CHAPTER X

Regulation of Canadian Coasting Trade

The Commission dealt in preceding chapters with the major problem drawn to its attention, i.e. the situation arising for Canadian coasting shipping from the competition of ships either built outside of Canada although registered in this country, or ships built and registered outside of Canada, mainly in the United Kingdom. The attention of the Commission has been drawn to another aspect of Canadian coasting trade, namely the competition between various modes of transportation within Canada, particularly the competition offered by water transportation to railway transportation.

A. Present Regulations

The main regulations affecting coasting shipping have been outlined in Chapter II. Comprehensive regulation of water transport is in effect only on the Mackenzie River, where vessels over 10 gross tons are subject to the Transport Act with respect to the transportation of passengers and all types of cargo. Under the same Act there is extensive regulation of water transportation between any two Canadian ports in the waters of the Great Lakes and St. Lawrence River west of the Island of Orleans. Such regulation, however, applies only to transportation in vessels exceeding 500 gross tons, and to the transport of passengers and goods other than "goods in bulk" as defined in the Act.[1] Requirements under the Transport Act include the obtaining of licences, which may be issued on the basis of public convenience and necessity, and the filing of tariffs for the approval of the Board of Transport Commissioners. Moreover, the Inland Water Freight Rates Act provides for the establishment of maximum rates for movements of wheat and other grains from Fort William and Port Arthur to other ports in Canada or the United States.

The attention of the Commission was drawn to railway regulations which do not all have counterparts applying to water transportation. For instance, the Railway Act requires the filing and publication of all rail tariffs, which

[1]The expression "goods in bulk" is defined in Section 2(1)(d) of the Transport Act as follows:
" 'goods in bulk' means the following goods laden or freighted in ships, and except as herein otherwise provided, not bundled or enclosed in bags, bales, boxes, cases, casks, crates or any other container:
(i) grain and grain products, including flour and mill feeds in bulk or in sacks,
(ii) ores and minerals (crude, screened, sized, refined or concentrated, but not otherwise processed), including ore concentrates in sacks, sand, stone and gravel, coal and coke, liquids,
(iii) pulpwood, woodpulp, poles and logs, including pulpwood and woodpulp in bales, and
(iv) waste paper loaded as full ship's cargo, iron and steel scrap and pig iron; . . ."

then become effective only after a specified time. Certain rail rates are determined by statute. Other examples are the equalization of freight rates as between regions and the restrictions respecting implementation of "competitive rates".

B. Regulation under Transport Act

The two major railways of Canada submitted to the Commission that such "inequality of regulation" between rail and water transportation, particularly between rail and certain types of water transportation, should be eliminated and that all types of water carriers should be subjected to the same basic regulations as railways.

More specifically, the Canadian National Railways made the following recommendations to the Commission:

> "a) The jurisdiction of the Board of Transport Commissioners should be extended to all ships engaged in the movement of domestic traffic subject to inter-carrier competition. Only such ships as engage in 'bulk' movement as understood in the economic sense should be excluded from the Board's regulatory powers; and 'bulk' in that sense would be limited to traffic carried undifferentiated in vessels specially designed for the movement of goods in shipload lots. From a practical point of view, there are such substantial differences in transportation requirements for this type of traffic, that no other carrier can compete effectively.
>
> "b) The regulatory powers of the Board should, in equity, be applied uniformly to ships in all segments of the coasting trade, including those trading on the Atlantic and Pacific coasts, in the inter-coastal service, and between the Atlantic and Pacific coasts and the Great Lakes, all of which are as much a part of the domestic water transportation system as are ships operating in the Great Lakes.
>
> "c) The jurisdiction of the Board over the vessels specified in 'a' and 'b' above should be extended further to cover all such vessels having over 100 tons' gross tonnage. The present limitation of 500 tons exempts from regulation a sizeable group of vessels which, in aggregate, play an important role in the intra-Canadian movement of goods by water. An exemption of 100 tons would, in the opinion of the Canadian National, be sufficient to exclude, for administrative convenience, vessels whose operations are not on a commercially significant scale."

The Canadian Pacific Railway went even further, for its recommendation did not exclude any of the "bulk" movements or any of the ships, even those under 100 tons. Its recommendations in this respect were as follows:

> "(a) The licensing and rate regulating provisions of the Transport Act contained in Parts I, II and III thereof should be extended to include all ships engaged in the coasting trade of Canada, due protection being given in the Act to ships now operating in such trade. In addition Section 5 of Part I should be amended to make it mandatory for the Board in reaching its decision on public convenience and necessity to give full effect to the considerations outlined in Sub-paragraphs (a) to (d) inclusive. Under present legislation, the Board may take these factors into consideration but is not compelled to do so.

