------|
|            | Pounds (x)                  | \$      | Pounds                      | \$     |
| 1932 ..... | 19,642,179                  | 258,934 | 507,807                     | 7,444  |
| 1933 ..... | 22,811,655                  | 314,515 | 588,454                     | 8,501  |
| 1934 ..... | 18,588,514                  | 230,357 | 508,316                     | 6,562  |
| 1935 ..... | 18,487,148                  | 260,885 | 660,018                     | 13,694 |
| 1936 ..... | 18,907,295                  | 243,164 | 1,328,219                   | 20,601 |
| 1937 ..... | 18,843,458                  | 240,309 | 1,167,768                   | 20,593 |
| 1938 ..... | 19,687,467                  | 281,668 | 1,195,208                   | 19,575 |
| 1939 ..... | 19,814,473                  | 304,214 | 1,586,163                   | 30,924 |
| 1940 ..... | 23,828,660                  | 406,185 | 1,651,471                   | 40,695 |
| 1941 ..... | 30,155,750                  | 571,010 | 1,486,000                   | 39,332 |
| 1942 ..... | 24,162,091                  | 528,350 | 1,350,000                   | 37,831 |
| 1943 ..... | 25,390,653                  | 601,283 | 2,410,000                   | 83,235 |

(x) Includes all clays.

Table 24 - CHINA CLAY (KAOLIN) USED IN THE MANUFACTURE OF PAPER IN CANADA, 1931-1943

| Year       | Tons   | Value   | Year       | Tons   | Value   |
|------------|--------|---------|------------|--------|---------|
|            |        |         |            |        |         |
| 1931 ..... | 11,484 | 173,660 | 1938 ..... | 34,968 | 488,147 |
| 1932 ..... | 14,452 | 205,068 | 1939 ..... | 32,769 | 430,092 |
| 1933 ..... | 20,048 | 267,014 | 1940 ..... | 36,931 | 558,659 |
| 1934 ..... | 27,550 | 357,286 | 1941 ..... | 32,844 | 588,585 |
| 1935 ..... | 33,766 | 422,584 | 1942 ..... | 28,734 | 578,190 |
| 1936 ..... | 39,165 | 520,121 | 1943 ..... | 26,374 | 561,285 |
| 1937 ..... | 41,738 | 578,225 |            |        |         |

Table 25 - CLAYS AND EARTHS USED IN CANADIAN RUBBER GOODS INDUSTRY, 1934-1943

| Year       | Tons  | Value  | Year       | Tons  | Value   |
|------------|-------|--------|------------|-------|---------|
|            |       |        |            |       |         |
| 1934 ..... | 2,591 | 54,868 | 1939 ..... | 3,438 | 80,745  |
| 1935 ..... | 2,639 | 63,553 | 1940 ..... | 3,586 | 90,867  |
| 1936 ..... | 3,017 | 70,709 | 1941 ..... | 4,059 | 101,441 |
| 1937 ..... | 5,614 | 79,500 | 1942 ..... | 1,523 | 37,186  |
| 1938 ..... | 2,942 | 81,955 | 1943 ..... | 1,257 | 35,266  |

Table 26 - FIREBRICK AND FIRECLAY USED IN THE MANUFACTURE OF IRON AND STEEL AND THEIR PRODUCTS IN CANADA, 1932-1942

| Year       | Firebrick |         | Fireclay        |         | Other Fireclay, Firebrick<br>and Cupola Blocks |
|------------|-----------|---------|-----------------|---------|--|
|            | Number    | Value   | Tons            | Value   |  |
| 1932 ..... | 3,409,000 | 123,532 | 5,910           | 52,492  | 56,595   |
| 1933 ..... | 1,846,016 | 141,784 | 7,615           | 62,602  | 11,628 (b)                                     |
| 1934 ..... | 2,590,452 | 192,558 | 8,248           | 75,906  | 21,488   |
| 1935 ..... | (a)       | 451,604 | 11,510          | 101,601 | 28,064   |
| 1936 ..... | (a)       | (a)     | \$ 779,014(c)   | (a)     | (a)  |
| 1937 ..... | (a)       | (a)     | \$ 1,058,787(c) | (a)     | (a)  |
| 1938 ..... | (a)       | (a)     | \$ 838,012(c)   | (a)     | (a)  |
| 1939 ..... | (a)       | (a)     | \$ 939,495(c)   | (a)     | (a)  |
| 1940 ..... | (a)       | (a)     | \$ 1,597,898(c) | (a)     | (a)  |
| 1941 ..... | (a)       | (a)     | \$ 2,581,813(c) | (a)     | (a)  |
| 1942 ..... | (a)       | (a)     | \$ 3,268,181(c) | (a)     | (a)  |

(a) Not published separately.

(b) From 1933 includes only cupola blocks.

(c) Combined value for firebrick, fireclay and other fireclay, etc.

NOTE: Corresponding data for 1943 are not yet available.

Table 27 - FULLER'S AND INFUSORIAL EARTH USED IN SPECIFIED CANADIAN INDUSTRIES, 1933-1943

| Year       | Sugar Refineries |         | Vegetable Oil Mills |        |
|------------|------------------|---------|---------------------|--------|
|            | Pounds           | \$      | Pounds              | \$     |
| 1933 ..... | (a)              | (a)     | 126,880             | 2,730  |
| 1934 ..... | (a)              | (a)     | 115,120             | 2,171  |
| 1935 ..... | (a)              | (a)     | 88,980              | 2,425  |
| 1936 ..... | 59,200(b)        | 1,730   | 243,720             | 10,044 |
| 1937 ..... | 4,586,786(c)     | 95,532  | 212,997(x)          | 9,349  |
| 1938 ..... | 4,908,597(c)     | 101,473 | 190,253             | 9,063  |
| 1939 ..... | 4,819,811(c)     | 105,711 | 207,105(b)          | 10,166 |
| 1940 ..... | 4,984,362(c)     | 112,369 | 216,254(b)          | 7,731  |
| 1941 ..... | 5,333,131(c)     | 133,129 | 275,290(b)          | 10,604 |
| 1942 ..... | 3,007,180(c)     | 75,295  | 437,120(b)          | 20,154 |
| 1943 ..... | 3,451,142(c)     | 89,075  | 484,380(b)          | 20,302 |

(a) Not recorded.

