

OPEN FILE

NICOLA VALLEY COAL FIELD

HERRITT, B.C.

During the year 1907 a new producing coal field was opened up in the Nicola valley, where the Nicola Valley Coal & Coke Co. began shipments of coal from the "Middlesboro Colliery," situated a few miles south of the town of Coutlee and on the bank of the Coldwater river, while another company, the Diamond Vale Coal & Iron Mines, had, by the end of the year, so far progressed towards the producing stage as to be deserving of notice. The whole field has been the subject of a report by Dr. R. W. Ellis, of the Geological Survey of Canada, from which report very extended extracts were copied into the Report of this Bureau for 1905. The collieries above mentioned are both in the area designated by Dr. Ellis as the "Coal Gully" area.

NICOLA VALLEY COAL & COKE COMPANY

The Coal Gully coal seam, now included in the area held by the Nicola Valley Coal & Coke Company, has for many years been mined in a small way to provide local wants. The opening from which this coal was taken had been run-in on an outcrop of coal so far up the gully as to be inaccessible by a railway, consequently, the company drove in a new tunnel at a convenient height above the general level of the valley, and succeeded in striking the coal at that level, after driving 20 feet through surface wash. This adit level is now known as

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the No. 1 mine, and had been, in July, only driven into the coal about 50 feet, but, since that time, the tunnel has been driven to intersect the old slope from Coal gully at a depth of about 800 feet on the slope, and various rooms have been set off. The tunnel was driven 8 feet by 8 feet in the clear, inside of timbers, which were 10 by 12 inches in caps and sills and 10 by 10 inches in the posts. This coal seam varies somewhat in thickness and character, but, where measured, was as follows:- Conglomerate roof, coal  $8\frac{1}{2}$  feet thick;  $2\frac{1}{2}$  feet rock and shale parting; coal, 5 feet thick, with a shale pavement.

The No. 2 mine is also opened out by an adit tunnel started a sufficient height above the valley to give working height for tipples and bins. This tunnel was started on the knoll forming the bank of the Coldwater river, about half a mile to the south from the No. 1 mine, and is supposed to be driven on the second to lowest of the known seams, which seam is here about 5 feet 6 inches thick with a 4-inch stone parting. About 200 feet higher up the hill a slope has been started away from the outcrop, and was to follow the dip until it intersected the adit level at a point about 500 feet from its mouth. It was the intention to use this slope as the return airway when the mine was opened up. The roof and pavement of the seam are good and sound, consisting of a fine-grained conglomerate or sandstone, the wash of a disintegrated granite.

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When the properties were visited in July they were only being developed, and neither of the tipples nor the railway had been constructed; since then, however, the Nos. 1 and 2 mines have been fully equipped, as can be seen in the photographs, taken later in the year, which accompany this report. Actual underground development had only been attempted on the two seams mentioned, but, from prospecting the outcrops, the company believes that it has, at least, four workable seams on its properties, viz:- The Jewel seam, which is the lowest stratigraphically, reported to be 18½ feet thick; next to this, in ascending order, is 136 feet of rock; then the Ellis seam, 8 feet 9 inches thick, followed by 136 feet of rock; then the Major seam, 17½ feet thick, above which is 89 feet of rock, and then the Gem seam, which is 3 feet thick.

The company shipped during the short portion of 1907 in which it was in operation, some 10,868 tons of coal. A spur leaving the C. P. Ry. branch line from Spences Bridge to Nicola, at Merritt, between Coutlee and Nicola, has been built to connect with both tipples.

As indicating the quality of the coal, the following analyses are given, taken from Dr. R. W. Ellis' report:-

(a)	From tunnel on lower seam of Coal gully	
	Water.....	3.04%
	Volatile combustible matter.....	37.18%
	Fixed carbon.....	52.05%
	Ash (reddish-white).....	7.73%
		<u>100.00%</u>

(Brought fw'd from (a))

Coke per cent., 59.78. Yields a compact, firm, coherent coke.

(b) From Lot 1,267. One creek running into Quilchena creek:

Water.....	6.95%
Volatile combustible matter.....	37.21%
Fixed carbon.....	47.95%
Ash (pale reddish-brown).....	7.89%
	<u>100.00%</u>

Coke per cent., 55.84. Yields a firm, coherent coke.

(c) From southerly outcrop of seam on Coldwater river:

Water.....	3.17%
Volatile combustible matter.....	35.73%
Fixed carbon.....	55.25%
Ash (light reddish-brown).....	5.85%
	<u>100.00%</u>

Coke per cent., 61.10. Yields a firm, coherent coke.

(d) From the Coldwater rive, near its junction with the Nicola near Coutlee Lower tunnel. C.H. Keefor, Esq.:

Water.....	1.37%
Volatile combustible matter.....	38.25%
Fixed carbon.....	54.25%
Ash (light reddish-brown).....	6.14%
	<u>100.00%</u>

X Coker per cent., 60.39. Yields a compact, firm, coherent coke.

Analyses by fast coking understood.

Geo. M. Pearce

Re: Coal Showings on the Sunshine (Geo. Fairley) property

This property has been explored intermittently by the Fairley family for a number of years, and a small quantity of coal was produced for local consumption. Workings consist of three tunnels, two of which are accessible, two shallow slopes and two air shafts. Workings aggregate about 1000 feet.

The lower tunnel, now caved, is said to have followed a coal seam of variable width up to a maximum of 7 feet. At one point, at the bottom of an air shaft, a coal seam can be examined. This seam is 1 foot in width, strikes 040° True and dips about 68°E, and shows considerable crushing. The walls are conglomerate and sandstone which is also crushed and cut by numerous faults. A small quantity of coal outside the adit, said to have come from the 7 foot section, is rather soft and crushed.

A second tunnel, some 500 feet Northeast of the first and 50 feet higher, contains a short section of a 4-foot seam of good coal. However this seam pinches out along the strike and down the dip between massive sandstone walls. It strikes 060° True and dips 58°E.

The third tunnel, about 300 feet northeast of the second and at approximately the same elevation, exposes in a slope a narrow and irregular seam of badly crushed coal which has about the same attitude as that in the second tunnel.

Volcanic rock outcrops about 400 feet north of the workings; the slope of the surface being 22°.

Although no plan of the workings was available, it seems reasonably certain that the three showings are all of the same seam in steeply-dipping and crushed measures close to the rim of the coal basin. In this location it is unlikely that further development would disclose mineable coal in commercial quantity. However, farther south nearer the Nicola River and farther away from the edge of the basin, this or other higher seams might well contain good coal in commercial quantity.

Nothing is known otherwise as to the extent of the coal measures north of the Nicola River. It is not known if the measures are continuous beneath the City of Merritt - the river may have eroded much of the measures in this area; nor, except in a very general way, can the coal occurrences on the Sunshine property be correlated with any of the Coal Gully seams.

A drill hole located somewhere along the base of the river bench, north of the Nicola River, would have value in that it would indicate the presence and thickness of the coal measures in this untested part of the basin, and might possibly intersect the continuation of the Sunshine seam or discover other higher seams similar to the upper seams of the Coal Gully section.

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