

Shipments of clay and clay products in 1972 were valued at \$52.3 million, a 7.7% increase over the previous year (Table 12.26). Deposits of clay for use in the manufacture of papers, refractories, high quality whitewares and stoneware products are scarce in Canada. Consequently china clay (kaolin), fire clay, ball clay and stoneware clay are mostly imported. In Canada common clays and shales, higher in alkalis and lower in alumina than the other clays, are used to manufacture brick and tile products.

#### 12.1.4 Oil and natural gas

Canadian production of crude oil and natural gas liquids in 1972 increased 15.9% to 671 million barrels (bbl). Crude oil output amounted to 562 million bbl or 1.5 million barrels a day (b/d) (Table 12.27). Gas plant production of natural gas liquids totalled 109 million bbl or 299,000 b/d. Natural gas production rose 16.6% in 1972 to 2,913,047 million cubic feet (MMcf) or 7,981 million cubic feet a day (MMcf/d) (Table 12.28).

In the face of record production levels Canada's liquid hydrocarbon reserves, which include conventional crude oil and natural gas liquids, declined for the third consecutive year. Estimating production of crude oil and natural gas liquids at 621 million bbl in 1972, the Canadian Petroleum Association (CPA) calculated that proven remaining reserves had declined by 439 million bbl to a year-end total of 9,723 million bbl. This comprises 8,020 million bbl of crude oil and 1,703 million bbl of natural gas liquids. Reserves added in 1972 totalled 182 million bbl and of this amount 110 million bbl were attributable to revisions, 45 million bbl to extensions of established fields and 27 million bbl to new discoveries. Using the 1972 level of production, the life index for conventional crude oil and natural gas liquids dropped to 15.6 years, the lowest it has been since the discovery of the Leduc field. Proven remaining marketable reserves of natural gas in Canada declined in 1972, the first recorded decline since the CPA began compiling estimates in the early 1950s. Proven reserves at the end of 1972 amounted to 52,935,782 MMcf, down 2,526,068 MMcf, or 4.6%, from the end of 1971. The decline resulted from low additions from new discoveries and record high production and consumption levels. Significant gas discoveries were reported in the Mackenzie Delta, the Arctic islands and off the east coast, but potential reserves in these areas are not included in the CPA estimates since no transportation facilities are available to move the gas to market.

Refinery expansion slackened in 1972 following the record growth rate in the previous year. No new refineries were built. However, two major refineries were under construction, one in Newfoundland which was completed in 1973 and another in Edmonton with a completion date of 1974.

**Alberta.** Crude oil production declined in all provinces except Alberta, which exceeded last year's production by 19.6%. Alberta production, at 1.2 million b/d, accounted for 79% of the total Canadian crude oil output in 1972. Synthetic crude oil production from the Great Canadian Oil Sands Limited's plant at Fort McMurray contributed 51,000 b/d. The Alberta Energy Resources Conservation Board (AERCB) estimated that in 1971 adjusted wellhead capacity was 1.65 million b/d; therefore about 74% of the province's capability was being used at the end of 1972. Since 1968 Alberta's unused productive capacity has declined from 56% of the then current production rate to 26% in 1972.

Exploratory and development drilling footages were increased in 1972 partly because of the incentive provided by higher prices for oil and gas. Both footages and number of wells increased as 2,719 wells were drilled with an aggregate footage of 10.05 million ft compared with 2,014 wells and 7.98 million ft in 1971. Many of the wells were drilled in the southern part of the province where shallow gas deposits are being explored and developed. Despite increased exploration drilling no new oil discoveries of any substance were made during 1972.

Alberta continued to supply four fifths of the marketable gas in Canada. Almost half of the gas development wells drilled were successful. Much of the development drilling was in the producing fields of southeastern Alberta. Three separate drill locations in the Ricinus area, 65 miles northwest of Calgary, have indicated potentially large reserves.

Early in 1973 Great Canadian Oil Sands Limited (GCOS) applied to the AERCB to increase its allowable production of synthetic crude oil to 65,000 b/d from its present allowable rate of 45,000 b/d. The Great Canadian Oil Sands Limited's recovery plant is located near Fort