"(b) Consideration should also be given to amending the provisions in Part III of the Transport Act to bring them more into conformity with the Railway Act by providing:
(1) Publication and filing by the water lines of special arrangements tariffs, in addition to all other tariffs.
(2) The same regulation respecting tariffs and tolls for the carriage of goods in bulk as apply to all other goods."

The railways' submissions are based on the argument that regulation should bear evenly on all forms of transportation. It is argued that not only is it "unfair" when the burden of regulation falls more heavily on one competitor than on another, but that it is also uneconomic because it impairs the productive strength of the burdened competitor.

The Commission inquired at the public hearings as to the practical disadvantages resulting for the railways from the so-called "inequality of control". A witness for one of the railways stated that the requirements of publishing rates and obtaining the approval of the Board of Transport Commissioners are handicaps for the railways not borne by water carriers, which may quote "spot rates". The Commission was unable to obtain specific evidence as to how these handicaps worked in practice. Neither was the Commission able to obtain such evidence as to how the lack of a licensing requirement for water carriers, on the basis of public convenience and necessity, had handicapped the railways.

When the attention of witnesses was drawn to the well-known position taken by railways in recent years in asking for a relaxation of regulations affecting rail transportation, it was agreed on behalf of one of the railway companies that such relaxation was desired and desirable, particularly as regards statutory rates and the conditions under which competitive rates may be applied. It was argued nevertheless that all water carriers in the coastal trade should be subjected to whatever regulations might be deemed necessary for railways.

The Commission cannot agree with such an argument. No evidence was submitted to the effect that the conditions within the shipping industry itself warrant more comprehensive or restrictive regulation, for instance to provide better water service, or to curb demonstrable abuses, or otherwise for the benefit of the public as distinct from benefit to other transport media. The solution of the problem raised by the railways might well be relaxation of some of the regulations imposed on rail transportation—an issue which is outside the scope of the present inquiry. But the keeping in force of any such regulations is not in itself a valid reason to impose an artificial handicap upon water carriers to reduce some of their natural competitive advantages over rail carriers in the guise of applying the same regulations impartially to each.

On the other hand, while the railways submitted that water carriers should be more extensively regulated, the Canadian Shipowners Association

and Saguenay Terminals Limited questioned the appropriateness of present regulations. They complained of the difficulty of establishing "public convenience and necessity" as required by the Transport Act for certain services.

The Commission simply points out that it is an invariable practice, whenever competition is limited in the provision of a public service, to authorize the licensing of an operator only on the basis of public convenience and necessity. To demonstrate this may be difficult whenever there is already an authorized operator in the field, but it is nevertheless a necessary requirement if the danger of destructive competition is to be avoided.

C. Central Transportation Authority

The relationship between rail and water carriers raises a much wider question than simply to decide whether or not there should be a uniform set of regulations. The attention of the Commission was drawn to the findings of the Royal Commission on Transportation, 1951 (Turgeon Commission), which included a statement that

> "The several means of transportation—railways, waterways, airways, (highways),[2] and now pipe lines—are distinct agencies that are inseparably interrelated. They should be so regulated as to serve not only individually but collectively in meeting the country's needs."[3]

The Turgeon Commission took the position that it was an "anomaly" to have three separate and independent bodies—the Board of Transport Commissioners, the Air Transport Board and the Canadian Maritime Commission—each charged with the control of a part of the Canadian transportation system. The proposed remedy was

> ". . . the constitution of a Central Authority which will be able to take in hand the major task of co-ordinated control, having at its disposal all the benefit acquired from the experience of the separate bodies in recent years.
>
> "The adoption of this policy would bring together the three above named bodies, re-organized and united and devoted henceforth to the pursuit of a well planned policy for the co-ordination and regulation of transportation."[4]

The Turgeon Commission, whose findings on this point were commended to this Commission by the Canadian Pacific Railway, among others, envisaged the establishment of a Central Authority to replace the existing separate bodies. Other groups which appeared before this Commission recommended a different type of central authority

> ". . . that would not necessarily replace the existing transportation authorities, but would rather complement the work of existing bodies, and would have as its objective the integration and overall co-ordination of various types of transportation services so that they would serve collectively in Canada's best interest."[5]

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[2]The Turgeon Commission had noted in the preceding sentence that highway transport comes largely under provincial jurisdiction.

[3]Turgeon Report p. 279.

[4]P. 280.

[5]Submission of the Government of Saskatchewan.

This view was put forward by the Government of Saskatchewan and was also expressed by farming groups such as the Interprovincial Farm Union Council and the Saskatchewan Farmers Union.

The Commission is not called upon to express an opinion as to whether one regulating body would serve the public interest better than three or more, or whether this or another type of central authority should be established. It is constrained to make two observations on the subject, however. One is that any regulation to be applied to a transportation medium should be justifiable on the grounds of the conditions of service to the public by that medium, for if one medium requires less regulation than another that is part of its natural advantage. The other observation is that no problem has been placed before this Commission which would require for its solution the attention of either of the two kinds of central authority that were advocated.

