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## THE TALC AND SOAPSTONE INDUSTRY, 1942

The value of crude and refined talc and soapstone sold by Canadian producers of these minerals in 1942 totalled $310,824 compared with a corresponding value of $360,809 in 1941. Mine shipments of soapstone in 1942 totalling 14,369 tons and valued at $136,529 came entirely from the Eastern Townships in the province of Quebec. Production of high grade talc is confined chiefly to the province of Ontario, and in 1942 shipments totalling 15,499 net tons valued at $174,295 were made from properties located near Madoc, Hastings county, and from a deposit situated in Canonto township in Frontenac county. In British Columbia, crude talc imported from the United States was treated in a mill operated by Geo. W. Richmond & Company of Vancouver.

During 1942 there were 10 firms reported as active in the industry, 7 in the province of Quebec and 3 in Ontario; all of these made commercial mine shipments. Capital employed in the industry totalled $567,665; employees numbered 115 and $113,601 were distributed as salaries and wages. Fuel and purchased electricity consumed were appraised at $25,905 and the cost of explosives and other process supplies used was reported at $33,208. The net value of sales in 1942 was estimated at $251,711 compared with $305,603 in 1941.

The following information is from a report prepared by the Bureau of Mines, Ottawa:

"The entire talc and soapstone production of Canada has for some years past come from Ontario and Quebec. More than 90 per cent of the total output of talc to the end of 1942, however, came from the Madoc area, Hastings county, Ontario, which supplies ground talc of good white colour, while Quebec produces mainly a grey, off-colour grade. Quebec is the only producer of cut soapstone blocks and bricks, and of sawed crayons.

"Development of the Madoc deposits commenced about 1900 and total output to date is estimated to have been about 400,000 tons. Since 1937, Canada Talc Limited, operating the Conley mine, has furnished most of the supply, having taken over the mine and mill of the G. H. Gillespie Company, the pioneer operator, in that year. Production is at the rate of about 15,000 tons a year. There have been various other small, intermittent operations in the area but these have accounted

for only a small tonnage. In 1941, Trent Mining Syndicate commenced development on a property adjoining the Conley mine and erected a small mill, but was inactive during most of 1942. W. C. Spry (Victory Talc) continued to grind a small tonnage of off-colour talc in the mill of Canada Slate Products about a mile north of Madoc, the crude rock being obtained from a deposit near Ompah, Frontenac county, 65 miles distant. The Ompah talc is finely schistose, cream-coloured, and quite distinct in character from that of the Madoc district.

"Quebec has been producing cut soapstone since 1922, mainly in the form of blocks and bricks for the alkali recovery furnaces of domestic kraft mills. The sawing of crayons was commenced a few years ago. The industry is centred in the Thetford Mines district, Eastern Townships, where Broughton Soapstone and Quarry Company is the principal operator. This company operates two soapstone quarries near Leeds station in Broughton township and in addition to turning out cut stone and crayons produces most of the ground talc made in the province. Other smaller operators in the same district are Charles Fortin, of Robertson, and L. C. Pharo, of Thetford Mines, working in Thetford and Leeds townships, respectively. Some of the sawing dust from these operations is sold to domestic roofing firms and a considerable tonnage of quarry and sawing waste is shipped to the grinding plant of Pulverized Products, Limited, 4820 Fourth Avenue, Rosemount, Montreal. Total sales of cut stone from the district in 1942 were about 3,000 tons and of ground talc about 8,500 tons. Baker Mining and Milling Company, 4010 St. Catherine Street West, Montreal, the only other operator in Quebec, has a mine and mill near Highwater in Brome county, close to the Vermont boundary. The company began to produce in 1938 and in 1941 reported sales of about 1,500 tons of ground talc of various grades. Total production of ground talc in the Province in 1942 was nearly 14,000 tons.

"In British Columbia the deposits near McGillivray, on the Pacific Great Eastern railway and at Kapoor near Victoria have been idle since 1935.

"Many grades of ground talc are marketed and the price range is wide. Value is dependent upon purity (governing freedom from lime and gritty or iron-bearing substances, slip, and colour), particle shape, and fineness of grinding, the specifications for which vary in the different consuming industries. Roofing and foundry talcs are the cheapest grades, these trades being satisfied with coarser grey or off-colour material, often soapstone powder or sawing dust, which sells at about $5 to $7 a ton f.o.b. rail. Domestic grey talc, suitable for rubber and paper use, sold in 1942 for an average of $7 to $8 per ton. White, Madoc talc was quoted at $7 to $10 for the coarser grades, $11 to $28 for finer mesh sizes, and $44 for minus 400-mesh material.