(b) Fuller's earth, in 1942, includes 97,785 pounds clarex earth valued at \$4,657, and in 1943 it includes 164,130 pounds valued at \$7,836.

(c) Infusorial earth.

(x) Includes other earth.

NOTE: In addition to the consumption recorded, there is a considerable quantity of fuller's earth used by the slaughtering industry.

Table 28 - CONSTRUCTION CONTRACTS AWARDED IN CANADA(x) FOR YEARS SPECIFIED

| Type           | 1929        | 1932        | 1939        | 1941        | 1942        | 1943        |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                | \$          | \$          | \$          | \$          | \$          | \$          |
| Residential... | 128,901,300 | 28,692,600  | 67,451,200  | 92,399,400  | 79,279,800  | 79,109,100  |
| Business ..... | 190,161,700 | 39,399,200  | 54,945,200  | 100,552,100 | 98,164,800  | 61,017,900  |
| Industrial ... | 62,968,800  | 7,820,400   | 22,753,000  | 92,805,500  | 74,084,500  | 32,857,000  |
| Engineering .. | 194,620,000 | 56,760,200  | 42,029,100  | 108,254,500 | 80,065,000  | 55,119,900  |
| TOTAL .....    | 576,651,800 | 132,872,400 | 187,178,500 | 593,991,300 | 281,594,100 | 206,103,900 |

(x) Compiled by MacLean Building Reports Ltd., Toronto, Ont.

PRICES (a) -BENTONITE - per ton, carload lots, f.o.b. Wyoming mines, dried and crushed, in bulk, \$7.50; pulverized, 200 mesh, \$9.50 in 100-lb. paper bags.CHINA CLAY (KAOLIN) - per ton, f.o.b. South Carolina and Georgia mines, in bulk; saggar clays, \$2.50 to \$3.50; tailings, \$4.50 to \$5.00. No. 2 grades, \$5.50 to \$6.00; No. 1 grades, air-floated, crude, \$6.75 to \$8.00; No. 1 washed, \$8.00. Florida: washed, crushed, bulk, \$11.75; air-floated and washed, \$14 to \$15. Maryland: ball clays, shredded bulk, \$3.00 to \$7.00; air-floated, in paper bags, \$10.10 to \$18.25.

New Jersey: plastic kaolin, pulverized, in paper bags, \$10.25 to \$10.75. Insecticide clay, \$11.50 to \$16.50. Imported English, per long ton, C and F. American ports: lump, \$26 to \$28 in bulk; air-floated \$40 to \$60 nominal.

FULLER'S EARTH - per ton, f.o.b. Colorado, \$9; f.o.b. Georgia or Florida, 30 to 60 mesh, \$14.50; 15 to 30, \$14; 200 and up, \$10; 100 and up \$7.

(b) - FULLER'S EARTH - English, long ton, nominal; Georgian, carlots, long ton \$27.78.

CHINA CLAY - Imported, carlots, bulk, ton \$25 to \$50 (U.S. only). Pigment clay for rubber, carlots, bags, ton \$25.00 less carlots, ton, \$26.50. Kaolin, colloidal, lb. 10 cents, Osmo 14 cents a pound.

- (a) "Engineering & Mining Journal's Metal & Mineral Markets" - New York, September, 1944 and July, 1945.  
 (b) F.O.B. market at Toronto - "Canadian Chemistry & Process Industries" - Toronto, July, 1944 and June, 1945.

Table 29 - IMPORTS INTO CANADA AND EXPORTS OF CLAY AND CLAY PRODUCTS, 1942 and 1943

|  |      | 1 9 4 2   | Quantity   | \$ | 1 9 4 5   | Quantity   | \$ |
|--|------|-----------|------------|----|-----------|------------|----|
| <b>Imports</b>   |      |           |            |    |           |            |    |
| Building brick .....   | ton  | 1,400     | 17,603     |    | 1,192     | 17,403     |    |
| Building blocks and fireproofing tile .....  | ...  | ...       | 13,574     |    | ...       | 22,354     |    |
| Clays—China .....  | cwt. | 924,856   | 528,580    |    | 674,008   | 592,651    |    |
| Fire .....   | cwt. | 1,926,652 | 369,845    |    | 1,668,888 | 320,809    |    |
| Pipe .....   | cwt. | 174,953   | 20,722     |    | 211,750   | 25,248     |    |
| Other clays, n.o.p. .....  | ...  | ...       | 154,963    |    | ...       | 186,842    |    |
| Zirconium silicate .....   | ...  | ...       | 10,707     |    | ...       | 15,146     |    |
| Zirconium oxide .....  | ...  | ...       | 37,525     |    | ...       | 41,745     |    |
| Drain tile, unglazed .....   | ...  | ...       | 14         |    | ...       | 1,417      |    |
| Drain, sewer pipe and earthenware fittings<br>therefor, chimney linings or vents, chimney<br>tops or inverted blocks, glazed or unglazed,<br>n.o.p. .....  | ...  | ...       | 6,164      |    | ...       | 2,958      |    |
| Tiles or blocks of earthenware or stone pre-<br>pared for mosaic flooring .....  | ...  | ...       | 31,231     |    | ...       | 23,680     |    |
| Tiles, earthenware, for roofing purposes .....   | ...  | ...       | 149        |    | ...       | 254        |    |
| Tiles, earthenware, n.o.p. .....   | ...  | ...       | 82,568     |    | ...       | 56,658     |    |
| Insulators, electric, porcelain .....  | ...  | ...       | 251,064    |    | ...       | 241,335    |    |
| Pottery, chinaware and earthenware, n.o.p. .....   | ...  | ...       | 4,926,563  |    | ...       | 4,371,530  |    |
| Brick, fire, other, valued at not less than<br>\$100 per M, rectangular shaped; the dimensions<br>of each not to exceed 125 cubic inches; for<br>use exclusively in the construction or repair<br>of a furnace, kiln, etc. ..... | ...  | ...       | 117,940    |    | ...       | 70,129     |    |
| Brick, fire, n.o.p., for use exclusively in the<br>construction or repair of a furnace, kiln or<br>other equipment of a manufacturing establish-<br>ment (not made in Canada) .....  | ...  | ...       | 2,195,994  |    | ...       | 1,972,956  |    |
| Firebrick, n.o.p. .....  | ...  | ...       | 1,717,146  |    | ...       | 1,661,129  |    |
| Firebrick, chrome .....  | ...  | ...       | 317,894    |    | ...       | 256,993    |    |
| Magnesite brick (fire) .....   | ...  | ...       | 1,175,015  |    | ...       | 1,111,754  |    |
| Silica brick (containing not less than 90 per<br>cent silica) .....  | ...  | ...       | 1,155,408  |    | ...       | 847,458    |    |
| Paving brick .....   | ton  | 786       | 6,742      |    | 944       | 7,753      |    |
| Artificial teeth, not mounted .....  | ...  | ...       | 752,096    |    | ...       | 768,425    |    |
| Baths, bathtubs, basins, laundry tubs, etc., of<br>earthenware, cement or clay, n.o.p. .....   | ...  | ...       | 256,539    |    | ...       | 359,978    |    |
| Saggars .....  | ...  | ...       | 33,240     |    | ...       | 46,778     |    |
| Crucibles, clay or sand .....  | ...  | ...       | 78,583     |    | ...       | 21,799     |    |
| Other manufactures of clay, n.o.p. .....   | ...  | ...       | 340,952    |    | ...       | 259,697    |    |
| Activated clay to refine oil .....   | ...  | ...       | 348,068    |    | ...       | 295,066    |    |
| Grog for refractory materials .....  | ton  | 1,401     | 51,651     |    | 2,070     | 46,894     |    |
| <b>TOTAL</b> .....   | ...  | ...       | 14,918,338 |    | ...       | 13,446,817 |    |