CHAPTER XI

Other Submissions

In addition to the submissions previously discussed in this report, representations have been made to the Commission during the course of its investigations in support of more than fifty other proposals. The Commission is grateful to those who have put so much time and effort in making these representations which have been in many respects helpful. A number of the proposals however fall outside the terms of reference and upon them it is not required to make recommendations; a number are in effect disposed of by the general recommendations in this report; the remainder, falling wholly or partially within the terms of reference and not already dealt with are discussed in the present chapter.

Submissions falling outside the terms of reference of the Commission are those relating to subsidization of Canadian ocean-going vessels,[1] development of a Far Eastern Trade Policy,[2] expansion of Canadian overseas trade generally,[3] development of international trade through Hudson's Bay,[4] encouragement to building ocean-going ships in Canada,[5] establishment of a Canadian ocean-going fleet of cargo vessels[6] and establishment of a Crown Corporation to operate an overseas trading fleet.[7] The Commission is not required to consider international trade or deep-sea shipping policy not affecting the coasting trade and therefore makes no recommendation on these subjects.

Submissions in effect covered by the main recommendations in this report include various representations that non-Canadian ships using the St. Lawrence Seaway Canals should be required to pay discriminatory tolls or that such vessels engaging in Canadian coasting trade be required to pay special taxes or fees or be subjected to other burdens.[8] Representations were also made by manufacturers and suppliers of marine equipment and shipping stores, whose businesses are ancillary to the shipbuilding industry, in support of various proposals for assistance to the shipbuilding industry and for

[1]Quebec Federation of Labour, Brief 155, p. 81, T.3630-3631; National Council of Shipyard Unions (C.C.L.), Halifax, Brief 107, T.1579

[2]Vancouver, New Westminster and District Metal Trades Council, Victoria and District Metal Trades Council, and Shipyard General Workers Federation, Vancouver, Brief 36.

[3]Labour-Progressive Party, B.C. Provincial Committee, Vancouver, Brief 118, Ex. 63.

[4]Federated Cooperatives, Limited, Saskatoon, Brief 45; Hudson Bay Route Association, Briefs 58 and 124, Ex. 69, T.2740; Interprovincial Farm Union Council, Saskatoon, Brief 112, T.2715.

[5]John Inglis Co. Limited, Brief 99.

[6]Hudson Bay Route Association, Briefs 58 and 124, Ex. 69.

[7]Labour-Progressive Party, B.C. Provincial Committee, Vancouver, Brief 118, Ex. 63, p. 6.

[8]The St. Lawrence Shipowners Association Inc., Brief 49, pp. 8-11; Plymouth Cordage Company of Canada Ltd., Brief 86, p. 2; Labour-Progressive Party, B.C. Provincial Committee, Vancouver, Brief 118, Ex. 63, p. 6; National Council of Shipyard Unions, Halifax, Brief 107; Kent Lines Ltd., Brunswick Motors Ltd., and Irving Pulp and Paper Ltd., Brief 129, Ex. 164, p. 7.

other measures to maintain their ancillary facilities.[9] Insofar as these proposals fall within the terms of reference the views of the Commission are sufficiently indicated in its discussion of the major proposals for restriction of the coasting trade to which these proposals are related and like considerations apply.

The Commission makes the following comments on the remaining subjects upon which representations were made. Although the Commission expresses its views in quite brief terms on many subjects of considerable magnitude, it is well aware of the importance of the proposals and has given them the most earnest and full consideration.

New or Improved Port Facilities or Coasting Trade Services

Representations were made to the Commission that port facilities at Fort William and Port Arthur,[10] Toronto,[11] Montreal,[12] Trois-Rivières,[13] Cap-de-la-Madeleine,[14] Quebec,[15] and North Sydney[16] and at Marysville and elsewhere in Newfoundland,[17] should be improved or new facilities constructed. Provision of additional aids to navigation in Newfoundland waters and of repair facilities for small ships in the Newfoundland coasting trade was urged.[18] The Commission was asked to recommend the establishment of cargo and other services between the islands off the coast of New Brunswick and the mainland,[19] a railway car service between Nova Scotia and New Brunswick,[20] a new ferry service between West Point, P.E.I., and Buctouche, N.B.,[21] the restoration of the Minas Basin Ferry service[22] and the establishment of a better steamer service on the west coast of Van-

[9]Canadian Car & Foundry Company, Limited, Brief 1; Darling Brothers Limited, Brief 5; Foster Wheeler Limited, Brief 7; The William Kennedy & Sons Limited, Brief 18; Peacock Brothers Limited, Brief 23; T. McAvity & Sons, Limited, Brief 32; Atlas Steels Limited, Brief 33; A. E. Watts Limited, Brief 39; The Canadian Blower & Forge Company Limited, Brief 43; Canadian Westinghouse Company Limited, Brief 60; Crane Limited, Brief 74; The Canadian Fairbanks-Morse Company Ltd., Brief 83; Plymouth Cordage Company of Canada, Ltd., Brief 86, p. 2; Canadian Marconi Company, Brief 88, p. 3; John Inglis Co. Ltd., Brief 99; Project Sales Ltd., Brief 105, p. 5.

