Pennsylvania anthracite, but the characteristics of each are sufficiently different to demand somewhat different grates and arrangements for draught. The Welsh anthracites are on the whole somewhat softer, contain less ash, and volatile matter, burn more freely and give slightly more heat than the Pennsylvania anthracites. Welsh anthracite is not used to any extent in Eastern Canada partly because of the proximity of the Pennsylvania fields and partly because generally speaking furnaces have been designed to use the Pennsylvania product. In the middle west, however, circumstances have forced design of furnaces which would burn bituminous as well as anthracite coal, for this reason it would appear that good quality Welsh anthracite might be expected to compete with the Pennsylvania product in the portions of the prairie provinces tributary to the Hudson Bay route under favourable conditions as to price. It would seem on the basis of pre-war prices that Welsh anthracite could be landed at such points as Moose Jaw, Regina and Saskatoon at from 65 cents to \$2 per ton less than Pennsylvania anthracite could be landed at the same points. During the years 1912 to 1915 inclusive the imports of anthracite coal through the ports of Fort William and Port Arthur has been fairly constant and has averaged approximately 490,000 tons (2,000 pounds) annually; during the same period the imports of anthracite through the Dakota and Minnesota gateways has averaged 15,000 tons annually, making the total imports of this commodity from the Pennsylvania fields into the middle west about 500,000 tons annually. The exact distribution of this coal is not certain but it is estimated as follows:

tills coal is not cortain and			
Port Arthur, Fort William and points east of Winnipeg	130,000	tons	
City of Winnipeg	200,000	tons	
City of Moose Jaw	10,000	tons	
City of Saskatoon	10,000	tons	
City of Regina	15,000	tons	
Points in Manitoba and Saskatche-			
wan west of Winnipeg	135,000	tons	
Total	500,000	tons	

It would seem reasonable to expect a traffic in Welsh anthracite coal to the extent of from 50,000 to 75,000 tons per annum with conditions so favourable as to price, and there is no doubt that with a decrease in price of from 65 cents to \$2 ton the consumption of anthracite would be increased largely especially in parts of the country where there is no wood available for fuel.

There is also the possibility of some traffic in structural steel to certain portions of the west in competition with steel from the Pittsburg district, and a good deal of structural material will be required in the next few years of development in western Canada.

During the years 1911-12, 1912-13 and 1913-14 the customs returns show that about \$15,000,000 worth of goods consisting of cottons, woollens, iron and steel products, china and earthenware, glass and glass products, cocoa, paper and paper products, linens, gloves, linoleum and other general merchandise was imported direct from Europe annually to such points in the middle west as Winnipeg, Brandon, Regina, Moose Jaw, Saskatoon, Edmonton, Calgary and Lethbridge. In addition to this there is also a large volume of general merchandise imported from Europe annually which is handled through jobbing houses in Montreal and Toronto, and eventually finds its way to the prairie provinces. There is no doubt whatever that

with the opening up of the Hudson Bay route, even with the short navigation season, that a substantial portion of this traffic would take the Hudson Bay route since there would be a considerable saving in distance over the route via Montreal or Halifax.

The middle west has been developing rapidly during the last few years and has shown a very substantial increase in population. A very substantial portion of this increase is from the British Isles and these settlers are certain to purchase a considerable quantity of general merchandise in Great Britain if there is a substantial decrease in the long rail haul from Montreal. They will naturally time their purchases so as to come within the period of navigation on Hudson bay.

The foregoing memorandum has been made on the basis of pre-war conditions and it is only fair to remark in this connection that conditions may be largely changed for a considerable period following the war, in what respect and to what extent is of course difficult to forecast. The following tables are attached:

- 1. Table showing shipments by lake of wheat and all grain from Fort William and Port Arthur by months, 1909-1912.
- 2. Table showing Exports of Canadian wheat and all grains from various Canadian ports, 1910-1915 inclusive.
- 3. Table showing quantity of grain exported from Montreal.
- 4. Table giving the estimated transportation expenses, Hudson Bay railway in handling 10,000,000 bushels of wheat outbound and 150,000 tons inbound in 75 days.
- 5. Table showing population of principal western prairie cities, towns and provinces, 1916.
- 6. Table showing value of goods imported from the United States to Canada through the Dakota gateways during years 1912-1915 inclusive.
- 7. Table showing imports of coal through ports of Fort William and Port Arthur during fiscal years ending 31st March, 1912, 1913, 1914 and 1915.
- 8. Table showing probable freight charges on rolled steel shapes from Pittsburg and England and various points in western Canada.
- 9. Table showing probable relative costs of anthracite coal to western points from Pennsylvania and Wales, 1913 prices.
- Table showing cost of fuel purchased by Canadian Northern railway during the year ended June 30, 1916.
- 11. Table showing probable relative cost of bituminous coal from Yellowhead, Pennsylvania and Sydney, 1913, at various points in western Canada.
  - 12. Table of distances.
- 13. Table showing value of goods imported through the principal ports in the middle west during fiscal years ended March 31, 1912, 1913, and 1914.
- 14. Table showing quantity of United States anthracate coal used 1916-17 in various western cities and towns with prices, from report by Commission of Conservation, 1917.
- 15. Table showing cars of grain handled 1913-1916 inclusive on various Canadian Northern lines tributary to Hudson Bay Railway.

(Sgd.) R. A. C. HENRY.