N - NANAIMO (NO DATE) (1) A.

Nanaimo - Wellington Coalfield.

Nomenclature of Seams
in Ascending order.

Douglas Seam
. . . . . Average 70 feet
Newcastle Seam apart.

No. 7 Seam
No. 6 Seam
No. 5 Seam . . . . . As disclosed by
No. 4 Seam boreholes at Wellington
No. 3 Seam seams average 30 feet apart.
No. 2 Seam

Wellington #1 Seam. . . . . Floor of coal measures.

Nanaimo - Wellington Coalfield.

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Wellington #1 Seam. . . . . Floor of coal measures.

Memorandum for Mr. P.F. Loftus

Re "Nanaimo -Wellington CoalfieMd".

Area Map Ref.	Estimated tonnage of mines now working	Proven tonnage by bores shafts & adjacent mines.	Estimated tonnage unproven & partly proven	Number of openings	Remarks
No. 1-A	530,000	.....	.....	1	-Lantzville.
No. 1-B	227,974	.....	.....	1	-#9 C.C. (D) Ltd.
No. 1-C	.....	600,333	.....	1	-Valley of Mill-stone River.
No. 1-D	.....	6,133,000	.....	2	-Old Wellington -mines 2 upper seams
No. 2-E	.....	4,802,987	.....	...	-This to be worked from a #1 area opening, seams, Wellington & No. 2.
No. 2-F	.....	.....	1,480,000	...	-Submarine Departure Bay.
No. 3-G	2,117,500	.....	.....	1	-No. 1 Shaft.
No. 4-H	825,000	.....	.....	1	-Reserve Shaft.
No. 4-I	.....	2,106,561	.....	...	-York & McDonald.
No. 4-J	.....	2,194,334	.....	1	-Between S.Side at #1 shaft and Reserve.
No. 5-K	275,000	.....	.....	2	-Extension mines.
No. 6-L	771,860	.....	.....	1	-#5 Alexandria
No. 6-M	.....	2,388,113	.....	1	-Outcrop between #5 Slope & Granby.
No. 6-N	.....	.....	1,450,000	(?)	-Richardson et al. 2 outcrops.
No. 6-O	577,500	.....		1	-Granby mine.
No. 6-P	.....	.....	1,128,528	...	-Adjacent Granby south & west.
No. 7-Q	500,000	.....	.....	1	-No. 8 mine.
No. 8-R	7,899,000	.....	.....	1	-Round Island (Submarine)
No. 8-S	.....	.....	11,917,941	1	-Proof, Morden shaft and 2 bores.
No. 8-T	.....	.....	8,966,402	1	-No bores, evidence Granby Mine.
TOTAL..	13,723,834:	18,225,328:	24,742,871:		

Memorandum for Mr. P.F. Loftus.

Re "Nanaimo - Wellington Coalfield".

Pursuant to your request for data and information generally in this field, I trust that the following will be of service to you. In writing up this data I am starting at Wellington and will follow down or south to Ladysmith or Oyster Harbour; so as to enable the various areas to be located on the map. I have marked them by numbers. For nomenclature of the various coals seams in this area, the attached table will explain.

WELLINGTON (NO. 1) AREA

This area which comprises what is generally known as the Wellington Estate situate in Mountain and Wellington Districts, has all been worked as regards the "Wellington Seam" by R. Dunsmuir & Sons and was abandoned about 1898, there are supposed to be areas of pillars and thin coal which have not been extracted, but the Old Mine plans are very indefinite on this point, and the only information which can be gleaned on this, is from the former mine officials and miners. These mines are now flooded, the names and location of which are as follows:

No. 1 Shaft at Departure Bay;
No. 2 Shaft now filled in, on Section 19, Range 4 Mountain District.
No. 3 Shaft about 400 feet to the south-west of No. 2 Shaft.
No. 1 Slope and Adit Level, the foot of which connects with the workings of No. 2 Shaft.
No. 4 Shaft on the Bluff in section 19, Range 5 Mountain District.
No. 5 Shaft on the south shore of Diver Lake in Section 20 Range 5, Mountain District.
No. 6 Shaft on the bluff in Section 17 Range 6 Mountain District.
Nos. 1 and 2, East Wellington in Sections 15 and 16 Range 6 and 7, Mountain District.