[10]Government of Manitoba, Brief 77, T.1761-1914 and 5563-5606.

[11]Toronto Harbour Commissioners, Brief 134, Ex. 155, T.4578-84; Ontario Shipping Intelligence Publishing Company, Brief 95; Toronto Board of Trade, Brief 50, T.4584-96.

[12]St. Lawrence Municipal Bureau, City of Montreal, Brief 84, Ex. 99; Canada Steamship Lines Limited, T.3807.

[13]City of Trois-Rivières, Brief 110; St. Lawrence Corporation Limited, Trois-Rivières, Brief 159 and T.3063-70.

[14]City of Cap-de-la-Madeleine, Brief 145, T.3055-63.

[15]Board of Trade, City of Quebec, Briefs 89 and 133, Ex. 71.

[16]Joint Councils of Burin District, Brief 72.

[17]Joint Councils of Burin District, Brief 72; Committee on Coastal Shipping of Newfoundland, Briefs 76 and 162, T.5941-91.

[18]Joint Councils of Burin District, Brief 72; Committee on Coastal Shipping of Newfoundland, Briefs 76 and 162, T.5941-91.

[19]Grand Manan Board of Trade, Brief 24; Industrial Union of Marine and Shipbuilding Workers of Canada, Local No. 3, International Association of Machinists, Local No. 482, United Brotherhood of Carpenters and Joiners of America, Local 840, International Brotherhood of Electrical Workers, Local 502, and The United Association of Journeymen and Apprentices of Plumbing and Pipefitting Industry of United States and Canada, Local No. 213, all of Saint John, N.B., Brief 16, T.1513-53.

[20]Industrial Union of Marine and Shipbuilding Workers of Canada, Local No. 3 and associated groups, Saint John, N.B., T.1514.

[21]West Point Ferries Limited, Brief 29, T.1414-30.

[22]Parrsboro and District Board of Trade, Parrsboro, N.S., Brief 31, T.1229-43.

couver Island.[23] The Commission was asked to recommend reduced wharfage and port dues for *goélettes* at the port of Quebec.[24]

The Commission recognizes the strong case put forward by the proponents of each of these projects in the light of their local knowledge. Each project requires careful consideration from a technical point of view, with detailed studies of traffic conditions and engineering requirements. Further, any proposal to meet all these requests requires a balancing of interests in the light of the Government's general financial policy and its overall works programme in this and other fields, and co-ordination of these projects with them. Government machinery now includes departments and agencies whose special function is to make investigation on these subjects and to whom all relevant information is available. They have already made studies of many of the problems and in some instances, particularly in the case of some harbour facilities, work is under way. Their Ministers are responsible to Parliament for general financial policy and the governmental works programme, and can give due weight to the varying interests. The Commission is impressed with the importance of having facilities adequate to utilize fully the St. Lawrence Seaway. The provision of new facilities at the Port of Montreal and requirements for general storage facilities are discussed in Chapter IV and in Chapter VI. The Commission does not feel that, within the limits of its functions and before experience of the effect of the Seaway is gained, it can go further than this discussion. It has therefore forwarded the representations and material in support of them to the appropriate Minister, in most cases the Minister of Transport, with a recommendation for continuing study and investigation.

Two subjects in the general category just outlined merit separate comments.

The Committee on Coastal Shipping of Newfoundland[25] stressed particularly the lack of facilities in Newfoundland for dry-docking small vessels ranging from 10 to 400 tons for inspection and repairs. Among other proposals was amendment of the federal Dry Docks Subsidies Act (R.S.C. 1952, Chapter 91) to provide for the establishment of a fourth class of dry docks or of marine railways, with accessory machine shops suitable for these vessels of a type smaller than those included in the three classes now dealt with by that Act. The small vessels trading around the coasts of Newfoundland are often the sole means of transportation to and from the outports. The need for appropriate facilities for their inspection, repair and maintenance cannot be over-emphasized. This need has been increased since the union of Newfoundland with Canada because of the quadrennial inspections required by the Canada Shipping Act. Further, it was urged on the Commission that repair and maintenance facilities of this type could

[23]Mr. George Nicholson, Victoria, B.C., Brief 20, T.2081-2100.
[24]Board of Trade, City of Quebec, Briefs 89 and 133, Ex. 71.
[25]Briefs 76 and 162, T.5941-91.

not be provided without public assistance. In other areas some of these facilities exist as survivals from the wooden ship era or were provided at a minimum of cost out of war surplus material at the end of World War II.

