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Review Ink Kent, Cariboo  
Mainlands  
688-91

REPORT OF COAL LANDS OF JAMES FORESTER

James Forester,  
Vernon, B. C.

Dear Sir:

*Split infinitive*  
I beg to herewith submit this report on the coal lands held by your company, on Sheep Mountains, west side of Okanagan Lake, in the Osoyoos Mining Division, Okanagan District, British Columbia.

This property is reached by boat to Ewing's Landing, and thence by wagon road and trail for a distance of seven miles. It is approximately eighteen miles from Vernon, B. C.

TITLE

The coal lands are held under License No's 8749-8750-8751, 8578, 8580 and comprise 3640 acres, (six square miles) more or less, under coal license act of 1910. Crown grantings under this act would be \$10.00 per acre, while the amended act would be \$20.00 per acre. The requirements of the coal lands act have been fulfilled hence the title is "good" but the ground should be crown granted to make the title perfect.

SURFACE CONDITIONS

Access to this property could be obtained by following Shorts Creek with a RR grade. Such a grade would be about five miles to reach your eastemline from a point on Okanagan Lake, south about three miles from Ewing's Landing. Such a grade would not present any engineering difficulties and would be for the greater part of the length in the nature of a side cut. I did not observe any difficulties such as large cuts or fills, and it would require but a few bridges. A grade following this creek would be about 2½.

The valley of Shorts Creek on the south side of your property provides enough timber for any buildings that may be required for housing your employees, also for tipple facilities and surface machinery.

Your property is traversed East by Shorts Creek which flows on your southern line. This creek will furnish an ample supply of water for all purposes and there is sufficient timber on yours and adjacent lands to provide against any contingency for at least a decade.

The property lies from east to west six miles and north to south, one mile.

The nature of the ground from Shorts Creek north is that of a sheer mountain face having a rise of approximately 2000 feet in a half a mile from this point and this is the summit, the inclination is in the opposite direction.

#### GEOLOGICAL FEATURES

The property has the appearance of being an isolated basin and has been tilted from the south side and thus exposing the measures. There are many signs of volcanic action in the neighbourhood and no doubt this is where the movement can be traced to.

The strata on this property is strictly normal, no faults or foldings of a serious nature being observed, and as the nature of the ground is that of a precipitous mountain side, upon the upper reaches of which there is no debris of any kind, any disturbance would be readily noticeable.

The strata on the south side of the mountain can be traced from the valley for three miles with no effort and unbroken, hence it is fair to assume it is normal. On the lower reaches there is a heavy covering in places of ash and in some hard ribs of volcanics. These rocks lay and appear to be in the nature of an overflow and have not at the points I observed, disturbed the strata.

There are many places where these ribs stand out prominently and on either side in a depression can be seen the sedimentaries "in place".

The strata for the most part is sandstone (ranging from a coarse sandstone full of argillites to a fine sandstone closely stratified). Shales, Hard Grey Fireclay and very coarse conglomerates full of volcanics in some cases having dimensions of 3 and 4 cubic yards.

There have been five seams of coal exposed and there is evidence of as many more as the coal smut is in evidence in at least 30 places. Some above the measures exposed and in other cases, below.

From the nature of the ground, the number of seams on the property could be readily ascertained as there is practically no debris in the upper sections.

Very little work has been done on any of the seams and the only serious attempt to prospect has been at #2 and #5 outcrop. In most cases a trench wide enough for a shovel has been dug and the seam exposed but the coal was not followed far enough to show the walls so that the roof or footwall could be seen "in place".

My opinion is that you have an upper and lower series of coal seams, separated by a barren zone.

All exposures made are on the south side of the mountains and outcrop #1 is the lowest, having an elevation approx. of 700 feet above Shorts Creek and about the centre of your property (east and west) and two foot seam has been exposed by a trench about ten feet long. The seam was clean and the walls exposed the roof and floor being sandstone.

Outcrop #2 is 500 feet west of #1 and has an elevation of 850 feet (approx.) above Shorts Creek and has an underlying strata of 50 feet separating the two seams. At the surface the coal has been degraded and for a distance of 20 feet there is only two feet of coal, showing, at this point the full height of the seam is exposed, which gives a total height overall of 6 feet 6 inches, the coal improves appreciably towards the face, and at the face is a strong coal having a shale roof and sandstone footwall, overlaid with two inches of clay. This in my opinion is a workable seam. The bottom shows a thickness of 55 inches in which there is a good mining at the top.

Outcrop #3 at elevation (approx.) of 900 feet above Shorts Creek and about 500 feet east. This seam is barely stripped and there was about four feet of coal but no walls could be observed and from the experience gained from #2 outcrop would state that this should improve with development but from the nature of the showing it would be impossible to state whether there was a workable seam of coal or not.

Outcrop #4 is situated 200 feet east of #3 and has an elevation (approx.) 1000 feet above Shorts Creek. The seam is exposed by a trench about 20 feet long and was coal all the way, no walls being seen.

The work done has not demonstrated the coal and I could not state its thickness or venture an opinion as to its quality.

Outcrop #5 is the highest exposure made on the property and has an elevation of (approx.) 1500 feet above Shorts Creek. It is situated one mile and a half from the east line and is a strong coal. This outcrop has been driven in for a short distance as an adit and the coal struck at twenty feet from the surface. From here there is a slope driven about twenty five feet, and at the face there was a seam six feet thick with a band of clay four inches thick. This is your strongest coal as yet exposed. The roof was shale and the floor hard clay underlaid with sandstone.

On the east side of your property at an elevation (approx.) of 1700 feet, seams of coal occur that can be traced for half a mile with no cover at all. From the point of observation they appear to be remarkable true with no appearance of distortion of any kind. The mountain side here is, however, entirely too precipitous to follow. Below this point the strata can be seen free from debris and a cross section of the entire mountain. However, no attempt has been made to expose the coal in this section. This applies to the east and north sections of your property but I observed indications of coal towards your East line.

Above this point there is evidence of other seams but no attempt has been made to prospect any higher. The strata at this point is strong and the mountain practically perpendicular. The strata here is a bed of conglomerate 50 feet thick, overlaid by a coarse grained sandstone which is several hundred feet thick. The normal dip of all strata is North 70 West (magnetic) at an angle of 30 degrees.

The coal is bituminous and has a good appearance, standing the weather well. It ignites easily and burns freely, giving off a good heat. It has a long flame and should be suitable for steam coal. Where I sampled it the coal would coke, when burned in a stove it leaves a grey ash.

It is described as having practically no sulphur or moisture.

An approximate analysis of this coal gives; Fixed carbon 64%; Volatile matter 29%; Ash 7%.

A laboratory test of its cooking qualities gives 6.62% Ash and yields a firm coherent Coke amounting to 65% of coke weight of coal.

Jas Holden  
1915