Table 29 - IMPORTS INTO CANADA AND EXPORTS OF CLAY AND CLAY PRODUCTS, 1942 and 1943 (Concluded)

|                                 |          | 1 9 4 2        | 1 9 4 3        |
|---------------------------------|----------|----------------|----------------|
|                                 | Quantity | \$             | Quantity       |
| <b>Exports</b>                  |          |                |                |
| Building brick .....            | M        | 1,435          | 25,159         |
| Clay, manufactures of .....     | ...      | 106,475        | ...            |
| Earthenware .....               | ...      | 27,765         | ...            |
| Porcelain insulators .....      | ...      | 204,594        | ...            |
| Refractories, dead-burned ..... | ton      | 1,880          | 59,845         |
| <b>TOTAL .....</b>              | ...      | <b>425,636</b> | <b>458,529</b> |

## LIST OF OPERATORS WHICH SHIPPED BRICK, TILE, SEWER PIPE, ETC., MADE FROM DOMESTIC CLAYS, 1943

| Name of Firm                            | Head Office Address                     | Location of Plant   |
|---|---|---------------------|
| <b>Nova Scotia -</b>                    |   |                     |
| Brooks, Stephen and Son                 | Box 159, New Glasgow                    | New Glasgow         |
| Harriss Bros.                           | 5 Byng Ave., Sydney                     | Sydney              |
| McCurdy, Henry                          | Middle Musquodoboit                     | Middle Musquodoboit |
| Shaw, L. E., Ltd.                       | 8 Prince St., Halifax                   | Lantz               |
| Standard Clay Products Ltd.             | St. Johns                               | New Glasgow         |
| <b>New Brunswick -</b>                  |   |                     |
| Ryan, M. and Son, Ltd.                  | Fredericton                             | Fredericton         |
| Shaw, L. E. Ltd.                        | 8 Prince St., Halifax, N.S.             | Chipman             |
| <b>Quebec -</b>                         |   |                     |
| Ascot Tile and Brick Co. Ltd.           | Ascot Corner                            | Ascot Corner        |
| Canada China Clay & Silica Ltd.         | Kasil                                   | Kasil               |
| Castonguay, Hubert                      | Deschaillons                            | Deschaillons        |
| Champlain Brique Ltée, La               | c/o H. Boulet, 15 St. Peter St., Quebec | in liquidation      |
| Citadelle Brique Ltée                   | 14 rue St. Joseph, Quebec               | Boischatal          |
| Crite, Freddy                           | rue du Moulin, St. Tite                 | St. Tite            |
| LaPrairie Company Inc., The             | 906 University Tower Bldg., Montreal    | LaPrairie, Delson   |
| Lothinière Brique Reg., La              | Deschaillons                            | Deschaillons        |
| Montreal Terra Cotta Limited            | 911 Dominion Square Bldg., Montreal     | Lakeside            |
| Roy, O. and P.                          | St. George West                         | St. George West     |
| St. Lawrence Brick Co. Ltd.             | 1010 St. Catherine St. W., Montreal     | LaPrairie           |
| Scott Brique Reg., La                   | Scott Junction                          | Scott Junction      |
| Standard Clay Products Ltd.             | Box 189, St. Johns                      | St. Johns           |
| <b>Ontario</b>                          |   |                     |
| Barnes, Wm. R. Co. Ltd.                 | 243 Cumberland Ave., Hamilton           | Waterdown           |
| Broadwell, B. and Son                   | Kingsville                              | Gosford S. Tp.      |
| Canadian Pressed Brick Co. Ltd.         | Kenilworth Ave. S., Hamilton            | Hamilton            |
| Central Tile Bricks Corp. Ltd.          | Tilbury                                 | Tilbury             |
| Chapman Bros.                           | 145 Dawes Rd., Toronto                  | East York Tp.       |
| Construction Materials Ltd.             | Drawer 70, New Toronto                  | Etobicoke Tp.       |
| Cooksville Company Ltd.                 | 46 Bloor St. W., Toronto                | Cooksville          |
| Cornhill, James & Sons Ltd.             | Box 36, Chatham                         | Harwich Tp.         |
| Coultis, George & Son                   | Thetford                                | Bosanquet           |
| Curtis Bros.                            | Box 809, Peterborough                   | Otonabee Tp.        |
| Deller, Albert & Son                    | Brownsville                             | Brownsville         |
| Dochart Brick, Tile & Terra Cotta Works | Arnprior                                | Arnprior            |
| Douglas, John R.                        | Wilkesport                              | Lambton Co.         |
| Elliott, James, Jr.                     | 519 Wellington St. W., Sault Ste. Marie | Korah Tp.           |
| Elliott, Wm.                            | R.R. 1, Glenannan                       | Bruce Co.           |
| Fletcher Brick & Tile                   | Fletcher                                | Tilbury E. Tp.      |