The Commission is impressed with the need for adequate repair facilities and with the representations that such facilities do not now exist. It recommends that immediate study be given to the early provision of facilities needed to ensure survival and efficient operation of the coasting fleet of small vessels essential to the Newfoundland economy.

The Commission was asked to recommend construction of the Chignecto Canal.[26] The advisability of the Canal was studied by the Chignecto Canal Commission under the chairmanship of Dr. Arthur Surveyer. Its report, completed on November 9, 1933, found that the Canal was technically feasible but that it offered "no national or local advantages at all commensurate with the estimated outlay". The Canal was again considered in 1949 and 1950 by the Royal Commission on Transportation under the chairmanship of the Hon. Mr. W. F. A. Turgeon. The Turgeon Commission reexamined the work of the Surveyer Commission, brought the earlier estimates up to date, and considered new evidence. Its report concluded that "there is certainly not sufficient evidence to justify the Commission in recommending a capital expenditure of at least $100,000,000, with annual charges in the neighbourhood of $6½ million", and that "the Commission cannot recommend the construction of the Chignecto Canal" (pp. 168-171).

The evidence before the Commission does not establish any substantial change in conditions affecting the Canal since this report was made on February 9th, 1951. The Commission concludes that, in the absence of some indication of material change, its general terms of reference do not require a further lengthy and technical investigation into this particular project which has so recently been specifically investigated.

Safety Equipment and Qualifications of Officers on Coasting Vessels

The Commission was urged to recommend relaxation of the requirements as to qualifications of ships' officers in coasting service and as to safety equipment on coasting vessels,[27] to meet local conditions of navigation. For example, the substitution on smaller vessels in certain coastal waters of dories for specially-constructed life boats was suggested on the ground that they were equally or more suitable for life saving purposes and more economical. The types of qualifications required of ships' officers and the types and kind of safety equipment required on board ships are strictly technical questions, the determination of which must turn on a knowledge

[26]Maritime Marine Workers Federation, Halifax, Brief 15; Industrial Union of Marine and Shipbuilding Workers of Canada, Local No. 3, and associated groups, Saint John, N.B., Brief 150; Kent Lines Ltd., Brunswick Motors Ltd., and Irving Pulp and Paper Ltd., Brief 129.

[27]Joint Councils of Burin District, Brief 72; Union Steamships Limited, Vancouver, Brief 93, p. 8; Committee on Coastal Shipping of Newfoundland, Brief 76, p. 10; Zwicker and Company Limited, Lunenburg, N.S., Brief 67.

of and experience with the operation of ships, their navigation and equipment. Technical staffs competent to consider these questions and familiar with them exist in government departments. The terms of reference of the Commission are directed primarily at the broader trading aspects of coasting trade. The Commission did not feel justified in employing technical staff to duplicate the work of those already existing. The personnel and information required to decide whether relaxation is advisable are available in the Government and the Commission has accordingly passed the representations and the material supporting them to the Minister of Transport with the recommendation that a study be made of them.

The Importation of Ships into Canada

Section 22 of the Canada Shipping Act now provides:

> "Notwithstanding anything in this Part a ship built outside of Canada shall not, without the consent of the Minister [of Transport], be registered in Canada".

As already explained in Chapter II, in practice no obstacle is placed in the way of importation of a vessel that is less than five years old. On the other hand a ship over five years old may be imported only in the most special circumstances. Several changes were proposed to the Commission. In was urged that the importation of any ship built outside Canada be prohibited. Again, although the discretion of the Minister was not shown to have been exercised in any unsatisfactory way, it was urged that the present law gives rise to uncertainty and that the ministerial discretion should be eliminated and a definite rule substituted for it or alternatively, that importation should be controlled by customs duty only.[28]

For the reasons already given, in dealing with the major representations for restrictions on the coasting trade, the Commission does not recommend the prohibition of the import of ships or any change in the present customs duties on them. The Commission is impressed, however, with the uncertain position in law of a person desiring to purchase or have a vessel constructed abroad to be brought into Canada. The purchaser must contract for the acquisition of the vessel before he has any legal right to bring it to Canada. The Commission therefore recommends that Section 22 be revised to eliminate the discretion of the Minister to refuse importation of any vessel less than five years old. This accords with present administrative practice and merely puts it into statutory form. The Commission recommends that the importation of a vessel more than five years old continue to be subject to the consent of the Minister.

The B.C. Towboat Owners' Association put forward a more complicated proposal.[29] They point out that under Canadian law a corporation incorporated anywhere in the British Commonwealth may own a Canadian ship

[28]Canadian Shipbuilding and Ship Repairing Association (British Columbia Member Shipyards), Victoria, B.C., Brief 103, p. 14, Brief 139, T.2446; B.C. Towboat Owners' Association, Brief 57, p. 2; Clarke Steamship Company Limited and associated companies, Brief 68, p. 10.

