

In oil sands development, Syncrude Canada Ltd.'s oil sands plant came on stream in August 1978. Initial production was 9 540 m<sup>3</sup>/d. When fully operational, the plant is expected to produce 19 870 m<sup>3</sup>/d, about 10% of current Canadian conventional crude oil production.

Another tar sands proposal was announced early in 1978 by Shell Canada Ltd. which was instrumental in forming a consortium, the Alsands Project Group. The group of seven oil companies in addition to Shell was formed to bring together the necessary resources. Shell was appointed to negotiate the commercial terms and prepare the application to the Alberta Energy Resources Conservation Board (AERCB). The consortium would be phased into an operating company to construct and operate the Alsands mining plant. The project, approved in 1979, incorporates the best undeveloped mineable orebodies and provides sufficient reserves to double its capacity or prolong its operation. It was expected production would begin in 1986 at initial output of 22 000 m<sup>3</sup>/d, and bring total synthetic oil production to 48 000 m<sup>3</sup>/d or 17.5 million cubic metres a year.

In the Lloydminster heavy oil belt straddling the Alberta-Saskatchewan border, Husky Oil Ltd. and another group of companies comprised of Petro-Canada, Gulf Canada Ltd. and the Saskatchewan Oil and Gas Corp. embarked on two separate programs of heavy oil exploration, development and enhanced recovery projects. These exploratory programs were designed to determine whether or not the heavy oil base was large enough to support the operation of a major upgrading facility in the Lloydminster area. Both Husky Oil and the Petro-Canada group expressed interest in constructing upgrading facilities which would process more than 15 898 m<sup>3</sup>/d of heavy crude oil.

Development of the huge oil sands resources of the Cold Lake area of Alberta, about 290 km east of Edmonton, was also progressing. In 1979, Esso Resources Ltd. received approval from the AERCB to build and operate a major heavy oil recovery and upgrading project near Cold Lake. Initially, the heavy asphaltic oil, too thick to flow in its natural state, would be recovered by a thermal method from a depth of 457 m. Once recovered, the heavy oil would be converted by a new upgrading facility to between 19 000 and 23 000 m<sup>3</sup>/d of high-grade synthetic crude oil. The synthetic crude oil would be further processed by existing Canadian refineries into a broad range of petroleum products. This project, when completed, would contribute significantly to Canada's petroleum resource base. Cost of the project was estimated at over \$4 billion, and it was expected to be completed by the mid-1980s. In field tests, Esso produced 800 m<sup>3</sup>/d with the oil being trucked to the Strathcona refinery near Edmonton.

### Federal incentives

### 13.4.3

Federal initiatives in taxes and pricing have helped to sustain high levels of activity in the petroleum industry. A special 50% depletion incentive was announced in 1978 for well equipment used in enhanced recovery projects. The frontier depletion allowance for wells costing more than \$5 million continued to have a positive impact on drilling in more remote areas of Canada. Access to world prices was announced for new non-conventional projects, with Syncrude and an expanded Great Canadian Oil Sands becoming the first beneficiaries. These measures, combined with specific provincial incentives and the investment tax credit available to all industries, produced an investment climate suited to accelerated development of new supplies as part of the national policy of reducing dependence on foreign oil imports. Data collected under a petroleum corporations monitoring survey showed that total petroleum related capital expenditures of the industry increased to 93.2% of the internal cash generated in 1978. During 1977, the same reinvestment ratio had been 91.5%.

A strong incentive to exploration has been provided by a revised tax structure. Companies investing new oil or gas revenue in exploration R&D pay taxes at a lower rate. In fact, oil and gas exploration and development expenditures amount to at least 70% of industry cash flows. Since 1975, both federal and provincial tax changes have encouraged exploration investment. Activity has been especially heavy in Alberta where additional supplies of natural gas have been located. A moratorium on proposed progressive incremental royalties for new oil and gas discoveries in the frontier regions was extended until 1982 to encourage the search for new supplies.