I have grouped these together as they are all connected underground. In this area, there are according to the records of the boreholes three seams of commercial coal lying above the "Wellington Seam" and are practically untouched, No. 9 mine of the Canadian Collieries (D) Ltd., is now working in the No. 2 directly above the "Wellington" with an average thickness of about 22 inches. Of five drill sections in the Diver Lake Division of this area, which give fourteen thickness (one being denuded) only three show less than two feet of coal, the average of these fourteen Sections being 27½ inches. In the Departure

Bay and (old) South Wellington Division of this area only the seam directly above the "Wellington" is workable. The following are the "estimated" quantities of coal for the area:

(a) No. 9 mine	(1 seam)	(2¾ years)	227,974 Long Tons @ 300 tons per day;
(b) Old South Wellington	(1 seam)	(6 years)	600,333 Long Tons @ 275 tons per day;
(c) Diver Lake	(3 seams)		
Departure Bay	(1 seam)		6,133,000 long tons

total... 6,961,307 Long Tons.

The coal seams above "Wellington" in the east Wellington Division are not included as it is doubtful if there is any coal there, none being shown in the Mines so far worked out and abandoned. Estimated life of area "C" taking an average output of 650 Long Tons per day per year of 275 days would be 34 years. It must be noted that the old workings are full of water, and before any work can be done in the upper seams, the Department of Mines will require the old workings to be pumped out, this being applicable not to the whole area but only such portions as it is proposed to work. In 1917 I made a report to Mr. Fleming who was then Vice-President of the Canadian Collieries (D) Ltd., and this report showed the following quantities of water, but I am sorry to say that I cannot find my working figures to check back on.

No. 1 Slope, Adit and No. 2 Shaft	(53,627,000	Imp.	Galls.
	(29,799,085	"	"
No. 3 Shaft	89,367,255	"	"
No. 4 Shaft	583,509,000	"	"
No. 5, 6, 1	728,071,000	"	"
East Wellington No. 1 and 2	162,914,400	"	"
Total	1,447,287,740	Imp.	Gals .

No. 9 Mine (Canadian Collieries (D) Ltd.)

In the near future pumping will have to be resorted to as the workings lying to the east of the slope will soon be over flooded ground, the amount of water to be handled in this area is 83,426,085 Imperial Gals., there is by all accounts a concrete stopping in on No. 10 Level in the dip working leading to No. 3 Shaft, which will stop any water coming from that area.

The following table of Levels will give an idea as to the contour of the floor at the "Wellington" coal seam in this area:--
High water mark at Departure Bay is 2000'.

	Surface	Floor of coal
No. 1 Shaft	2214.13	1955.07
No. 2 Shaft	2235.66	2088.66
No. 3 Shaft	2235.15	
No. 4 Shaft	2347.02	1927.02
No. 5 Shaft	2357.59	2112.60
No. 6 Shaft	2355.13	2007.13
No. 1 Shaft, East Well. approx.	2222.0(?)	
No. 2 Shaft, East Wellington.	2222.0(?)	
Water Shaft	2230.53	2065.53
Bore by Millstone River	2221.48	
No. 1 Slope (Knuckle)	2350.53	
No. 4 Fan Shaft	2405.60	2138.60

The water at the present time is outflowing from No. 1 Shaft, Nos. 1 and 2 East Wellington but it is difficult to guage the outflow as the shaft collars are built up and the water percolates through the filling. No. 1 Shaft, Departure Bay and also No. 2 Shaft, East Wellington, both being the lowest elevation both as regards elevation of shaft, collars and floor of coal, would appear to be the logical points to dewater from, with the point slightly in favor of No. 2 East Wellington as this shaft would be nearer to a power line and also the Millstone River for an outflow is very close.