[29]Brief 57; see also Straits Towing Limited, Brief 117, Ex. 62; Union Steamships Ltd., Brief 93.

although all its shareholders may be aliens. Under United States law a corporation cannot own a United States ship if more than 25% of its shares are owned by aliens. United States competitors of West Coast ship operators can therefore incorporate a Canadian subsidiary company to own Canadian ships and operate them in the Canadian coasting trade although Canadian ship operators cannot incorporate a United States subsidiary to engage in United States coasting trade. It was stated that United States ship operators can therefore in effect operate in both United States and Canadian coasting trade while Canadian ship operators are confined to Canadian coasting trade. The United States operators may with the consent of the Minister of Transport, import vessels into Canada for this purpose.

The Association urged that the importation of vessels be controlled entirely by customs duties and coupled with this proposal a further proposal that a reciprocal arrangement be negotiated with the United States Government to give Canadians the same access to United States coasting trade that United States operators have to Canadian coasting trade or alternatively that the same requirements as to ownership of shares by Canadian shareholders be enacted in Canada to prevent United States subsidiary companies from engaging in the coasting trade. The Association finally urged that if these two recommendations could not be adopted the importation of ships should be prohibited.

The Commission cannot base any recommendation on the negotiation of the reciprocal arrangement advocated. It would be necessary apparently to induce the United States to adopt a new policy that is a radical departure from its present shipping law and no such change could be expected. The Commission does not recommend that Canadian law be changed to require that any percentage of shares in a corporation owning a Canadian ship must be held by Canadian citizens in their own right. To do so Canada would have to abbrogate the British Commonwealth Merchant Shipping Agreement, which establishes uniform conditions as to ownership of British ships throughout the Commonwealth. Moreover, unless British ships registered in other parts of the Commonwealth were also to be excluded from the coasting trade, a proposal which the Commission has already rejected, the amendment would be ineffective to accomplish the Association's object, since vessels owned by the United States subsidiaries could be registered in other parts of the Commonwealth and acquire status as British ships. Further, the participation in the coasting trade of vessels owned by Canadian subsidiaries of United States companies is but an example of a much larger question as to investment of United States capital in Canadian industry generally. The Commission does not believe that conditions in the coasting trade warrant a special policy.

Allocation of Cargoes

It was urged upon the Commission that all Crown-owned cargoes shipped in coasting trade should be allocated to Canadian vessels.[30] A second proposal was that a definite proportion of all coasting trade cargoes, whether owned by the Crown or privately owned, should be allocated to smaller vessels.[31]

As to the first of these suggestions, the Commission is inclined to the view that its sponsors thought that the amount of government-owned cargo was not large. Government cargoes in fact constitute a large part of the coasting trade. Almost every bushel of wheat that leaves the Lakehead by water is the property of the Canadian Wheat Board, a Crown corporation. In any event the reasons already given for rejecting the proposal that the whole of the coasting trade be confined to Canadian vessels are fully applicable to this proposal to confine the commercial operations of the Crown as a shipper in coasting trade to Canadian vessels. The conclusions this Commission has reached as to the advantages of competitive forces in cheapening transport and as to the benefit to the economy as a whole apply equally to the transport of government-owned cargoes and privately-owned cargoes.

As to the second proposal, the allocation of a proportion of all cargoes to smaller vessels does not appear to be necessary. In many instances the depth of the water, the size of the port, harbour facilities, amount of cargo shipped, quality and price of service and similar practical considerations operate in favour of such *petite navigation* and no laws are required to reinforce these natural advantages. The completion of the Seaway will not deprive these vessels of the essential role they play in the coasting trade. Moreover, the administrative procedures required to carry out such a plan would be extremely burdensome. Allotment of space to each purchaser of goods would be necessary since in general it is a purchaser who determines the mode of shipment. Allotment of a quota to each operator would be required. A system of inspection and verification with penalties to enforce the allocation would be needed. Such extensive regulation would impart rigidity into the pattern of much of the trade, reducing the benefits to be drawn from competition and tending to slow up technological evolution and to reduce efficiency. The possible advantages do not outweigh the substantial disadvantages sufficiently to warrant the adoption of this policy.

Government Loans to Assist Small Ship Construction

The Commission was urged to recommend that government action be taken to make readily available loans for the construction of *goélettes* and cargo carrying schooners of the types that operate along the north shore of

[30]Capt. Roger Desgagnés, Saint-Joseph-de-la-Rive, County of Charlevoix, Quebec, Brief 9; Newfoundland Canada Steamships Limited, Brief 132, Ex. 33, T.1244-1275.

