

wells, from which gas is piped 178 miles to Calgary. The city has within its limits a large area of gas-producing horizons and has drilled several wells. To manufacturing industries gas is supplied free for five years and after that period is supplied at a low figure—about five cents per thousand.

The Great Landslide at Frank, Alberta.

From Medicine Hat the Crow's Nest Pass route was followed. At Hillcrest the party left the train to view the results of the disastrous landslide which occurred at Frank in 1903, and which is believed to be one of the greatest which has ever occurred. As a result of the openings made in the process of mining coal the whole side of Turtle Mountain broke away on extensive joint planes and piled up a mass of rock at a great distance away and high up the opposite side of the valley. It seems almost a physical impossibility that the sliding of rock down the mountain side would of itself produce enough energy to send the material so far and so high. It is nevertheless believed by Mr. Brock and others who made special study of the phenomenon soon after its occurrence that such was the case. Mr. Brock, in point-

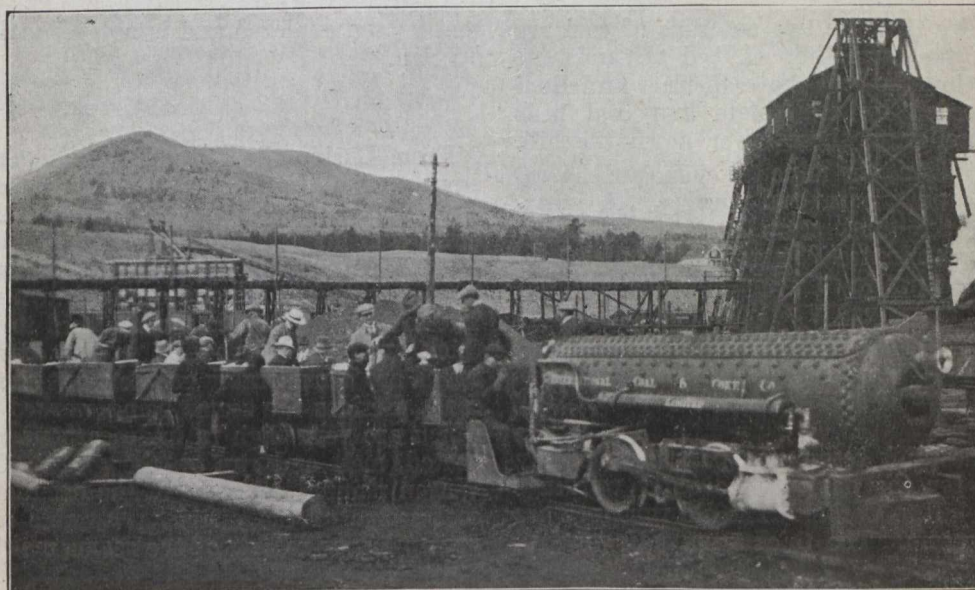
ment to examine and report on the condition of the mountain. The most dangerous period of the year is when freezing and melting of water is occurring in the joint planes. The action of frost is liable to set off the trigger, as Mr. Brock puts it.

Coal Mines at Hillcrest, Frank and Blairmore.

After examining the Frank landslide several coal mines and structural sections were visited. At Blairmore the party were taken into the International Mine, where a very extensive bed of coal is being mined. The tunnel level runs for nearly three miles into the mountain, and from it rooms have been driven several hundred feet to the surface.

The Corbin Coal Seams.

To visit the Corbin mine the excursion train was taken sixteen miles south from McGillivray on the Eastern British Columbia Railway, which follows the south fork of Michel creek. At Corbin the mining company had made excellent arrangements for taking the visitors up to the great exposures of coal over 1,000 feet above the town and 6,100 feet above sea level. A standard gauge railway has been recently constructed up the hill and,



Air locomotive and train load of geologists ready to enter International coal mine at Blairmore.

ing out features of the extraordinary slide stated that eye witnesses saw the great mass rebound as it struck the bottom of the valley and actually leap up the opposite slope. This account is borne out by the fact that there is actually a decided valley in the debris, such as might have been thus formed. It has been utilized in rebuilding the railroad across the area covered by fallen rock, and is a marked depression which greatly facilitated construction.

The actual position of the fallen rock suggests what might have been expected if a gigantic blast had been fired along the joint plane. Sudden relief of horizontal tension may have been partly responsible for the extraordinary distribution of the broken rock.

There are numerous large open joints parallel to the face along which the slide took place and another large portion of the mountain is believed by Mr. Brock to be in a very precarious condition and liable to slide. A danger zone has been established and warning given to the public by a commission appointed by the Govern-

for the convenience of the geologists, a gondola was fitted up as an observation car and pushed ahead of the locomotive up the grade. General Manager Roberts and Superintendent Graham accompanied the party.

Part of the ascent is made directly and is intended to be later used as a section of the railroad which will be continued south up the valley. The upper part is made by a series of switchbacks.

The outcrop of coal is a very remarkable one. The seam is usually thick and forms the surface rock for a large area on the slope of the hill. Bore holes driven to determine the thickness show that there is a large area which carries from 50 to 100 feet in thickness. Below this there is a slate bed 10 to 20 feet in thickness, and then a second bed of coal about as thick as the slate. At the mine the coal seam dips at a gentle angle to the west. Further down the slope the beds flatten and then turn up, the shale coming to surface. Higher up the hill there are outcrops of the beds which underlie the coal seam and then another thick bed of coal. The structure