

Salt is another important Canadian industrial mineral; more than 3,000,000 tons are produced annually, valued at over \$19,000,000.

Requirements of the kraft paper industry resulted in record production of 250,000 tons of sodium sulphate in Saskatchewan in 1961. Three of the four producers are using natural gas for the conversion of the natural mineral mirabilite to a commercial product, viz., 'salt cake'. In two of these operations a technique known as submerged combustion is being used and is resulting in improved efficiency. In 1961, Saskatchewan Minerals, Sodium Sulphate Division, reopened the Bishopric plant which had been idle for several years.

Late in 1960, Quebec Lithium Corporation resumed mining and milling of spodumene north of Val d'Or, to provide feed for the new lithium chemical plant and for continuing sales of ceramic-grade spodumene concentrate. By October 1961, the chemical plant was turning out about 6,000 lb. of high-purity lithium carbonate daily, a production that will be doubled. Early in 1962, Quebec Lithium will be marketing lithium hydroxide and monohydrate processed from lithium carbonate and is also planning to add lithium halides to the chemicals produced from spodumene.

Subsection 3.—Petroleum and Natural Gas

As a result of important new developments, 1961 was an exceptionally good year for many segments of the petroleum and natural gas industries. The production and transportation sectors of the petroleum industry benefited greatly from the Federal Government's national oil policy announced on Feb. 1, which was designed to achieve increased domestic production on a voluntary basis. Approximately one-half of Canada's crude-oil-producing capacity has been shut-in in recent years; the oil policy set production targets for Canadian producers so that a more favourable production-to-consumption ratio would be established. Specifically, output goals of crude oil and natural gas liquids were set at 625,000 bbl. a day by mid-1961; 640,000 bbl. a day for the whole year; and approximately 800,000 bbl. a day by the end of 1963. A change in the pattern of supply and distribution by the industry was under way and this resulted in the 1961 targets being reached. The average daily production of 642,000 bbl. surpassed the 1960 record output of 543,000 bbl. by 18 p.c. In Alberta, the large increase in output did not result in a correspondingly large expansion of exploration and development programs during the year since production facilities and oil reserves were more than adequate to meet the increased market demand. In British Columbia, however, the stimulus of a new pipeline being built to make British Columbia oil available to Vancouver refineries caused a sharp increase in oil development drilling and installation of production facilities. The 1961 value of crude petroleum and natural gas liquids production was \$509,834,660 compared with \$438,978,707 in 1960.

The natural gas industry had a highly successful year in 1961, both in terms of production and of capital investment. Production, valued at \$63,607,157, amounted to 646,018,204 Mcf., a 24-p.c. increase over the 1960 output and an all-time record. Thus, the large annual increases in natural gas production that have prevailed for the past decade continued without slackening, and the year-end completion of the Alberta-California gas pipeline ensures that the rapid expansion of output will continue through 1962. The Alberta-California gas pipeline, with its lateral feeders, was the largest item of capital expenditure; \$130,000,000 was spent on the Alberta and British Columbia section of the line. In addition, new natural gas processing plants costing about \$50,000,000 were built, several of them for the specific purpose of supplying the Alberta-California pipeline.

Table 1 shows production of oil and gas in Western Canada since 1954. The natural gas production figures exclude gas flared in the field, the percentage of which varies from year to year. In 1954, 20 p.c. of gross gas production was flared but in recent years increased demand has made it economical to gather a larger proportion of the gas produced, thereby reducing the percentage flared.