[31]Capt. Roger Desgagnés, above.

the St. Lawrence and in Newfoundland waters.[32] The Commission is impressed with the difficulties which attend the owners of these ships in obtaining loans to finance their construction. Normal commercial credit facilities may not be readily adaptable to this type of financing. The Industrial Development Bank appears, however, to have been established (Chapter 151, R.S.C. 1952) to meet such needs. Its authority includes the power to lend money to finance the building, alteration or repair of ships or vessels. The Commission recommends that the Bank give serious study to the needs of the operators of small ships in the coasting trade to ensure that adequate credit facilities are properly available to them.

Labour Relations

The Commission was urged to recommend that legislation be enacted to regulate the internal government of trade unions, to revise collective bargaining procedures,[33] to apply the federal Industrial Relations and Disputes Investigation Act to the shipbuilding industry,[34] to impose compulsory minimum wage and maximum working hours in small coasting vessels[35] and to require a labour representative to be appointed to the Canadian Maritime Commission.[36]

The first two of these proposals raise general questions of policy in labour legislation in matters not peculiar to the coasting trade. They should be dealt with as such and not as a by-product of an investigation directed at another target. As to shipyards, they are presently subject to provincial labour relations legislation. This is in accordance with the pattern of such legislation in Canada whereby local undertakings are not in general subject to federal control in labour matters. Apart from legal constitutional questions that might arise there appears to be no sufficient reason why the general pattern should be departed from in the case of shipyards any more than other local undertakings.

The Commission cannot agree that minimum wage and maximum working hours should be imposed on all smaller vessels operating in the coasting trade. These vessels are frequently operated by family groups under informal employment arrangements in which the persons on board are more in the nature of members of a syndicate. Further, many of these vessels also engage in fishing under profit sharing and other similar schemes of remuneration which this type of regulation would entirely disrupt. The proposed recommendation would put many of these smaller vessels now rendering useful service, particularly in Newfoundland and St. Lawrence waters, out of business.

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[32]Capt. Roger Desgagnés, Saint-Joseph-de-la-Rive, County of Charlevoix, Quebec, Brief 9.
[33]Union Steamships Limited, Vancouver, Brief 115, Ex. 57, p. 5, T.2307-70.
[34]Canadian and Catholic Confederation of Labour and National Metal Trades Federation, Montreal, Brief 101, p. 81.
[35]Canadian Congress of Labour, Ottawa, Brief 75, p. 7.
[36]Canadian and Catholic Confederation of Labour and National Metal Trades Federation, Montreal, Brief 101.

The Commission does not agree with the proposal that a labour representative on the Canadian Maritime Commission is essential. Boards set up to function on general policy in wide fields cannot have representatives of every interest that may be affected by their operations. The functions of the Canadian Maritime Commission extend over all shipping problems. Only a small proportion of these require consideration of labour problems. The Canadian Maritime Commission does not therefore, seem to be a body that calls for a representative appointment of this nature. Moreover the Canadian Maritime Commission is itself advised by numerous advisory committees which include an advisory labour panel.

Free Ports

The establishment of two separate free ports, one at Trois-Rivières[37] and one at a port to be established on the Burin Peninsula in Newfoundland,[38] was proposed to the Commission. The operation of free ports is essentially for transhipment or processing, free of customs inconveniences, of cargoes in international trade. Such free ports might contribute something to coasting trade by providing a depot from which goods would move into coasting trade but the considerations of weight governing their establishment are primarily concerned with international trading. Moreover, proposals for free ports, their number and location in competing Canadian centres, have been extensively studied by government departments which have also studied the experience at free ports in other countries. For these reasons, this Commission does not consider it would be appropriate to make any recommendation.

Tolls and Charges for all Port and Canal Facilities

Parliament in enacting the St. Lawrence Seaway legislation has provided for the charging of tolls to meet the costs of construction and maintenance of the new facilities. The Canadian Pacific Railway Company submitted that vessels using all canals or other shipping facilities constructed at any time by public monies should be required to pay tolls and charges on the ground that, to the extent that these transportation facilities are made available without charge, shipping as a form of transport is being subsidized in its competition with the railways.[39] It was said that the railway companies pay fully for the costs of the rights of way, terminals and other facilities which they use in the operations of the railway and also pay local taxes.

An evaluation of the C.P.R.'s contention would raise broad questions of public policy in relation to highways and air transportation facilities as well as railways and water transport facilities. All of these have over the years

[37]Corporation of the City of Trois-Rivières, Brief 110, p. 8.

[38]Newfoundland Transportation Co. Ltd., St. John's, Newfoundland, Brief 4; Joint Councils of Burin District, Brief 72, pp. 3-4, T. 1082.