"Pyrophyllite - Pyrophyllite (hydrous silicate of alumina) closely resembles talc on appearance and physical characteristics. It is difficult to distinguish from talc even by microscopic means and often requires chemical analysis for its identification. In the ground state it can be employed for many of the industrial uses of talc. Commercial deposits are relatively scarce. Most of the recorded world production comes from North Carolina where the industry has expanded rapidly in recent years. A large part of the American output goes to the ceramic trade, the remainder being sold for fillers in various products. When fired, pyrophyllite does not flux, as does talc, and it is of value in a wide range of high-grade ceramic products, including refractories.

"Important deposits are known in Newfoundland, from which some shipments were made a few years ago to the grinding mill of Clinchfield Sand and Feldspar Corporation, Baltimore, Maryland. The occurrences are at present owned and

operated by Industrial Minerals Company of Newfoundland Limited, Box 435, St. John's, which in 1942 installed a grinding plant with a capacity of 25 tons a day and shipped about 500 tons of ground material to Great Britain. In Canada, some rather low-grade, sericitic pyrophyllite occurs at Kyuquot Sound on the west coast of Vancouver Island. A small quantity was shipped from these deposits about 30 years ago for use in refractories and cleanser products. None of the reported occurrences of pyrophyllite in Quebec have been developed and little is known of their extent or economic possibilities. One such deposit in Stanstead township, near Lake Memphremagog, was investigated in 1941 by the Bureau of Mines, but the material proved to be sericite.

"In 1942, pyrophyllite was quoted at $8 to $13 a ton, f.o.b. North Carolina mills, for 200-mesh and 325-mesh material, respectively."

Table 1 - PRINCIPAL STATISTICS OF THE TALC AND SOAPSTONE INDUSTRY IN CANADA, 1940-1942

| | | 1940 | 1941 | 1942 |
|---|---|---|---|---|
| Number of firms | | 8(b) | 8(c) | 10(a) |
| Capital employed | $ | 319,398 | 695,581 | 567,665 |
| Number of employees - On salary | | 7 | 8 | 8 |
| On wages | | 87 | 140 | 107 |
| Total | | 94 | 148 | 115 |
| Salaries and wages - Salaries | $ | 19,563 | 21,564 | 22,729 |
| Wages | $ | 61,316 | 107,256 | 90,872 |
| Total | $ | 80,879 | 128,820 | 113,601 |
| Selling value of products (Gross) | $ | 229,639 | 360,809 | 310,824 |
| Cost of fuel and purchased electricity | $ | 15,480 | 26,882 | 25,905 |
| Cost of explosives and other process supplies | $ | 21,650 | 28,324 | 33,208 |
| Selling value of products (net) | $ | 192,509 | 305,603 | 251,711 |

(a) 7 firms in Quebec and 3 in Ontario; data for 1 firm in Quebec, other than Sales not available.
(b) 6 firms in Quebec and 2 in Ontario.
(c) 5 firms in Quebec and 3 in Ontario.

Table 2 - CAPITAL EMPLOYED, BY CLASSES (x), 1940-1942

| | 1940 | 1941 | 1942 |
|---|---|---|---|
| | $ | $ | $ |
| Present value of lands, buildings, fixtures, machinery, tools and other equipment | 284,993 | 590,303 | 458,036 |
| Inventory value of materials on hand, stocks in process, fuel and miscellaneous supplies on hand | 5,184 | 18,343 | 9,465 |
| Inventory value of finished products on hand | 6,518 | 8,915 | 21,385 |
| Operating capital | 22,703 | 78,020 | 78,779 |
| TOTAL | 319,398 | 695,581 | 567,665 |

(x) By active firms.

Table 3 - WAGE-EARNERS, BY MONTHS, 1941 and 1942

| Month | Total 1941 | 1942 | | |
|---|---|---|---|---|
| | | Surface | Underground | Mill |
| January | 99 | 55 | 57 | 29 |
| February | 108 | 63 | 56 | 26 |
| March | 100 | 46 | 58 | 25 |
| April | 121 | 43 | 49 | 25 |
| May | 131 | 43 | 45 | 22 |
| June | 150 | 46 | 45 | 26 |
| July | 149 | 53 | 34 | 23 |
| August | 161 | 47 | 25 | 21 |
| September | 153 | 35 | 27 | 23 |
| October | 173 | 33 | 25 | 24 |
| November | 169 | 34 | 25 | 22 |
| December | 167 | 41 | 18 | 20 |

