

In keeping with good conservation practice, engineering techniques to conserve oil reservoir energy have been adopted at the Leduc, Golden Spike and Turner Valley fields and plans for other fields were under study in 1955. Such engineering techniques, which may involve the injection of either water or gas into the producing formation, insure a maximum recovery of oil.

Increasing attention is also being given to "wet gas" processing. In 1955 there were eight gas conservation plants in Alberta having a total daily capacity of 332,000,000 cu. feet of natural gas. These plants are designed to recover propane, butane and pentane; two of them also treat sulphur bearing natural gas for the recovery of sulphur.

*Saskatchewan.*—In 1954 there was a marked increase in drilling activity in the southeastern part of Saskatchewan. Although there has been general exploratory activity throughout the southern part of the Province, south of Saskatoon, production prior to 1954 came largely from an area west of a line through Swift Current and Rosetown with the Lloydminster field marking the northern extent of the area. In this western area oil and gas production is obtained in large part from sands of Jurassic and Cretaceous ages.

In southeastern Saskatchewan the Midale field discovery of 1953 led to a series of other discoveries in limestone formations of Mississippian age during 1954 and 1955. By mid-1955 eight fields having a total of 96 wells had been defined. These fields produce a light-gravity oil, comparable to Alberta oil, from formations in the depth range of 3,500 to 4,600 feet. The rather small and isolated fields have required detailed drilling but the number discovered in a relatively short time has attracted much interest to this part of the Province.

Near Swift Current a total of 195 wells had been completed by mid-1955 in three of Saskatchewan's largest fields—Fosterton, Cantuar, and Success—and the medium-gravity oil from these Lower Cretaceous-Jurassic fields was being transported by pipeline to a United States refinery near St. Paul, Minnesota. The Coleville field near Kindersley, which is Saskatchewan's largest field, had 195 oil wells producing from a sand formation of Mississippian age. The oil is the heavy type similar to that produced in the Lloydminster field. The Smiley Viking sand field adjacent to the Coleville field remained the largest light-gravity oilfield in Saskatchewan and had 127 wells by mid-1955. Pressure maintenance programs for four oilfields were being planned during 1955 to insure maximum oil recovery.

Lower Cretaceous Viking sands of the Coleville-Smiley and the Brock fields are the argest sources of natural gas in the Province. In 1955 gas service from these fields was being extended northward from Saskatoon to Prince Albert.

*Manitoba.*—Oilfields in Manitoba centre on the town of Virden and oil occurrences so far discovered are Mississippian in age. Exploration continued throughout the southeastern part of the Province with the principal objective of testing limestone formations which have a depth range of 1,700 to 2,600 feet. The relative shallowness of oil occurrences and the ready access to market of the light-gravity oil produced have been incentives to exploration. Manitoba recorded the greatest percentage increase of any province in drilling and production for the year 1954. A water injection program instituted in the Daly field in 1953 has proved effective and by 1955 a doubling of the ultimate recovery percentage was assured.

*British Columbia.*—New gas fields discovered included West Buick Creek, Montney, Red Creek, North Beaton, Gates and Nig Creek. In further development of the Fort St. John field, British Columbia's largest gas source, seven productive gas zones were found during the drilling of a deep well in 1954 and the well when completed in a formation of Permo-Pennsylvanian age was found to have a daily open flow of 71,000,000 cu. feet.