

On Lone Prairie, Mr. Wartenby, one of the settlers, told me he fed his cattle for only ten days during the winter of 1918-19. This place used to be a favourite wintering-place for Indian horses.

The present situation of this area as regards agriculture now is: Some stockmen on Halfway River; settlers who produce little or nothing about Hudson Hope, having little market; and a few trapper settlers, squatters, and absentees on Peace River above Hudson Hope, near Moberly Lake, and at Middle Fork of the Pine, East Fork of the Pine, on Lone Prairie, at Flat Creek, and along the western side of Kiskatinaw River. These people cannot sell produce, nor have they much stock, excepting one case on Halfway River. The country has only Indian trails; hence those who hold the land must risk a living by trapping or other occupations.

The main highway of the country is the Peace River. This avenue of approach from the eastern railway connections and from the west by way of Fort George and the Parsnip River has a considerable traffic of a frontier character, placer-miners, prospectors, trappers, and other adventurers, or exploration parties. Some money should be spent upon the improvement of the one long portage road at Hudson Hope of fourteen miles, and in making a conspicuous landing-place above the canyon at its upper end, for it is a dangerous approach.

## APPENDIX B.

### ALBERTA OIL PRODUCTION.

The producing wells are, with one exception, all in a small area on the Turner fold or anticline near Black Diamond; here there are five small producers within an area of about two miles by one mile. The exception is the old "Discovery" or Lineham well, which is near Waterton Lakes, in the south-western corner of Alberta. It is within the Palaeozoic or Limestone Mountains and has produced a little oil of a heavier quality than the Black Diamond field.

The Black Diamond field produces oils of a paraffin base which vary from 38 to 62 Beaumé, or 0.831 to 0.729 specific gravity, compared with water which is 1.00.

There are here five producers and on semi-official authority their output has been given as follows:—

Year.	Gallons.	Barrels.
1914.....	7,640	218.3
1915.....	7,560	216.0
1916.....	83,680	2,390.3
1917.....	274,472	7,842.0
1918.....	502,712	16,934.5
Totals.....	965,064	27,601.1

A total of 27,601.1 barrels of 35 imperial gallons of a high-priced light oil suitable for gasoline and for motor-driving.

The oil so far found on the eastern side of the great trough or syncline at points east of Edmonton, Lower Athabaska and Lower Peace Rivers is a heavy oil of asphaltum base—15.5 to 25 Beaumé, or 0.96 to 0.903 specific gravity.

The Athabaska tar-sands have been estimated to contain several thousand million barrels of oil, but the problem is to extract it from gummy sands which contain 10 to 15 per cent. bitumen. The oil which seeps into the wells is in small quantity and too viscous to pump readily; such is also the case on Lower Peace River.

Concerning future developments, it is believed that the Imperial Oil Company, after careful investigation of a large portion of the Province, will soon be drilling at points south of Pincher Creek, south of the Black Diamond field, east of Edmonton, near the western end of the Great Slave Lake, and on the Mackenzie River below Fort Norman.