

TK - NASKEENA 14(1)A

"REPORT ON NASKEENA  
COAL CLAIMS"

G.F. MONCKTON

Nov. 10, 1914

*copy 4*

00 229

R E P O R T

AREA:

The property of the Naskeena Coal Syndicate comprises 36 claims each covering one square mile. It extends over a length of twelve miles along the strike of the coal and has an average width of two and a half miles. Since the coalfield is bounded on the west by a fault which brings up much lower strata and the claims are located by true north lines, small areas of barren ground are included in some of them, leaving about 32 square miles of actual coal land.

ISOLATION  
OF  
COALFIELD:

The coal measures rise to the crown of an anticlinal on the east side. On the other side of this anticlinal the coal series is eroded. To the southward it is cut off by a fault, and to the north it is twisted by a cross folding and beyond that it deteriorates as it approaches an ancient centre of volcanic action some 12 miles away, so that practically all the workable coal known in the district is included in this group of claims. Several other claims were taken up and abandoned after examination. The thickness of the coal measures is estimated at from 1500 to 2000 feet, but it has not been found possible to make a complete section yet.

UPPER  
SERIES:

The upper part is distinguished by its massive sandstones between which occur some shale beds. It contains one seam of coal three and a half feet to four feet thick (No. 6) which has been tested by open cuts at four different points and may also be seen cropping out on a precipice. Samples taken from this three feet from the surface yielded by analysis:

|                                      |       |   |
|--------------------------------------|-------|---|
| Water .....                          | 2     | % |
| Volatile combustible<br>matter ..... | 3.75  | % |
| Fixed carbon .....                   | 78.75 | % |
| Ash .....                            | 15    | % |
| Sulphur .....                        | 0.5   | % |

MIDDLE  
SERIES:

About 160 feet below this is another seam (No. 2) which was three feet thick at one point of

the outcrop but was impracticable to develop without great expense owing to sliding ground. Thrity feet below this is another (No. 1) which showed five feet of coal at the outcrop and yielded by analysis:

|                                    |       |
|------------------------------------|-------|
| Moisture .....                     | 4 %   |
| Volatile combustibile matter ..... | 4.7%  |
| Fixed carbon .....                 | 75.7% |
| Ash .....                          | 15 %  |
| Sulphur .....                      | 0.6%  |

These analyses were made by Mr. J. O'Sullivan F.C.S. of Vancouver, for twenty years assayer to Vivians works at Swansee. He adds "This is a smokeless, steam and domestic fuel, and is far superior to the average Banff hard coal, now selling in this city at \$12.00 per ton." Other seams are know to exist above No. 6.

The middle portion of the series is almost entirely fine grained sandstones with hard sandy shale beds. It is only possible to examine this on high ground on Little Cedar River. The coal seams tested in it are one which is four feet or more in thickness, one three feet and another two feet six inches. This last may be thicker as the outcrop is squeezed down under an overhanging bank, and showed much less on the surface. There are believed to be a number of others in this part of the coal series, two of which are believed to be workable seams, but they could not be tested without blasting a trail out in the face of the cliffs.

LOWER SERIES:

The lower part of the series is black shale and soft sandstones. Several seams are known to occur in it but none as yet which are over eighteen inches.

Not more than a third of the coal series crops out of the surface in such a position that the coal seams can be indicated without boring and much broken coal has been found at different points so situated that it must come from seams not discovered as yet.

BORING:

If machinery was available it would be easy to bore on the property so as to prove the exact

position and thickness of the seams, which is the only way to test the property. A rough road, good enough for hauling machinery, traverses the claims. As the measures dip at an average angle of  $35^{\circ}$  it would be possible to test the ground by shallow holes as the different beds approach the surface. The level of this road is 800 feet. The best railroad location would be 600 to 800 feet above the sea and as the coal measures rise to a height of 3000 above this in places it would be possible to mine the coal from the level of the railroad track to the rise. The coal above the main openings would extend about two miles to the rise, and reach an elevation which might be averaged to 2000 feet above it. About three fourths of the workable area would be comprised in this higher ground so that coal which would need to be mined by shafts would not be required for many years.

POSSIBLE  
AMOUNT OF  
COAL:

The coal series is remarkable for its regularity as compared with west coal fields in these mountain regions, but if we allow one-fifth of the area for barren ground and ground not workable to a substantial profit, we should still have 18000 acres of coal available. Supposing that only ten feet of coal was found to be workable, an absurdly small amount in view of present indications, this would give us a total of 210,000,000 tons after making the allowance for the slope of the seam, and reckoning an extraction on 12000 tons to the acre. Of this 100,000,000 would be above the railroad level.

This coal could be mines as cheaply as any other in Western America. If it were put on the market so as to ensure a permanent supply an increasing demand for it would arise. At present the only coal of the kind comes from 500 miles inland but is inferior and sells in Vancouver for \$12.00 a ton. The Naskeena coal is smokeless which would render it of great value for ships and there would be a market for it all along the Pacific Coast as far as San Diego, as it is so superior to bituminous coal for domestic use. I think that there is even now a market for 500,000 tons yearly.

RAILROAD  
ROUTES:

At present the nearest railroad is the Grand Trunk Pacific which is 27 miles distant at Kitsumkalum. The construction of a railroad to this point would cost about \$10,000.00 a mile. There would then be a haul of 40 miles to tidewater, or 70 miles to a deep sea harbour. An alternative route to this latter part from Kitsumkalum is through the Lakelse Valley to Kittimat, which is a fine harbour 35 miles from Kitsumkalum. The grade throughout from the mines to Kittimat would not exceed one half of one per cent and would be all downhill to Kitsumkalum. In the Lakelse a very low divide would be crossed. The Kitsumkalum and Lakelse are wide valleys which are capable of supporting a large agricultural population and are only just beginning to be settled. There would also be an opportunity for this railroad to handle a large logging trade as it would pass through some of the best timber locations in Northern B.C.

FACILITIES  
FOR  
WORKING:

The property is intersected by the Cedar and Beaver Rivers and also by the Little Cedar all of which cut so deep down into the strata that it will be possible to open up the seams at several points at levels of 600 to 800 feet above the sea. In many places the streams flow through deep canyons on the precipitous sides of which coal seams are visible which cannot at present be reached for purposes of examination. There is plenty of flat land for railroad and townsite purposes. The fertile ground in the vicinity will furnish a large amount of supplies for the population which will conduce to cheapness of mining. The supply of timber for props is practically unlimited.

AGE:

The coal measures belong to the Kootanic or Skeena Age (Lower cretaceous period) to which also belong all the different fields of bituminous coal along the Rocky Mountains and the anthracite field of Groundhog.

OIL:

Seepages of oil occur here. These point either to the existence of oil itself in considerable quantity or else to large deposits of oil shale which might be of equal value. The occurrence of the

seepages in connection with anticlines points to the first supposition. The Calgary oilfields are also in Lower Cretaceous rocks. In this locality the source appears to be immediately under the coal series and I think that a very important oilfield may be discovered in these beds.

ASH IN COAL:

Having had considerable experience of the Groundhog district I may say that for surface showing this coalfield compares most favourable with that. As a rule samples from Groundhog would carry 25% Ash when taken from as near the surface as No. 1 and No. 6, although they improved as depth was attained.

"G. F. MINGERTON"

November 10th 1914