LIST OF OPERATORS WHICH SHIPPED BRICK, TILE, SEWER PIPE, ETC., MADE FROM DOMESTIC CLAYS, 1943  
 (Continued)

| Name of Firm                             | Head Office Address               | Location of Plant  |
|--|-----------------------------------|--------------------|
| <b>Ontario (Con.) -</b>                  |                                   |                    |
| Frid Bros. Ltd.                          | Main and Macklin Sts., Hamilton   | Hamilton           |
| Gammage, C. R.                           | R.R. 2, Dresden                   | Camden Tp.         |
| Hamilton Pressed Brick Co. Ltd.          | 211 Kensington Ave. S., Hamilton  | Wentworth Co.      |
| Hill, A. W. & Sons                       | Coatsworth                        | Tilbury E. Tp.     |
| Huntsville Brick Works                   | Box 308, Huntsville               | Chaffey Tp.        |
| Interprovincial Brick Co. Ltd.           | 46 Bloor St. W., Toronto          | Cheltenham, Milton |
| Jamieson Lime Co.                        | Renfrew                           | Renfrew            |
| Janes, D. A.                             | Mt. Brydges                       | Caradoc Tp.        |
| Jasperon Brick & Tile Co.                | Kingsville                        | Coatsworth Tp.     |
| Koebel Bros.                             | St. Clements                      | St. Clements       |
| Lindsay, Earl & Sons                     | R.R. 2, Wallaceburg               | Kent Co.           |
| Martin, Amos C.                          | R.R. 3, Wallenstein               | Peel Tp.           |
| McFarlane, W. J.                         | Forest                            | Forest             |
| McFarren, F. B., Ltd.                    | 120 Wellington St. W., Toronto    | Streetsville       |
| Milton Brick Co. Ltd.                    | 170 Bloor St. W., Toronto         | Esquesing Tp.      |
| Missinaibi Clays & Mining Ltd.           | 56½ Adelaide St. E., Toronto      | Missinaibi Dist.   |
| Moscow Brick & Tile Works                | R.R. 1, Greenock                  | Culrose Tp.        |
| Napanee Brick & Tile Works               | R.R. 3, Napanee                   | Lennox Co.         |
| National Fireproofing Co. of Canada Ltd. | 57 Bloor St. W., Toronto 5        | Aldershot          |
| National Sewer Pipe Co. Ltd.             | Aldershot                         | E. Flamboro Tp.    |
|  |                                   | Hamilton           |
|  |                                   | Swansea            |
| Northern Brick & Clay Products           | New Liskeard                      | Temiskaming        |
| Norwich Brick & Tile Works               | R.R. 2, Norwich                   | Oxford Co.         |
| Ottawa Brick & Terra Cotta Co. Ltd.      | Billings Bridge                   | Billings Bridge    |
| Paxton, Fred R.                          | 70 Herrick Ave., St. Catharines   | St. Catharines     |
| Phinn Brick Co.                          | 1042 Adelaide St., London         | London             |
| Phippen & Son                            | 390 Dawes Rd., East York          | East York          |
| Seegmiller, E. & E., Ltd.                | 525 Wendell Ave., Kitchener       | Kitchener          |
| Snelgrove, A., Estate                    | Beaverton                         | Beaverton          |
| Sprott and Sprott                        | R.R. 4, Seaforth                  | Tuckersmith Tp.    |
| Standard Brick Co.                       | 500 Greenwood Ave., Toronto       | Toronto            |
| Superior Brick & Tile Co. Ltd.           | 426 Victoria Ave., Fort William   | Paipoonge Tp.      |
| Toronto Brick Co. Ltd.                   | 897 Bay St., Toronto              | Toronto, York Tp.  |
| Wallace, R., & Son                       | 92 First Ave., North Bay          | Widdifield Tp.     |
| Wright, F. M.                            | Comber                            | Tilbury W. Tp.     |
| <b>Manitoba -</b>                        |                                   |                    |
| Alsip Brick, Tile & Lumber Co. Ltd.      | 537 Portage Ave., Winnipeg        | Winnipeg           |
| Pembina Mt. Clays Ltd. (x)               | 915 Paris Bldg., Winnipeg         | Morden             |
| Wardrop, D. M.                           | Whitemouth                        | Whitemouth         |
| <b>Saskatchewan -</b>                    |                                   |                    |
| Alberta Clay Products Co. Ltd.           | Medicine Hat, Alta.               | Ravenscrag         |
| Bruno Clay Works Ltd.                    | 411 Albert Ave., Saskatoon        | Eastend            |
| Dominion Fire Brick & Clay Products Ltd. | Box 99, Moose Jaw                 | Willows            |
| International Clay Products Ltd.         | Box 399, Estevan                  | Bruno              |
| Medalta Potteries Ltd.                   | 620 .. 3rd St. W., Calgary, Alta. | Claybank           |
|  |                                   | Estevan            |
|  |                                   | Willows, Eastend   |
| <b>Alberta -</b>                         |                                   |                    |
| Acme Brick Co. Ltd.                      | 125 Alberta Block, Edmonton       | Cannall            |
| Aetna Coal Co.                           | East Coulee                       | Rosedale Ferry     |
| Alberta Clay Products Co. Ltd.           | Medicine Hat                      | Dunmore,           |
| Grande Prairie Brick Yard                | Grande Prairie                    | Medicine Hat       |
| Gunderson Brick & Coal Co. Ltd.          | Redcliffe                         | Grande Prairie     |
| Kidd, Gordon L. (x)                      | Box 230, Drumheller               | Redcliffe          |
|  |                                   | Sec.14-29-20 W.4   |

(x) Produces Bentonite.

