

operated on the pillar and stall system with compressed air haulage on the main levels, the tippie capacity being about 1,200 tons in two shifts. The company has a coking plant at this point consisting of a washery for treating the slack coal and a battery of 50 Belgian ovens of the Bernard type.

Blairmore.—At this point the West Canadian Collieries are operating a mine on the south side of the railway, with an output from 700 to 1,000 tons a day. The coal seams have also been prospected for some distance north of the track.

Coleman.—At Coleman two companies are operating coal mines, one on each side of the valley. The plant and mines of the International Coal and Coke Company (Dennison Colliery), are situated to the south of the railway where five coal seams have been proved, of which No. 2, 15 feet, and No. 4, 6 feet are at present being worked. Both seams are opened by means of levels driven on the strike, the coal being won by pillar and stall method, and the rooms driven up the pitch, which is here about 32 degrees.

The capacity of the mine and plant is about 3,000 tons daily.

The coke plant consists of a Bradford breaker and 216 beehive ovens, the coal being delivered to the ovens by electric lorry.

The McGillivray Creek Coal and Coke Company's mine is situated on the north side of the valley, about one-half mile from the railway. One seam, from 10 to 12 feet in thickness, the No. 2 of the series, has been developed by means of a slope with levels driven from its foot, the coal being worked by pillar and stall system. From the top of the slope the mine cars are hauled by electric motor along a surface tram to the tippie, a distance of one and one-half miles. The tippie, of steel construction, is equipped with screens and picking belts, and is capable of handling about 2,000 tons in two shifts daily.

Corbin.—At Corbin a similar outlying remnant of the coal-measures is being exploited by the Corbin Coal and Coke Company. This company is operating two mines; No. 1 being opened near the valley level by means of a tunnel along the strike of the seam, while No. 2 mine is situated nearly 1,000 feet above the floor of the valley. The geological relationship of these two openings has not as yet been worked out, and it is possible that the same seam is represented at both places. At No. 1 mine the seam is nearly vertical and varies greatly in size, from a minimum thickness of 10 feet to a maximum of nearly 250 feet; this great difference may be due to compressed monoclinical folding. At the upper mine the coal has been stripped near the top of the hill, and shows the coal in a synclinal basin about 370 feet in width; the thickness of the coal near the centre of the syncline having been proved by drilling to be over 100 feet.

The upper mine is reached from the valley by means of a switch-back railway and the coal is worked in open cuts with a steam shovel. The output in 1910 from No. 1 mine alone amounted to about 142,000 tons.

McGillivray.—McGillivray station is situated near the eastern edge of the main Crowsnest coal basin, the rocks having general westerly dips. From the station to the junction of the North Fork with the main Michel Creek, where the coal measures proper are entered, the railway follows closely the strike of the Fernie shales.

The Crowsnest basin has a total length along its major axis of about 35 miles, with a maximum width of 11 miles, and is estimated to cover an area of about

230 square miles. In a section measured near Morrissey, 22 coal seams, of one foot and over in thickness, were noted, containing in the aggregate 216 feet of coal in a total thickness of measures of about 3,200 feet. The greater part of the coal, however, consisting of 198 feet, occurs in a thickness of strata of 1,847 feet. Assuming the extent of the basin to be 230 square miles, and the average thickness of workable coal at 100 feet, the total available supply of coal would be about 23,000,000,000 tons.

The coal measures are overlain by a great series of conglomerates, sandstones and shales containing, towards the base, thin seams of coal of a semi-cannel nature and reaching a maximum thickness of from 4,000 to 5,000 feet. It is over comparatively limited areas only, however, that such great thicknesses of the overlying beds are to be found, denudation having removed them to a large extent over the greater part of the basin.

Where crossed by the railway in the valley of Michel Creek, the basin has narrowed to about four miles in width and the beds overlying the coal measures have been entirely removed by erosion.

Michel.—At Michel, near the centre of the trough, the Crowsnest Pass Coal Company is operating an extensive colliery and coke-making plant. The company has developed seven seams in all, four on the south side of the valley and three on the north side; of the former the seams designated upper No. 3, No. 3, No. 4 and No. 5, have the following respective widths: 10 to 12 feet, 4½ to 5½ feet, 6 to 8 feet, and 6 to 8 feet, while on the north side, No. 7 seam is about 11½ feet thick with a 2½ foot parting; No. 8 is from 8 to 14 and No. 9 is about 10 feet thick. No. 9 seam has not been worked for some years. All the mines at Michel, with the exception of No. 3, are worked by the pillar and stall method: in No. 3 the longwall system is in use. A total of 486 beehive coke ovens have been built at Michel.

Hosmer.—At Hosmer the colliery of the Department of Natural Resources of the Canadian Pacific Railway is situated. A rock tunnel, across the measures, has been driven at a point 600 feet above the railway for a distance of 4,931 feet, which has cut ten coal seams of the following dimensions:—

No. 1 seam,	18 feet (5.4 m.).
No. 2 "	12 feet (3.6 m.).
No. 3 "	22 feet (6.7 m.).
No. 4 "	4 feet (1.2 m.).
	5 feet coal, (1.5 m.).
No. 5 "	10 inch parting, (25.4 cm.).
	13 feet coal, (3.9 m.).
No. 6 "	8 feet 8 ins. (2.6 m.).
No. 7 "	4 feet (1.2 m.).
No. 8 "	5 feet (1.5 m.).
No. 9 "	8 feet (2.4 m.).
No. 10 "	large seam.

Of these seams Nos. 2, 9 and 10 are at present being worked, and it is probable that Nos. 9 and 10 correspond to seams Nos. 2 and 1, respectively, of the Coal Creek Colliery. The lowest seams, first cut in the tunnel, have easterly dips of 63 degrees, the dip flattening from three on the minimum of about 25 degrees. In addition to the tunnel seams, the company is operating a mine on the outcrop of the coal, where No. 2 seam is being worked by means of a slope; this point being several hundred feet higher than the tunnel entry.