

whole Alberta production since its beginning in 1914 until the beginning of the Second World War. This increase was achieved despite increasingly drastic "market allowables" imposed by refineries established in the Prairie Provinces so that deliveries should not exceed the refining capacity of some 60,000 to 65,000 bbl. daily. The interprovincial pipe line (see p. 519) is calculated to overcome this obstacle.

The Leduc field continues to be the most prolific of the Alberta fields. Yielding 372,427 bbl. in its first year (1947) its production for 1949 amounted to 9,688,784 bbl. At the end of 1949 there were 351 wells in the field giving a daily average of 25,454 bbl. as compared with 172 wells averaging 21,326 bbl. at the end of 1948. The apparent falling-off in daily average production per well is explained by curtailment through market allowables.

To the northwest of the Leduc field is the Golden Spike No. 1 well with its amazing thickness of 545 ft. of pay sand and the still more amazing No. 5 brought in late in January, 1950—a two-zone producer with 560 ft. thickness. All the hopes that were based upon initial production from Golden Spike No. 1 have not been realized but this and like successes open up new prospects to the west of the main Leduc field whose potential is rated at some 215,000,000 bbl.

The Redwater field with reserves estimated at 500,000,000 bbl. may yet be a formidable contender for first place. In the first statistical period recorded (October-December, 1948) Redwater produced 36,875 bbl. Its output in the same period a year later was 1,678,010 bbl. and 4,793,491 bbl. for the complete year.

Although during 1949 the venerable Turner Valley field's output continued the shrinkage which set in after 1942, it was, nevertheless, third among Alberta's producing fields. The 1949 output was 4,304,063 bbl. bringing its cumulative total in 35 years to 102,155,970 bbl. It has been estimated that the Turner Valley production from 1949 to 1960 inclusive will be about 31,042,000 bbl. with several millions more for the decade 1960-70.

In October, 1949, discovery of the Normandville well at 6,700 ft. gave rise to new promise of petroleum in the Peace River country, some 210 miles northwest of Edmonton. The well produced 971 bbl. in its first half-month from a 25 ft. thick Devonian limestone, and by the end of the year the Alberta Government had granted oil and gas rights to the extent of some 20,000,000 acres in the Peace River as far north as Hay River.

At the end of 1949 there were 1,219 listed wells in Alberta producing a daily average of 54,606 bbl., compared with 717 wells at the end of 1948, averaging 37,785 bbl. of crude oil daily. The effect of market allowables is reflected in these figures when it is noted that the increase in the number of wells was 72 p.c. while the increase in the quantity of crude delivered was only about 20 p.c. In mid-December it was estimated that with restrictions removed, Alberta fields could produce (at that time) 125,000 bbl. daily. The daily average was then approximately 57,500 bbl. from 1,060 wells. At mid-May, 1950, production was approximately the same from 1,455 wells, a situation that emphasized the need for the construction of the interprovincial pipe line.

During 1949 exploration and development continued at ever-accelerating pace. Of 104 geophysical units in the Prairie Provinces at the end of the year, 85 units were in Alberta, 17 were in Saskatchewan and 2 in Manitoba. Before discovery of the Leduc field early in 1947 there were only 15 such parties in Alberta.