

The most significant step-out of a previously discovered pool took place in the Waterton-Castle River area. Following the discovery of gas in the Mississippian formation in 1956, two nearby 'wildcat' wells, one at Castle River and one at Gladstone Creek, were successfully completed in the same horizon in 1957. More recently, two further exploratory tests indicate success and the possibility of a gas field rivalling Pincher Creek in importance. The discovery of the Pine Creek and Waterton reserves account for over one-half of the increase attributed to new discoveries. Reserves of natural gas were raised to 21,100,000,000 cu. feet in 1957 and by Mar. 31, 1958, established reserves had been raised to 22,500,000,000 cu. feet or the equivalent of 23,300,000,000 cu. feet when converted to a common heating value of 1,000 B.t.u. per cu. foot.

A number of Alberta's fields produce condensate gas and during 1957 the daily capacity of natural gas processing facilities was increased from 401,000,000 to 521,000,000 cu. feet. The number of processing plants in operation increased from 10 in 1956 to 12 in 1957, with five more under construction. In addition, the Pincher Creek plant doubled its capacity in 1958 to 120,000,000 cu. feet daily when it was linked with the Trans-Canada pipeline, and total plant capacity to process 'wet' gas then reached 862,000,000 cu. feet daily.

*Saskatchewan.*—Production of crude oil in Saskatchewan in 1957 totalled 36,861,089 bbl. and in 1958 an estimated 46,500,000 bbl., the latter figure being almost double the 1956 production. This increase, particularly in a period when the national output was down, can be attributed to the preferred geographical location of the province, compared with Alberta, in relation to markets in Ontario and central United States. Drilling activity continued at a rapid rate and in 1957, for the first time, Saskatchewan had more oil well completions than Alberta, bringing in a total of 893 new wells. There were 33 oil discoveries, most of which served to extend field boundaries or to fill in non-producing parts of established areas. The important Midale oil discovery in southeastern Saskatchewan in 1953 has led to the finding by May 1958 of a total of 18 fields in this area. These fields are being developed on the northern rim of the Williston Basin, a large structural feature with its centre in North Dakota. Oil occurs in limestone of Mississippian age at depths from 3,100 to 5,400 feet, the average being approximately 4,100 feet. Increased production of light gravity crude made up over 13,000,000 bbl. of the 16,000,000-bbl. increase in annual production.

Producing fields on the west side of the province are in the vicinities of Lloydminster, Kindersley and Swift Current. With the exception of the comparatively small Smiley field, all are either heavy or medium gravity crude oil fields. Oil fields in these areas produce from sandstone formations of Lower Cretaceous and Jurassic ages and the average well depth is 3,000 feet. Production of medium gravity crude accounted for over 3,000,000 bbl. of the increase of the 1957 production over 1956, while production of heavy gravity crude was down by over 500,000 bbl.

All natural gas reserves are in fields on the west side of the province and occur predominantly in formations of Cretaceous age. Five gas discoveries were made in 1957 and 12 field development wells were drilled. Saskatchewan's natural gas resources are much smaller than those of Alberta or British Columbia and all are reserved for use within the province.

*Manitoba.*—Oil production in Manitoba was up slightly in 1957 with 6,089,743 bbl. of crude oil being produced. During the year 224 wells were drilled, 127 of which found oil and 97 were dry. Of the 224 wells, 153 were development wells drilled mostly in the North Virden, Virden-Roselea and Daly fields which accounted for almost 85 p.c. of the provincial production. The testing of the Devonian and older formations in the area east and north of the Mississippian truncation, which was begun in 1956, was continued but without success. The 1958 total production was down slightly at an estimated 5,900,000 bbl.

*Yukon and Northwest Territories.*—The small production from the Northwest Territories comes from the Norman Wells field on the Mackenzie River, 90 miles south of the Arctic Circle. Crude oil from this field supplies a small refinery located there. Only