Petroleum.—The Turner Valley field in Alberta is the principal source of production in Canada. After 1933 only the southern end of the field remained available for the acquisition of leases, and in this area a well, Century 1, completed in 1934, produced crude oil instead of naphtha-laden gas. In 1936, Turner Valley Royalties 1, about half a mile to the southwest of Century 1, was completed and brought in as the first big crude-oil producer of Turner Valley. The impetus thus given to the drilling of wells essentially for oil was remarkable. By the end of 1939 about 100 wells had been drilled and only about 3 p.c. failed to prove productive. Of the total over 90 are in the southern part of the field opened up by Turner Valley Royalties 1. Production in many of these wells has been greatly increased by acidization, the effect of which is to open up the pore structure and establish channels for oil to flow more readily to the well. Whether the ultimate production of a well is increased by this treatment has not yet been determined.

The oil from the limestone in the crude-oil area of Turner Valley ranges in gravity from 40° API to 46°, and yields 50 p.c. of straight-run gasoline, differing from most crudes, which yield 30 to 35 p.c. Wide variability in the yield of different wells has been found in the oil area. At the end of 1939 Alberta had produced 27,800,000 bbl.

The rapid growth of crude-oil production in Turner Valley brought with it the problems of transportation and marketing. Tank storage in the field and at Calgary has now been increased so that the pipe-line can handle the demands from the Prairie Provinces and eastern British Columbia. Some oil is also moved from the field by truck. Limited markets have necessitated the curtailment of production and a system of prorationing has been used in Alberta since September, 1937.

The acreage factor has been simplified by allowing only one well to 40 acres.

It is reasonable to expect that, once adequate markets are opened, Turner Valley will not be the only big producer of crude oil in Alberta for the foothills are known to contain numerous structures that offer attractive prospects for oil. Nowhere yet has sufficient development been done to define what may be expected, but wells on the Elbow River and the Clearwater, a right-bank tributary of the North Saskatchewan River, have proved oil to be there in quantity. The region open to prospecting is enormous, extending into British Columbia and the Northwest Territories.

The principal Ontario oil fields are situated in the southwestern peninsula between Lake Huron and Lake Erie. The maximum production of these fields was reached in the '90's and has since declined. In 1939 Ontario's output totalled 206,196 bbl. New Brunswick's small production comes from the Stony Creek field, near Moncton. For the production by provinces in 1938, see Table 6, p. 321.

32.—Quantities and Values of Crude Petroleum Produced in Canada, 1920-39.

NOTE.—Figures for the years 1886 to 1910, inclusive, will be found at p. 377 of the 1933 Year Book, and for 1911 to 1919 at p. 353 of the 1939 Year Book.

Year.	Quantity.	Value.	Year.	Quantity.	Value.	Year.	Quantity.	Value.
	bbl.[1]	$		bbl.[1]	$		bbl.[1]	$
1920.....	196,251	822,235	1927....	476,591	1,516,043	1934....	1,410,895	3,449,162
1921.....	187,541	641,533	1928....	624,184	2,035,300	1935....	1,446,620	3,492,188
1922.....	179,068	611,176	1929....	1,117,368	3,731,764	1936....	1,500,374	3,421,767
1923.....	170,169	522,018	1930....	1,522,220	5,033,820	1937....	2,943,750	5,399,353
1924.....	160,773	467,400	1931....	1,542,573	4,211,674	1938....	6,966,084	9,230,173
1925.....	332,001	1,250,705	1932....	1,044,412	3,022,592	1939[2]...	7,838,310	10,353,351
1926.....	364,444	1,311,665	1933....	1,145,333	3,138,791			

[1] The barrel=35 imperial gallons. [2] Preliminary figures.