Table 4 - WAGE-EARNERS WORKING NUMBER OF HOURS SPECIFIED DURING ONE WEEK IN MONTH OF HIGHEST EMPLOYMENT, 1942

| Number of hours worked | Number of wage-earners | Number of hours worked | Number of wage-earners |
|---|---|---|---|
| 30 hours or less | 3 | 49-50 hours | ... |
| 31-43 hours | 4 | 51-54 hours | 85 |
| 44 hours | 1 | 55 hours | 2 |
| 45-47 hours | ... | 56-64 hours | 25 |
| 48 hours | ... | 65 hours and over | 32 |
| Grand total number of employees in week specified | | | 153 |
| Total wages paid in week specified | | | $ 2,494 |

Table 5 - FUEL AND ELECTRICITY USED, 1941 and 1942

| Item | Unit of measure | 1941 | | 1942 | |
|---|---|---|---|---|---|
| | | Quantity | Value | Quantity | Value |
| | | | $ | | $ |
| Bituminous coal - Canadian | tons | 5 | 45 | 3 | 30 |
| Foreign | tons | ... | ... | ... | ... |
| Anthracite coal | tons | ... | ... | ... | ... |
| Gasoline | Imp.gal. | 14,448 | 3,631 | 17,194 | 5,237 |
| Kerosene | Imp.gal. | 90 | 17 | 187 | 39 |
| Fuel oil and diesel oil | Imp.gal. | 11,197 | 1,638 | 3,940 | 851 |
| Wood | cord | 70 | 210 | 68 | 339 |
| Electricity purchased (x) | K.W.H. | 1,849,225 | 21,341 | 1,648,880 | 19,409 |
| TOTAL | ... | ... | 26,882 | ... | 25,905 |

(x) In addition, 107,424 K.W.H. generated for own use in 1941.

Table 6 - POWER EQUIPMENT INSTALLATION, 1942

| | Number of units | Horse power--Manufacturers' rating |
|---|---|---|
| Diesel engines | 2 | 78 |
| Other gas engines | 14 | 450 |
| Electric motors operated by purchased power | 41 | 1,002 |
| Electric motors operated by own power | ... | ... |

Table 7 - PRODUCTION OF TALC AND SOAPSTONE IN CANADA, 1930-1942

| Year | Value | Year | Value |
|---|---|---|---|
| | $ | | $ |
| 1930 | 186,216 | 1937 | 163,814 |
| 1931 | 157,083 | 1938 | 144,848 |
| 1932 | 159,038 | 1939 | 170,066 |
| 1933 | 190,836 | 1940 | 229,639 |
| 1934 | 180,777 | 1941 | 360,809 |
| 1935 | 171,532 | 1942 | 310,824 |
| 1936 | 177,270 | | |

Production of talc and soapstone in Canada from 1886 to the end of 1942 totalled 551,669 short tons valued at $5,128,105. The largest annual tonnage produced during these years was 34,632 in 1941, also, the greatest annual value was $360,809 in 1941.

Table 8 - PRODUCTION (SALES) IN CANADA OF TALC AND SOAPSTONE, 1940-1942

| | 1940 | | 1941 | | 1942 | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| | Tons | $ | Tons | $ | Tons | $ |
| Soapstone (Quebec)(x) | 8,625 | 74,905 | 16,461 | 155,925 | 14,369 | 136,529 |
| Talc - Ontario | 15,166 | 154,734 | 18,171 | 204,884 | 15,499 | 174,295 |
| TOTAL CANADA | 23,791 | 229,639 | 34,632 | 360,809 | 29,868 | 310,824 |

(x) Shipments by some firms usually include a considerable quantity of material classified as talc.

Table 9 - CONSUMPTION OF TALC IN CANADA, BY INDUSTRIES, AS REPORTED IN THE ANNUAL CENSUS OF MANUFACTURES, 1941

| Industry | Short tons | Cost at works |
|---|---|---|
| | | $ |
| Rubber industry | 1,093 | 21,194 |
| Electrical apparatus | 438 | 10,906 |
| Paints | 3,789 | 130,215 |
| Soaps and cleansing preparations | 793 | 21,244 |
| Toilet preparations | 562 | 27,377 |
| Polishes | 19 | 478 |
| Products from imported clays | 762 | 11,542 |
| Prepared roofing | 4,740 | 49,750 |
| Pulp and paper | 1,169 | 19,023 |