LIST OF OPERATORS WHICH SHIPPED BRICK, TILE, SEWER PIPE, ETC., MADE FROM DOMESTIC CLAYS, 1943  
(Concluded)

| Name of Firm                                  | Head Office Address            | Location of Plant |
|---|--------------------------------|-------------------|
| <u>Alberta</u> (Con.) -                       |                                |                   |
| Medicine Hat Brick & Tile Co. Ltd.            | Box 100, Medicine Hat          | Medicine Hat      |
| Redcliffe Pressed Brick Co. Ltd.              | Redcliffe                      | Redcliffe         |
| <u>British Columbia</u> -                     |                                |                   |
| Baker Brick & Tile Co. Ltd.                   | 5191 Douglas St., Victoria     | Victoria          |
| Champion & White Ltd.                         | 1075 Main St., Vancouver       | Bazan Bay         |
| Clayburn Co. Ltd.                             | 850 W. Hastings St., Vancouver | Kilgard           |
| Fairey & Co.                                  | 661 Taylor St., Vancouver      | Vancouver         |
| Gypsum, Lime & Alabastine Canada, Ltd.<br>(x) | Paris, Ont.                    | New Westminster   |
| Glover, F. (x)                                | Princeton                      | Princeton         |
| Haug, Wm. & Son                               | Box 220, Kelowna               | Kelowna           |
| Port Haney Brick Co. Ltd.                     | 846 Howe St., Vancouver        | Haney             |

(x) Produces Bentonite.

PRODUCERS OF STONEWARE AND POTTERY, 1943

| Name of Firm                | Head Office Address        | Location of Plant |
|-----------------------------|----------------------------|-------------------|
| <u>New Brunswick</u> -      |                            |                   |
| Canuck Pottery              | 198 Union St., Saint John  | Saint John        |
| Deichmann, K. and E.        | Moss Glen                  | Moss Glen         |
| Foley Pottery Ltd.          | Saint John                 | Musquodoboit      |
|                             |                            | Saint John        |
| <u>Quebec</u> -             |                            |                   |
| Poterie du Saguenay, La     | Chicoutimi                 | Chicoutimi        |
| Laurentian Art Pottery Inc. | St. Jerome                 | St. Jerome        |
| <u>Ontario</u> -            |                            |                   |
| Foster Pottery Co.          | Main St. W., Hamilton      | Hamilton          |
| <u>Alberta</u> -            |                            |                   |
| Medalta Potteries Ltd.      | 620 .. 3rd St. W., Calgary | Medicine Hat      |
| Medicine Hat Potteries      | Medicine Hat               | Medicine Hat      |

II. PRODUCTS FROM IMPORTED CLAYS, 1943

This industry covers the operations of Canadian plants which were occupied chiefly in making ceramic products from imported clays. Products made in these plants during 1943 included high tension insulators, vitreous china sanitary ware, china dinnerware, firebrick, sewer pipe, floor and wall tile, refractory cements, electrical porcelains, etc.

Twenty-four plants reported in this group for 1943 and their output was valued at \$4,585,416, against last year's total of \$5,597,228 and the 1941 figure of \$5,371,853. Capital employed amounted to \$5,542,518. The average number of workers was 1,117 and payments for salaries and wages totalled \$1,768,361. Fuel and electricity cost \$352,902 and materials for use in manufacturing processes cost \$929,854.

Table 30 - PRINCIPAL STATISTICS OF THE IMPORTED CLAY PRODUCTS INDUSTRY, 1942 and 1943

|  |    | 1942      | 1943      |
|--|----|-----------|-----------|
| Number of plants .....                         |    | 24        | 24        |
| Capital employed .....                         | \$ | 5,776,158 | 5,542,518 |
| Average number of employees .....              |    | 1,396     | 1,117     |
| Salaries and wages .....                       | \$ | 2,050,238 | 1,768,561 |
| Cost of fuel and electricity .....             | \$ | 386,969   | 532,902   |
| Cost of materials at works .....               | \$ | 1,170,938 | 929,854   |
| Gross selling value of products at works ..... | \$ | 5,397,228 | 4,385,416 |

NOTE: Profits or losses cannot be calculated from above figures as data are not available for general expense items, such as interest, rent, depreciation, taxes, insurance, advertising, etc.

Table 31 - CAPITAL EMPLOYED IN THE IMPORTED CLAY PRODUCTS INDUSTRY, BY PROVINCES, 1942 and 1943

| Province          | Present value<br>of land,<br>buildings,<br>machinery<br>and tools | Value of Inventories          |                                  |  | TOTAL<br>CAPITAL<br>EMPLOYED |
|-------------------|---|-------------------------------|----------------------------------|--|------------------------------|
|                   |   | Materials and<br>fuel on hand | Finished<br>stocks in<br>process | Cash, bills<br>and accounts<br>receivable,<br>etc. |                              |
|                   | \$  | \$                            | \$                               | \$   | \$                           |
| <u>1942</u>       |   |                               |                                  |  |                              |
| Ontario .....     | 1,970,692   | 483,702                       | 491,221                          | 1,150,861  | 4,096,476                    |
| Quebec .....)     | 1,052,986   | 159,246                       | 87,337                           | 380,113  | 1,679,682                    |
| British Columbia) |   |                               |                                  |  |                              |
| CANADA ....       | 3,023,678   | 642,948                       | 578,558                          | 1,530,974  | 5,776,158                    |
| <u>1943</u>       |   |                               |                                  |  |                              |
| Ontario .....     | 1,909,443   | 574,938                       | 587,679                          | 1,229,145  | 3,901,205                    |
| Quebec .....)     | 995,568   | 193,397                       | 99,936                           | 352,212  | 1,641,113                    |
| British Columbia) |   |                               |                                  |  |                              |
| CANADA ....       | 2,905,011   | 568,335                       | 487,615                          | 1,581,357  | 5,542,518                    |

