published by the Survey within this past year. This map is based on actual triangulation and traverse **surv**eys made by the Survey and show the coal measures of the Crow's Nest basin to be almost entirely to the west of the **east**ern boundary of Lot 4,589 and so, consequently, not within Lot 4,593. The coal basin is also shown as lying north of the east fork of Lodgepole Creek.

On the headwaters of the Flathead and of the Lodgepole there are numerous exposures of the eastern edge of the coal measures of the Crow's Nest basin, and these have been prospected by various parties, exposing very promising coal seams.

These coal measures certainly lie very close to the boundary between the two blocks mentioned, and as such boundary has not been run out on the ground, the map of the Geological Survey is undoubtedly the best authority we have, and this places the coal exposures in Lot 4,580.

OIL.—Oil seepages have been reported from this section of British Columbia and also from the adjoining Territory of Alberta, certainly as far back as 1889, if not earlier. The late Dr. Selwyn, then Director of the Geological Survey, visited the district in 1891 with Mr. William Fernie, and in his report to the Hon. Edgar Dewdney, then Minister of the Interior, he saves:—

"I found a decided boom in petroleum claims and a company formed to put down a boring, the site selected being 18 miles south, and a little east. of Pincher Creek."

Speaking of the rock formation at the site of this venture, he says: "They were the ordinary varieties of sandstone and sandy shales of the Cretaceous."

Further on he tells of collecting a sample of crude oil from seepage through gravel, etc., in the bed of a stream about five miles to the east of the summit. He calls this Cameron Falls Creek, but it is possibly the south fork of the Kootanie branch of Watertown River, as at this point oil is found seeping to-day and boring is going on at present at a considerable depth. Over the summit, in British Columbia, he speaks of oil on Kish-e-nch-na Creek (he calls it Akamina brook in error):—

"On the edge of a beaver dam pool there were ledges of hard, dark-blue shale. Lifting layers of this at and below the water, a quantity of dark-green, circular patches of oil rose to the surface, and a precisely similar result followed by stirring up the mud in the bottom of the pool."

The finding of a trace of oil at this point has been reported to the Provincial Mineralogist by an old prospector who has been in the district for years. On the other hand, the Provincial Mineralogist camped on September and and oth on the spot described and was unable to detect or locate the seepage referred to. Dr. Dawson made a detailed examination of the geology of this creek in 1885, and must have also camped at this same spot, but he also failed to discover and record any oil seepage on this stream. The probabilities are that the seepage is very slight, or it may only show at certain stages of water.

In the same report Dr. Selwyn tells of his visit to Sage Creek and of the finding of two seepages of oil or that stream. These the Provincial Mineralogist found, and they are described hereafter.

As far as could be learned or found on the ground, these are the only seepages in the district known today. It will be seen, therefore, that the discovery of oil is a matter of some standing, and that the close prospecting of later years has not added materially to the early discoveries.

GEOLOGY OF OIL-BEARING DISTRICT .- Sage and Kish-e-neh-na creek are the only two streams upon which oil has been reported as actually found. These two creeks are parallel and closely adjoining, being only separated in their upper reaches by a spur of the main range. The seepages of oil reported occur on both creeks just where the mountains give way to the ancient wide valley of the Flathead, and it is quite certain that the geological formations are the same in both these creeks. This fact is immediately visible to the eye from the upper benches of the river valley, from whence the view obtained of the strata exposed on the ends of the mountain ranges show them to have been at one time continuous. The valleys of these two creeks have been cut out by erosion, there being no evidence in the lower portions of these valleys of any faults, folds or anything more than slight bending of the beds. About three miles above the oil on Sage Creek there is evidence of what appears to be a fault crossing the creek and affecting the strata; the mountains here are sheer and bare, enabling the formation to be seen, while on Kish-e-neh-na Creek the hills are not as steep and are covered with slide material, obscuring the view of the various strata except upon the peaks; but the same fault probably also extends across the valley.

As to the rocks comprising this regularly bedded formation, they consist of shales, slates, quartzites, compact magnesia, limestones, sandstones and at certain places interbedded trap-flows. All are close grained, compact, and not capable of absorbing oil. The rocks in the upper beds are very red in colour, chiefly shale and slates, while lower down beds of light-coloured magnesian limestones, containing much silicious matter, occur, bedded with banded sandstones and quartzites. None of these rocks are capable of absorbing oil, nor can they be suspected of being the source of any oil, as they are devoid of any appearance of carbonaceous matter. They have been referred by Dawson, by Selwyn and other geologists, to the Cambrian age, a formation older than the Carboniferous and very much older than the Cretaceous, in which latter the coal of British Columbia and also of Alberta is found. Oil had never been found in rocks of the Cambrian age, and the reported discovery of it rising through such was at first received with much doubt, until thoroughly substantiated by the Director of the Geological Survey, Dr. Selwyn, from personal observation. In the district itself there is no possible clue to the elucidation of even the possibility of such an occurrence, and it was only after the most careful and extended detailed survey of the whole range of