Canada shares with Soviet Russia the distinction of being a producer of *nepheline syenite*. This is a quartz-free, white, igneous rock consisting of a mixture of soda feldspar, potash feldspar, and nepheline. It occurs in large uniform deposits in Eastern Ontario and is being worked near Lakefield, Ont., by American Nepheline Limited. The deposit there is five miles long, has an average height of 350 ft. above the surrounding country and is from one-quarter mile to one mile wide.

Nepheline syenite is produced mainly for use in the ceramic industry; it is pulverized for use as an ingredient in glass, pottery, vitrified china, floor and wall tile. When pulverized to micron size it is used as a pigment extender in paints, and as a filler in plastics, rubber, and insecticides. It is also used in scouring compounds, and as an additive in the manufacture of mineral wool. Because its high alumina content—about 23 p.c. by weight—may be easily leached out, nepheline syenite is a potential source of alumina.

Salt is one of the necessities of life and is an essential raw material for the chemical and food-processing industries. Salt is found in every province of Canada and truly may be said to be available in inexhaustible quantity. In Western Canada, for instance, it occurs in great underground beds extending for hundreds of miles from the southern part of Manitoba through Saskatchewan to the northern part of Alberta. It is produced in Ontario and Nova Scotia as well as in the Prairie Provinces. Most of the production is obtained by pumping water down holes drilled to the salt beds and then pumping the saturated brine back to the surface.

In 1953, production amounted to 946,650 tons with a value of $7,356,595. About 53 p.c. of this was used by the chemical industry, principally in the form of brine. The chief primary chemical products made from salt are caustic soda, chlorine, and soda ash, but there is a host of secondary products. The fishing industry, meat packing, textile, leather, refrigeration, metallurgical, soap, and many other industries utilize salt. The only salt produced by direct mining in Canada is at Malagash, N.S., where a relatively impure salt is obtained, which after being crushed is sold throughout eastern Canada for use on highways and railways to remove ice in winter and to control dust in summer. At present, Canadian Rock Salt Company Limited is sinking a shaft near Windsor, Ont., in preparation for the mining of the pure rock salt available in that locality at a depth of 1,100 ft.

Silica is another material indispensable to Canadian industry. It is the principal constituent of many minerals but the chief commercial sources are quartzite, sandstone, sand, and quartz from quarries in Ontario, Quebec, Nova Scotia, Manitoba, and British Columbia. The products differ in the several provinces: chief are flux for metallurgical use, silica flour, moulding sand, and material for the making of ferrosilicon, silicon metal, artificial abrasives, silica brick, and other ceramic products. Quartz crystals of excellent quality are quarried in small quantity at Lyndhurst, Ont.—at present the only producing source on this continent. The quartz is used in the making of submarine-detection equipment.

Silica is also used in the chemical industry. Some recent products, known as silicones, which are derived from silica, coke and chlorine, are acclaimed as being among the most significant chemical developments in recent years. Silicones fill the gap between organic and silicate compounds, and their chemical structure promises an endless array of them. They are available in the form of colourless liquids, oils, greases, varnishes, and resins, and as special rubber products. Silicone-treated materials will "shed water like a duck's back."