Table 32 - EMPLOYEES, SALARIES AND WAGES IN THE IMPORTED CLAY PRODUCTS INDUSTRY, BY PROVINCES, 1942 and 1943

| Provinces         | Average Number of Employees |          |      |        |       | TOTAL   | Salaries  | Wages     | TOTAL<br>SALARIES<br>and WAGES |
|-------------------|-----------------------------|----------|------|--------|-------|---------|-----------|-----------|--------------------------------|
|                   | On Salaries                 | On Wages | Male | Female | Male  |         |           |           |                                |
|                   |                             |          | Male | Female |       |         | \$        | \$        | \$                             |
| <u>1942</u>       |                             |          |      |        |       |         |           |           |                                |
| Ontario .....     | 100                         | 58       | 722  | 248    | 1,128 | 358,044 | 1,294,107 | 1,652,151 |                                |
| Quebec .....)     | 30                          | 11       | 220  | 7      | 268   | 92,817  | 325,270   | 418,087   |                                |
| British Columbia) |                             |          |      |        |       |         |           |           |                                |
| CANADA ....       | 130                         | 69       | 942  | 255    | 1,396 | 430,861 | 1,619,377 | 2,050,238 |                                |
| <u>1943</u>       |                             |          |      |        |       |         |           |           |                                |
| Ontario .....     | 90                          | 54       | 528  | 186    | 858   | 350,053 | 1,004,057 | 1,354,090 |                                |
| Quebec .....)     | 31                          | 11       | 209  | 8      | 259   | 93,606  | 340,665   | 434,271   |                                |
| British Columbia) |                             |          |      |        |       |         |           |           |                                |
| CANADA ....       | 121                         | 65       | 737  | 194    | 1,117 | 423,659 | 1,344,702 | 1,768,361 |                                |

Table 33 - WAGE-EARNERS, BY MONTHS, IN THE IMPORTED CLAY PRODUCTS INDUSTRY, 1942 and 1943 (Number on pay-roll on the last work day of each month)

| Month           | 1 9 4 2 |        |       | 1 9 4 3 |        |       |
|-----------------|---------|--------|-------|---------|--------|-------|
|                 | Male    | Female | TOTAL | Male    | Female | TOTAL |
| January .....   | 1,110   | 312    | 1,422 | 794     | 182    | 976   |
| February .....  | 1,081   | 291    | 1,372 | 775     | 175    | 950   |
| March .....     | 1,032   | 270    | 1,302 | 753     | 185    | 938   |
| April .....     | 1,000   | 277    | 1,277 | 755     | 175    | 910   |
| May .....       | 956     | 269    | 1,225 | 729     | 186    | 915   |
| June .....      | 968     | 260    | 1,228 | 736     | 212    | 948   |
| July .....      | 888     | 226    | 1,114 | 745     | 213    | 958   |
| August .....    | 900     | 242    | 1,142 | 741     | 202    | 943   |
| September ..... | 872     | 232    | 1,104 | 708     | 192    | 900   |
| October .....   | 841     | 229    | 1,070 | 706     | 197    | 903   |
| November .....  | 834     | 227    | 1,061 | 724     | 204    | 928   |
| December .....  | 840     | 219    | 1,059 | 731     | 193    | 924   |
| AVERAGE .....   | 942     | 255    | 1,197 | 737     | 194    | 931   |

Table 34 - HOURS WORKED PER WEEK BY WAGE-EARNERS, 1943 (In one week of month of highest employment)

| Hours worked per week | Number of Wage-Earners |        | Hours worked per week                     | Number of Wage-Earners |        |
|-----------------------|------------------------|--------|---|------------------------|--------|
|                       | Male                   | Female |   | Male                   | Female |
| 50 hours or less .... | 103                    | 25     | 55 hours .....                            | 49                     | ...    |
| 51-45 hours .....     | 205                    | 61     | 56-64 hours .....                         | 118                    | ...    |
| 44 hours .....        | 54                     | 20     | 65 hours and over ...                     | 29                     | ...    |
| 45-47 hours .....     | 58                     | 38     | TOTAL .....                               | 861                    | 225    |
| 48 hours .....        | 55                     | 15     | Total wages paid in selected week .... \$ | 25,591                 | 3,436  |
| 49-50 hours .....     | 99                     | 67     |   |                        |        |
| 51-54 hours .....     | 91                     | 1      |   |                        |        |

Table 35 - FUEL AND ELECTRICITY USED IN THE IMPORTED CLAY PRODUCTS INDUSTRY, 1942 and 1943

| Kind                              | Unit of measure | 1 9 4 2   |               | 1 9 4 3   |               |
|-----------------------------------|-----------------|-----------|---------------|-----------|---------------|
|                                   |                 | Quantity  | Cost at works | Quantity  | Cost at works |
| Coal, anthracite .....            | ton             | 20        | \$ 323        | 17        | 267           |
| Coal, bituminous - Canadian ..... | ton             | 65        | 627           | 117       | 1,239         |
| Imported .....                    | ton             | 27,216    | 216,806       | 23,801    | 196,944       |
| Coke .....                        | ton             | 1,369     | 15,129        | 1,212     | 15,966        |
| Gasoline .....                    | Imp.gal.        | 15,230    | 5,189         | 11,857    | 3,956         |
| Kerosene .....                    | Imp.gal.        | 1,160     | 263           | 2,796     | 491           |
| Fuel oil .....                    | Imp.gal.        | 602,425   | 55,301        | 437,793   | 41,072        |
| Wood .....                        | cord            | 18        | 105           | 23        | 207           |
| Gas-Manufactured .....            | M cu.ft.        | 159,713   | 52,905        | 90,469    | 35,754        |
| Natural .....                     | M cu.ft.        | 6,468     | 3,548         | 5,127     | 3,311         |
| Electricity purchased .....       | K.W.H.          | 2,915,109 | 34,776        | 2,566,802 | 33,695        |
| TOTAL .....                       |                 | ...       | 384,972       | ...       | 332,902       |
| Electricity generated for own use | K.W.H.          | 910,000   | ...           | ...       | ...           |

Table 36 - POWER EQUIPMENT IN THE IMPORTED CLAY PRODUCTS INDUSTRY, 1942 and 1943

|   | 1 9 4 2         |                         | 1 9 4 3         |                         |
|---|-----------------|-------------------------|-----------------|-------------------------|
|   | Number of units | Total rated horse power | Number of units | Total rated horse power |
| Steam engines .....   | 2               | 390                     | 2               | 390                     |
| Gasoline, gas and oil engines .....   | 2               | 42                      | 1               | 2                       |
| Electric motors run by purchased power<br>(except motor generator sets) ..... | 601             | 2,387                   | 650             | 2,504                   |
| TOTAL .....   | 605             | 2,819                   | 653             | 2,896                   |
| Electric motors run by above primary units                                    | 41              | 405                     | ...             | ...                     |
| Stationary boilers .....  | 16              | 1,291                   | 66              | 1,391                   |
| Motor generator sets .....  | 1               | 15                      | 1               | 15                      |