No. 4 Fan Shaft from the level table indicates that is is at the Apex, therefore to get at the coal in the upper seams in the Departure Bay and Diver Lake areas, the water to be pumped to make start at mining is that amount which lies from the main level connecting Nos. 1 and 5 shafts and the outcrop. As the coal which lies to the south of this connecting level, is to the dip, a pump would have to be installed to lift this dip water out.

There is a small area lying to the north of this No. 1 area, of which I have not written, as there has not been any prospecting accomplished, five miles to the north of this No. 1 Area and adjoining the Old Lantzville mine on the north a small outlier is now being developed by the Lantzville Collieries, who have rights to 160 acres, it has been bored in the south-west corner and proved 1' 7" of coal, but the slope has just reached the coal 5' 8" thick, with a band of rock in the middle, for the purpose of this estimate, I have taken the area which is 160 acres,

as being underlaid 60% by the 1' 7" seam and 40% of the outcrop by the 5' 8" seam and then taking 90% of this total, which gives a total of 530,000 long tons.

Northfield Area (No. 2)

The Western Fuel Corporation are the owners of the majority of the land in this area, and years ago their predecessors opened and worked part of the area from which is known as the Northfield shaft. During Mr. Bowen's regime as Vice-President with Mr. Hunt as General Manager a series of boreholes were drilled and from conversation with Mr. Bowen, it has been estimated that there are over 2,500,000 tons of coal available in the Wellington Seam. The No. 2 seam is shown by boreholes, and from these I have estimated that there is available in this seam 2,302,987 long tons, making a total of 4,802,987 long tons; to this must be added that area covered by water (Departure Bay) which I have calculated to contain 1,480,034 long tons. Since the two companies (Western Fuel Corporation and Canadian Collieries (D) Ltd.,) have come under one management, it would be advisable I think to dewater the Departure Bay-Diver Lake Divisions of the No. 1 or Wellington area and open Northfield Area using No. 1 shaft as a Fan shaft and driving a slope, in such a position as to top both properties. There is a division of this area which lies to the south of the Western Fuel Co's holdings, and comprising the Newcastle Reserve, but nothing is known of this definitely, as it has not been bored. The Brechin Mine is in this area, but it is closed down and worked out, this mine was under Newcastle Island, a barrier being left between it and the workings from No. 1 Shaft (No. 3 area) of the Western Fuel Corporation.

Nanaimo or No. 3 Area.

In this area I have included No. 1 Shaft mine, the Wakesiah mine and the Harewood Mine, of these three, the Harewood Mine is closed down and worked out and the Wakesiah is from all authoritative accounts nearing its end thus leaving only No. 1 mine, there are also six other mines which are worked out and abandoned, namely the "Douglas Slope" and the "Nicol Street Shaft", No. 3 mine, No. 4 Slope, No. 5 Shaft, and Southfield; pillars are said to be available in the old Douglas Slope Mine, which could be reached from No. 1 shaft after dewatering.

As regards No. 1 mine, this shaft was sunk in 1883 and the workings extend under the Harbour and beyond Protection Island, two seams are worked from this shaft, namely the "Douglas" seam and the "Newcastle" seam, the "Douglas seam has been worked very extensively and a large percentage of pillars extracted. To the north as far as the barrier of the Brechin mine, and easterly to and under Protection

Island, also to the south or what is known as the "south side" which extends to the barrier line laid down by Mr. Stockett, from this south side nearly all the pillars have been extracted.

"Newcastle seam". The work in this seam, all longwall, extends to the north from the shaft to the Brechin barrier and east to and under Protection Island, and is now I believe being driven under the Gulf. As regards the life of this mine, nothing definite can be said, as the eastern edge of the south side workings are up against a fault, and it may be said that the area now being worked is mainly submarine so that no boreholes can be put down, but from various sources from which I could glean information, it can be said to have a life of seven years, which, at a daily output of 1100 long tons and a year of 275 days a total of 2,117,500 long tons.

