

13.4.2 Exploration and development

Western provinces. With the prospect of continuing strong demand and increased wellhead prices, producers increased their efforts to develop new reserves. As a result, successful gas well completions in 1972 increased by 38.5% over 1971 to 1,157 wells. Much of the development was in the shallow gas fields of southeastern Alberta. Gas from this area is a relatively dry, sulphur-free commodity requiring no processing which can be marketed easily because of ready access to existing pipeline systems. Exploratory drilling in the foothills and deeper basins of western Alberta became more attractive as the prospect of better prices began to offset the deeper drilling costs of this area and the expense of removing sulphur.

The search for gas in shallow formations in southern Alberta continued in 1973 to be a priority exploration target and this was reflected in a 120% rise in the number of wells drilled. Additional exploratory interest in this area was generated when the British block near Medicine Hat, formerly reserved for military testing, was made available for exploration. This 8,000-sq-mile area is now being evaluated by a provincial government funded drilling program. The block is almost completely surrounded by gas-producing fields and is estimated to contain upward of 4 MMMMcf of gas reserves. The first 27 tests of the scheduled 50-well drilling program have been drilled and all were reported successful.

In British Columbia exploration and development drilling in or near the established fields close to Fort St. John continued in 1972 at a rapid pace. Exploration gas wells completions increased 100% and development wells, 50%. A high level of activity continued in 1973.

In Saskatchewan exploration was more static in 1972. Any drilling activity that did take place was in the neighbourhood of the established fields in the southwestern corner of the province. Activity declined in 1973.

Northern regions. On the northern frontier, industry activity in the Mackenzie Delta and the Arctic islands continued unabated and significant discoveries were made in both areas. The discoveries in the Mackenzie Delta during 1973 confirmed the earlier estimates of a substantial reserve build-up. The initial gas discovery in the Mackenzie Delta area was made in 1971 on Richards Island; since then six more have been made, most of them also on Richards Island. Three were drilled in 1973 and in addition, the Kugpik 0-13 well drilled 55 miles north of Inuvik encountered significant quantities of both gas and oil from a zone below 7,200 ft. At the end of 1973 these discoveries had yet to be evaluated.

Late in 1973, the search extended to the Arctic off-shore area when Imperial Oil Limited began a multi-well drilling program 10 miles from Richards Island on a man-made island in the Beaufort Sea, the first off-shore well to be drilled in the Arctic. It is likely that progress of this well will be closely followed by both industry and government as the area off-shore from the Mackenzie Delta is reputed to have as good potential for hydrocarbon accumulation as the mainland. Imperial had applied for a licence to build a second island about 19 miles southwest of the first with the intention of drilling another off-shore well during the coming year.

Since the discovery of a major gas field at Drake Point on Melville Island in 1970, five more major gas fields have been found, the most recent by Dome Petroleum on King Christian Island in 1973. All of the others were located by Panarctic Oils Ltd.

Atlantic region. In the off-shore east region, where drilling commenced in 1966, a total of 66 exploratory wells were completed at the end of 1973. There have been four significant discoveries, all in the vicinity of Sable Island, the first being made on the southwestern tip of the island in 1971. This well, when tested, yielded substantial quantities of oil and gas from 17 separate zones. Six miles to the southwest, a gas-condensate discovery was made a year later and the third significant discovery was made 30 miles east of Sable Island when the Primrose N-50 well tested flows of gas with condensate from three separate zones. In mid-1973 another oil discovery was made 25 miles southwest of Sable Island when the Cohasset D-42 well yielded low sulphur crude oil on test from three separate zones. All of these discoveries are currently being evaluated but it will probably be some time before it will be fully determined if they can be commercially developed.

Eastern provinces. In Ontario and Quebec no large gas discoveries were made in 1972. Ontario had seven minor gas discoveries and 27 development wells were drilled in the gas producing area of the province while in Quebec the seven exploratory wells drilled were unsuccessful.