Table 37 - MATERIALS USED IN THE IMPORTED CLAY PRODUCTS INDUSTRY, 1942 and 1943

| Material                                      | 1 9 4 2    |                        |    | 1 9 4 3    |                        |    |
|---|------------|------------------------|----|------------|------------------------|----|
|   | Short tons | Total cost<br>at works | \$ | Short tons | Total cost<br>at works | \$ |
| Imported clays - Ball clay .....              | 2,614      | 53,881                 |    | 2,250      | 45,901                 |    |
| China clay .....                              | 3,344      | 80,003                 |    | 2,889      | 70,479                 |    |
| Fireclay .....                                | 35,391     | 249,635                |    | 30,297     | 244,788                |    |
| Sagger clay .....                             | 847        | 14,347                 |    | 812        | 13,828                 |    |
| Other imported clays .....                    | 733        | 16,848                 |    | ...        | 18,991                 |    |
| Canadian clays - Fireclay .....               | 23         | 1,615                  |    | 12         | 300                    |    |
| Other clays .....                             | 164        | 836                    |    | 18         | 54                     |    |
| Feldspar .....                                | 2,799      | 62,525                 |    | 2,352      | 50,794                 |    |
| Silica and ground quartz .....                | 3,753      | 63,253                 |    | 3,597      | 58,412                 |    |
| Talc .....                                    | 565        | 7,774                  |    | 354        | 5,586                  |    |
| Other glazing materials .....                 | ...        | 24,401                 |    | ...        | 18,277                 |    |
| Insulator hardware .....                      | ...        | 125,662                |    | ...        | 75,316                 |    |
| Shipping containers and packing materials ... | ...        | 109,255                |    | ...        | 94,424                 |    |
| All other materials .....                     | ...        | 360,897                |    | ...        | 234,704                |    |
| <b>TOTAL</b> .....                            | ...        | 1,170,938              |    | ...        | 929,854                |    |

Table 38 - PRODUCTS MADE IN THE IMPORTED CLAY PRODUCTS INDUSTRY, 1942 and 1943

| Product  | 1 9 4 2                         |    | 1 9 4 3                         |    |
|--|---------------------------------|----|---------------------------------|----|
|  | Gross selling<br>value at works | \$ | Gross selling<br>value at works | \$ |
| Firebrick and stove linings - Rigid .....  | 1,138,761                       |    | 608,482                         |    |
| Plastic .....  | 213,712                         |    | 254,523                         |    |
| High temperature cements .....   | 131,478                         |    | 112,737                         |    |
| High tension porcelain insulators, china sanitary ware, clay sewer pipe, floor and wall tile, pottery, china tableware, etc. (Separate figures cannot be shown for these items as there were only one or two producers in each case) ..... | 3,913,277                       |    | 3,409,674                       |    |
| <b>TOTAL</b> .....   | 5,597,228                       |    | 4,385,416                       |    |

NOTE: Clay firebrick, floor tile, sewer pipe and pottery are also made in Canada from domestic clays (see Tables 8 and 39). High temperature cements and refractory bricks are made also by concerns in other industries (see Tables 39 and 40).

Table 39 - TOTAL PRODUCTION IN CANADA OF REFRACTORY SHAPES, 1932-1943

| Year       | From Domestic Clays              |       |           | Other (x)    |   |           |
|------------|----------------------------------|-------|-----------|--------------|---|-----------|
|            | Fireclay<br>blocks and<br>shapes |       | Firebrick | Silica brick | Rigid fire-<br>brick and<br>stove linings | Total     |
|            | \$                               | M     | \$        | M            | \$  | \$        |
| 1932 ..... | 75,209                           | 1,580 | 71,757    | 93           | 4,304                                     | 212,838   |
| 1933 ..... | 80,625                           | 1,547 | 73,226    | 636          | 23,185                                    | 210,484   |
| 1934 ..... | 62,388                           | 2,109 | 101,219   | 2,528        | 85,945                                    | 275,472   |
| 1935 ..... | 71,344                           | 1,817 | 90,149    | 2,461        | 96,134                                    | 314,825   |
| 1936 ..... | 65,171                           | 2,548 | 118,923   | 2,323        | 97,285                                    | 350,602   |
| 1937 ..... | 75,431                           | 2,950 | 142,827   | 3,744        | 181,126                                   | 441,341   |
| 1938 ..... | 73,512                           | 2,213 | 113,581   | 1,788        | 100,403                                   | 448,494   |
| 1939 ..... | 95,256                           | 2,331 | 119,346   | 2,403        | 124,907                                   | 640,376   |
| 1940 ..... | 85,127                           | 3,167 | 165,525   | 3,453        | 182,786                                   | 892,072   |
| 1941 ..... | 190,497                          | 3,643 | 185,897   | 4,111        | 238,433                                   | 1,186,805 |
| 1942 ..... | 210,246                          | 3,816 | 197,830   | 4,273        | 263,006                                   | 1,753,245 |
| 1943 ..... | 262,154                          | 3,644 | 192,618   | 4,165        | 295,505                                   | 1,461,484 |
|            |                                  |       |           |              |   | 2,211,761 |