In the south-western part of this area, there is a possibility of finding the "Wellington" seam, this area may be described as being south of the Harewood mine and west of No. 3 shaft No. 4 slope and southfield, and bounded on the West by the fluff facing Extension antiline, there have been some boreholes put down adjacent to Harewood Mine, which were not very favorable, but opposite the No. 1 Southfield slope and west of it, the late T.D. Jones drilled a hole and from local report, he obtained the "Wellington" seam at either 817 or 917 feet and therefore no tonnage has been estimated for this section.

Reserve Mine (No. 4 Area)

Included in this area, I have placed the 480 acres comprising what is known as the "York and McDonald Estates", this mine has had a chequered career, after the shafts were sunk it was found that the coal lay nearly on edge, and a new landing had to be made further up the shaft, in driving to the east or south of east, a bump occurred in which some men lost their lives and this section was closed off. The coal lies in very irregular bodies and a lot of dead work had had to be done. At the south-western end, No. 5 Shaft mine was tapped and the accumulated water drawn off, so as to facilitate the work of getting the coal out of the barrier. At the present time I believe th t work is being done to the west to arrive at the coal lying nearby the old No. 3 mine and No. 4 Slope, there is an area to be worked at some future date, this area lies between the foot of the road on the north end and the side workings of No. 1 mine. The workings are in the "Douglas" seam. Estimated tonnage for this area is made up as follows:

From various sources from which information could be obtained, I expect that the Reserve Mine, is good for five

years, which at the rate of six hundred tons per day makes a total of 825,000 long tons.

York & McDonald Estates.

From borehole records, I have estimated an average seam of four feet and have made the extraction at 70% of the total, thus allowing 30% for rolls, faults, wants and loss in mining giving a total of 2,106,561 long tons.

Area between Reserve Mine and South Side of No. 1 Shaft.

By information from various sources, this seam has been allowed for at four feet and the area 500 acres and taking an extraction of 70% as in the previous case the total available is 2,194,334 long tons. My opinion is, that No. 4 Slope could be made available for mining the coal in this section, in preference to Reserve mhaft, because, this would eliminate the pumping from the shaft, and would make a shorter railroad haul, also for the reason that in the near future the Nanaimo River Bridge Trusses would have to be rebuilt, and it would save this expense.

Extension No. 5 Area

This area comprises the Extension Mines being Nos. 1, 2 and 3 slopes and No. 4 Shaft and the "Vancouver Slope"; all in the "Wellington" seam. No. 4 Shaft mine is worked out and flooded by an inflow from Stark's Lake. "Vancouver Slope" is working on coal and pillars left in original No. 1 and No. 3 Slopes.

Nos. 1, 2 and 3. These mines are all worked from the main tunnel, and are about at the end of their profitable producing stage, which maypossibly be prolonged for about one year. Estimated tonnage 275,000 long tons.

South Wellington (NO. 6 Area)

Included in this area are the following mines Pacific Coast Coal Mines Ltd., Nos. 1 and 2 (abandoned) Alexandria Slope, No. 5 Slope and the Granby Colliery. It has been estimated that No. 5 mine and Alexandria slope afater pumping will have a life of five years and a total of 771,860 long tons. The coal in these mines is from the "Douglas" seam.

In this area there is a possibility for further development. The western edge of this area has been placed at approximately the apex of easterly dip of

the "Wellington" Seam and although the boreholes and the workings from No. 4 mine in the southern part have not been very favorable, there is still the northern part to be looked into, but no estimation of tonnage has been made, as it must be drilled to obtain data from which to make calculations on.

The next seam above the "Wellington" of commercial importance is the "Newcastle" this outcrops about 20 chains west of the "Southfield" mine described in No. 3 area and again at about 60 chains west of the "Alexandria" slope, at each of these places a small amount of work has been done and it shows the seam to be 3½ feet thick. The next seam above the "Newcastle" is the "Douglas" in which are the Pacific Coast Coal Mines Nos. 1 and 2, (now worked out), "Alexandria" "No. 5 Slope" and "Granby", while the workings in "No. 5" to the south show soft coal and the same may also apply to the Granby, there is a section lying between these two mines and bounded on the west by the outcrop, which in my opinion can be said to be commercial coal, this is evidenced by the quality seen in the Granby Mine in their No. 4 and 5 north levels and also in the small shaft sunk in Section 8 range 6 Cranberry District. The length of this division of the area is about one mile or 5280 feet and the average length along the dip to what may be termed the end of the commercial coal may safely be estimated at 30 chains or 1980 feet this would give an area of 240 acres, and taking the average thickness of the seam at 7 feet would indicate a total tonnage on a 90% extraction basis of 2,388,113 long tons at 650 tons per diem and 275 days for a year a life of over 13 years.

No. 6 Area "Granby Mine"

I have just been informed that this company is developing a new piece of ground by a diagonal slope in a south easterly direction which from a borehole ahead and the slope face is in good coal, which has been estimated to give them three years of good coal which at an output of 700 tons per day is equal to 577,500 long tons, It is said that the prolongation of this slope will have to pass through Canadian Collieries ground to enable them to arrive at their own areas again. This means that by prolonging the known position of the outcrop of the Douglas Seam at Granby to its known position at the Oyster Bay Collieries, that an area equal to about 160 acres belonging to the Canadian Collieries must be taken into account which will total 1,128,528 long tons.

Haslam Flat (No. 7 Area)

This area has been taken to include all that acreage lying to the south of Nanaimo River, west and south of Cedar District. This area is underlaid with the "Wellington" "Newcastle" and "Douglas" seams, and while a considerable amount of boring and prospecting has been done, nothing of commercial quality has been proved, with the exception of No. 8 mine of the Canadian Collieries (D) Ltd., in the northwestern part of the area, and from information gathered from various sources, it would appear that No. 8 only has a short life. This mine from the formation would appear to be in the No. 2 Seam, the floor and roof of which I have reason to believe is identical with that at No. 9 Mine Wellington. The tonnage available being 500,000 long tons.

No. 7 Slope which was driven on Lot 15 and Lot 8 Bright District in a south westerly direction, bu the seam although about five feet thick was dirty and of no commercial account, and was closed down, there is a possibility of finding coal below, as the floor was giving off a quantity of gas, also the measures would appear to be in one of the upper seams, the area is about 320 acres, no estimate is made of tonnage as this can only be done after it has been drilled. Some years ago the Oyster Bay Collieries started work, in about the middle of this area, near the southern boundary of Lot 15 Bright District and about 40 chains west of the south east corner, on the outcrop of the "Douglas" Seam, but it was abandoned, several attempts have been made to obtain the coal rights under the Indian Reserve, but nothing materialized so far and with the exception of one borehole by Brentons Crossing adjacent the Esquimalt and Nanaimo Railway and another on Chemanus Bay; which I have reason to believe were not very favourable.

Cedar District (NO. 8 Area)

This area includes all of Cedar District and about 450 acres adjacent to Morden shaft of the West Coal Collieries, and Round Island with the surrounding submarine areas.

Active development in this area has been confined to the Morden shaft mine, and the preliminary work on Round Island by the Consumer's Coal Co., and two boreholes beyond the workings of Morden mine, the first of these holes was put down on the right bank of Nanaimo River, and at a depth of over 1,000 feet encountered the "Douglas" Seam, a slope was driven from the eastern extremity of the Morden workings to arrive at the coal intersected by this bore, the other hole was drilled on the seashore a little south-west of Round Island and at 1200 feet found the "Douglas" seam 3½ feet thick.

Re "Consumers Coal Co."