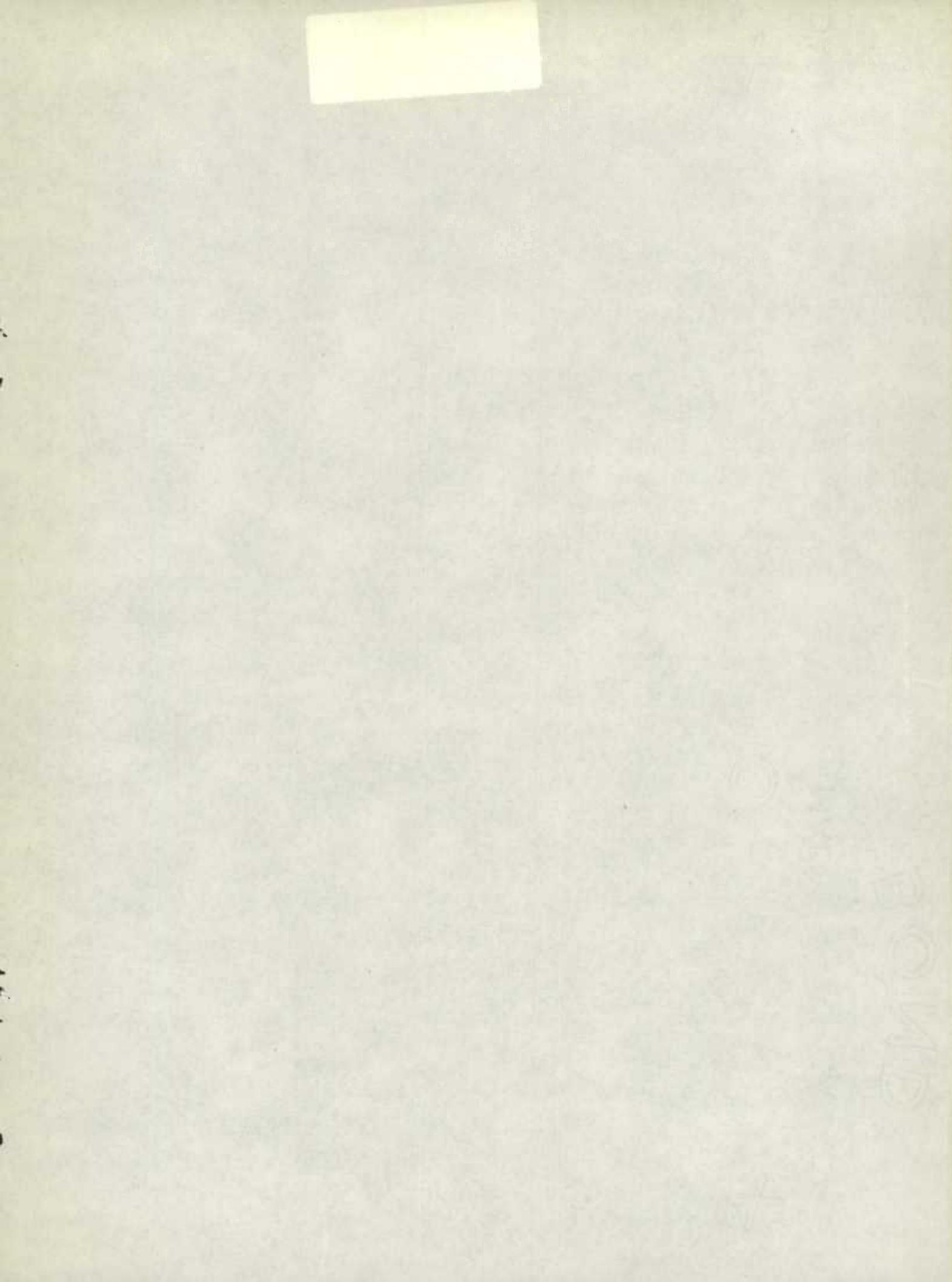
(x) Includes shapes made from imported clays, from magnesite, etc., amounting to 54,800 tons in 1942 and to 31,341 tons in 1943.

Table 40 - TOTAL PRODUCTION IN CANADA OF REFRACTORY CLAY AND PLASTICS, 1933-1943

| Year       | Short tons | Selling value at works<br>\$ |
|------------|------------|------------------------------|
| 1933 ..... | 1,405      | 101,488                      |
| 1934 ..... | 2,119      | 142,290                      |
| 1935 ..... | 3,506      | 179,161                      |
| 1936 ..... | 3,784      | 212,607                      |
| 1937 ..... | 5,303      | 260,883                      |
| 1938 ..... | 7,155      | 377,687                      |
| 1939 ..... | 5,094      | 271,106                      |
| 1940 ..... | 10,915     | 630,450                      |
| 1941 ..... | 16,379     | 933,388                      |
| 1942 ..... | 18,458     | 1,027,336                    |
| 1943 ..... | 18,619     | 1,100,510                    |

## LIST OF FIRMS IN THE IMPORTED CLAY PRODUCTS INDUSTRY, 1943

| Name of Firm                             | Address                              |
|--|--------------------------------------|
| <u>Quebec</u> -                          |                                      |
| Canada Firebrick Company Ltd.            | 4741 St. Amroise St., Montreal       |
| Canadian Potteries Ltd.                  | 5 Mackenzie King St., St. Johns      |
| Standard Clay Products Ltd.              | St. Johns                            |
| Walker-Hind-Sutherland Refractories Ltd. | 309 St. Ferdinand St., Montreal      |
| <u>Ontario</u> -                         |                                      |
| Armaco Ltd.                              | 24 Wellington St. W., Toronto        |
| Canadian Ohio Brass Company Ltd.         | Thorold Rd., Niagara Falls           |
| Canadian Porcelain Company Ltd.          | Paradise Rd., Hamilton               |
| Canada Vitrified Products Ltd.           | Talbot St. E., St. Thomas            |
| Dominion Potteries Ltd.                  | Dundas St. W., Oakville              |
| Donvale Pottery Co.                      | 27 Davies Ave., Toronto 8            |
| Ecanada Art Pottery Ltd.                 | 2 Paradise Rd., Hamilton             |
| Frontenac Floor & Wall Tile Co. Ltd.     | Kingston                             |
| Green, A. P., Fire Brick Co. Ltd.        | Commercial St. (Leaside), Toronto 12 |
| Hamilton Potteries Ltd.                  | 100 Locke St., Hamilton              |
| McMaster Pottery                         | Main St., Dundas                     |
| National Refractories Ltd.               | Port Robinson                        |
| Ontario Refractories Ltd.                | Port Robinson                        |
| Plibrico Jointless Firebrick Ltd.        | Horner Ave., Toronto 14              |
| Robinson Clay Product Co. of Canada Ltd. | 119 Shaftesbury Ave., Toronto        |
| Smith Potteries                          | 353 King St. W., Oshawa              |
| Sovereign Potteries Ltd.                 | 282 Sherman Ave. N., Hamilton        |
| Turner's Plastic Fire Brick Co. Ltd.     | Audley St., Mimico                   |
| Georgetown Clay Products Ltd.            | King St., Georgetown                 |
| <u>British Columbia</u> -                |                                      |
| Allen Refractories                       | 69E .. 1st Ave., Vancouver           |



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