There is a difficulty in estimating the total tonnage in this division (2400 acres) as it is all a submarine area, and as I have already said there is only the slope on Round Island and a borehole on the sea shore to the southwest, and from these the seam has been taken at 3½ feet, my assumptions therefore for the tonnage available is partly from my own experience, but mainly from converstations I had with the late Mr. George Wilkinson who was Chief Inspector of Mines. After making the calculation I took only 60% of the total which gave 7,899,000 long tons, thus allowing 40% for rolls, faults and that amount lost on the easterly dip of the anticline owing to the apparent steepness of the pitch as determined by the Dominion Geological Survey.

Morden Shaft Area and to the East.

This area contains approximately 3452 acres and the evident thickness of the seam has been taken from the two boreholes, previously mentioned, and from the York Estate bores and has been accepted as being 3½ feet thick, calculated tonnage has been taken at 65% of the whole so as to allow a safe margin for rolls, faults and wants to which gives a total of 11,917,941 long tons.

Round Island or a little to the east of it is practically the apex of the Trincomali Anticline, and has a trend south-east, a syncline which goes from Chemainus Bay with a certain amount of winding passes by Trois Bras or Holden Lake and is practically parallel to the Trincomali Anticline, the depth of the floor at this syncline as shown by Professor Clapp, is about 1500 to 1700 feet at Holden Lake. Immediately to the east of the "Granby workings, there is a block of land, owned by the settlers, who are bonded together to deal with this block, which contains approximately 3200 acres, several times in the past few years this block has been under option, but up to the present, nothing has materialized. It would require two shafts (deep) to open up this block, and judging from the following experience of the Granby Company, would not appear to be of a profitable nature.

In the "Granby" mine the foot of the main slope on their boundary was in high coal; but the workings to the south of the slope were stopped by the Department of Mines owing to the frequency of bumps, but while they had high coal in most places, it must be remembered, that their percentage of lump coal extraction was small, thus indicating that at the present time, it was not profitable mining, until further prospecting has been done in this area. It is not very easy to give any idea as to its possibilities. From the foregoing

it would appear that this area is very difficult to estimate and although the "Granby" company had high coal along the boundary, I prefer in estimating this area to take the thickness of the seam at 3½ feet as shown in the "Morden Shaft" area and even then allowing a very liberal assumed loss for faults, rolls, wants etc., which I have taken this time at 50% after making this allowance I arrive at a total of 8,776,402 long tons.

In taking out the areas of these last two I have as far as possible excluded all that ground which lies below the 1500 foot contour as delineated on the Dominion Geologic Survey Maps, it has been demonstrated that when the workings arrive at or near that contour the coal generally speaking is not of commercial quality.

From the foregoing, I would assume that the most feasible points of near future development would be as follows.

No. 1 and No. 2 Areas.

No. 9 mine of the Canadian Collieries (D) Ltd., being in an isolated portion of this area will naturally have to be finished first, there is approximately a tonnage in the seam now being worked of 227,974 tons, taking a 90% extraction with an average seam of 22 inches s.g. 1.25 at 300 tons per day and 275 days per year, would give a life at 2⅜ years. It is possible that there might be a recovery made from the level pillars in the Wellington Seam, which would naturally prolong the life of the mine.

The next portion of this area which I will specify is that lying in the Valley of the Millstone River and overlying the workings of No. 3, 4 and 6 mines, there are two thicknesses shown, in the No. 3 Shaft (5 ft.) and 1 bore (3' 7) with a parting of 2' 6" making an average of 4' 3½" 600,333 tons on a basis of 400 tons per day and a year of 275 days would last 5.9 years. There is a doubt in my mind if this can be worked, as it is in the Valley of the Millstone River and the overburden being very heavy due to the River water and the cover at No. 3 shaft is only 130 feet, and also on account of the amount of water which would have to be pumped; this area could be made available from the foot of the workings of No. 9 and save an extra opening.

The main part of this field and also the No. 2 area should be worked from two openings, namely No. 1 Shaft for air and a slope at Departure Bay, and a slope at or near No. 5 shaft, using the Fan Shaft and No. 5 Shaft for airways from the different seams and coupling these shafts to one Fan shipment could be made from this point by Esquimalt and Nanaimo Railway and also by rehabilitating the old grade of Dunsmuir and Sons and shipment from the first point at No. 1 Shaft to Departure to a scow wharf which is one mile from the old Dunsmuir wharf site at Departure Bay and the track thereto is already made and only has to be rehabilitated.

The amount of water to be handled, in this area before coal can be gotten out would be as near as it can be arrived at, there being no elevations on the old plans. 361,821,900 Imperial gallons, which at 2000 imperial gallons per minute would take 126 days to dewater. While the dewatering is proceeding the two slopes can be driven, and should reach the uppermost seams in 65 days for slope at or near No. 1 shaft, 60 days, for slope at or near No. 5 Shaft.

The coal in these two areas is household coal of the best quality and therefore, development should be begun in the very near future to take care of any decline in output which may materialize in the No. 3 Area from No. 1 Shaft. The development of these Nos. 1 and 2 areas, is entirely in the hands of the Canadian Collieries (D) Ltd., and the Western Fuel Corporation of Canada Limited.

The next logical point of near future development is the No. 6 or South Wellington Area and in my opinion a slope should be started at a point near the small shaft in Section 8 Range 6, Cranberry District and driven to clear the extremity of the workings to the south of No. 5 slope, this would be "Douglas" seam coal. This slope should be started in such time so as to have it at a productive output coincident with the closing of No. 5 and Alexandria mine. As already shown No. 5 Alexandria will have a life of 5 years and this new slope 13 years, which gives to this division which is under the control of the Canadian Collieries (D) Ltd., a life of 18 years.

In this division it must not be lost sight of that the "Newcastle" seam has been uncovered, at two points as already shown, but development from the outcrop is in the hands of four owners, namely, Fiddick (25 acres) Richardson 160 acres) E. Evans (160 acres) Canadian Collieries (D) Ltd., (255 acres) and the Western Fuel Corporation of which Evans and Richardson have the largest areas adjacent the outcrop, and the outcrop passes through the Western edge of the Canadian Collieries (D) Ltd., land, Fiddick being slightly to the east of the outcrop. In this division while the coal has been explosed as already noted in two places along the outcrop,

owing to the "Bone" seen in one place in the coal, this thickness has been allowed for at 3 feet instead of 3½ feet, making the calculation for gross tonnage in the usual manner, and as there are no bores to the dip, 40% has been allowed for faults, rolls, wants etc., net total of 1,450,000 long tons was arrived at. It is difficult to designate the openings needed as there are four owners concerned; therefore unless one company becomes the owner, there would be four openings needed.

No. 8 Area Cedar District

As I have already said, the Consumers Coal Co., are now driving a slope from Round Island, but it is doubtful in my mind if this will be the final point of output, as it is in an open roadstead being exposed to the full force of the south-east gales, and would therfore be precarious for shipping, there are also two other points to be considered, one is that the entrance to the slope is not very much above high water and if the measures are at all free and open, at high tide with a heavy south-east gale blowing, there is a possibility of water entering the mine, the other point to be taken into consideration is that it is an Island of only about three acres, and there would be no water for a steam plant, unless a water boat was kept in operation.

The next point of development in this area is from the Morden shaft of the West Coast Collieries. This point is the logical point to develop the area lying to the east, and also about 160 acres to the north of No. 5 slope in No. 6 area and the 480 acres or York Estate in the No. 4 area. The West Coal Collieries do not seem to be disposed to active operations, therefore it would seem probable that either the Canadian Collieries (D) Ltd., or Western Fuel Corporation might handle this, towards the end of the life of the operations (18 years) described in previously under No. 6 or South Wellington conclusions, provided arrangements could be made for acquiring the Morden shaft areas.

Concisely put the foregoing means, develop Nos. 1 and 2 areas to the north with a life of over 20 years No. 6 area to the south with a life of 18 years and the life of future developments beyond this period cannot at the present be estimated. Herewith find blueprint of the areas variously coloured.

Yours faithfully,

"ALFRED G. KING".