[39]Canadian Pacific Railway Co., Brief 87.

received very substantial public subsidies in money and public lands or in other forms. It is well known that the public aid granted to various forms of transportation in the past has been based not on the concept of equal treatment for all transportation agencies, but rather upon consideration of what forms of public investment in aids to transportation might best contribute from time to time to the general economic development of Canada. The proper scope and apportionment of public expenditure to assist in the creation and maintenance of facilities for all the different kinds of transportation was and is a legitimate and important subject for public discussion. It cannot have been intended, however, that this Commission, as a by-product of an inquiry into current problems relating to the coasting trade, should inquire into all problems of inequalities in the whole field of transportation. Such an inquiry would involve consideration of all arrangements for public assistance to transportation media by land, sea or air since the first facilities were established in this country. It would require an evaluation of the alleged inequalities and of the extent to which the economy has adjusted to them if they exist, and a weighing of the relative types of compensatory action in this whole broad field. The Commission makes no recommendation.

Additional Government Agencies

Several recommendations were made to the Commission suggesting the establishment of new or additional government agencies relating to transportation. One of these, the establishment of a single regulatory body, has been dealt with in Chapter X.

The establishment of an Atlantic Provinces Shipping Board with power to deal fully with all situations properly within Canadian control in both coastal and deep-sea shipping was urged.[40] The functions of the proposed regulatory body were not made clear to the Commission. To the extent that it would be to concern itself with deep-sea shipping the proposal is outside the terms of reference of the Commission. As far as coasting trade is concerned it does not seem that regional problems can be separated so distinctly from national problems that the establishment of a separate regional controlling agency can be justified. If such separation cannot be made, then obviously, if regulatory bodies are to be established, the existence of two —a national and a regional one—would lead to conflict and confusion. The Commission does not adopt this recommendation.

The establishment of an advisory body on shipping was advocated.[41] This proposal is based on a misconception since such an agency now exists in the Canadian Maritime Commission which in turn consults many advisory committees.

[40]Kent Lines Limited, Brunswick Motors Ltd., and Irving Pulp and Paper Ltd., Brief 129, Ex. 164.
[41]Montreal Trades and Labour Council, Brief 153, T.3653; Quebec Federation of Labour, Brief 155, T.3631.

Extension of Existing Regulation

A request was put forward on behalf of the residents of Manson's Landing in British Columbia that the cargo and passenger services from it to Vancouver be regulated in the public interest.[42] Machinery exists for this regulation under Part III of the Transport Act. The information furnished to the Commission is not adequate for it to form an opinion as to the advisability of such regulation. It accordingly makes no recommendation but has drawn the representations and material supporting them to the attention of the Minister of Transport.

Withdrawal of Income Tax Exemption to Non-resident Operators

The Income Tax Act exempts from taxation income of a non-resident person earned in Canada from the operation of a ship if the country where he resides grants substantially similar relief to persons resident in Canada. Reciprocal arrangements exist between Canada and, among other countries, the United Kingdom and the United States. It was proposed that revenue earned by non-Canadian ships in Canada's coasting trade, should be taxed in this country.[43] The difference in the incidence of taxation has already been considered. The reciprocal arrangement between Canada and the United States enables Canadian vessels to trade in and out of United States ports in international trade without incurring tax liability. The provision also serves a major taxation purpose by avoiding difficulties in income tax administration and eliminating double taxation. It is a standard provision in a great majority of international tax conventions. The Commission does not recommend the proposal.

Exemption of Ship Operators from Combines Investigation Act

Certain shipowners proposed that the Combines Investigation Act should not apply to coasting shipping so that ship operators could reach agreements as to services to be supplied and freight rates.[43] This practice is not uncommon in international trade. As to coasting trade, a Royal Commission in 1923 found that there was a combine in the operation of shipping on the Great Lakes which led to an enhancement of insurance charges and freight rates. In the light of this experience, the Commission does not feel that there are any special circumstances in coasting shipping to justify it being accorded different treatment within the present framework of Combines legislation. It therefore makes no recommendation.

[42]Manson's Landing Community Activities Committee, Cortes Island, B.C., Brief 116, T.2294-5.
[43]Union Steamships Ltd., Vancouver, Brief 93, p. 8.

APPENDIX I

COMMISSION

appointing

THE HONOURABLE MR. JUSTICE W. F. SPENCE, ET AL

Commissioners under Part I of the Inquiries Act to inquire into the coastal trade of Canada.

DATED ..... 1st March, 1955.

RECORDED ..... 6th April, 1955.

Film 22 Document 169.

(sgd.) H. W. Doyle

FOR DEPUTY REGISTRAR GENERAL OF CANADA.

Refer. No. 146131

(sgd.) Vincent Massey

CANADA

[SEAL]

(sgd.) F. P. Varcoe
DEPUTY ATTORNEY GENERAL,
CANADA.

ELIZABETH THE SECOND, by the Grace of God of the United Kingdom, Canada and Her other Realms and Territories QUEEN, Head of the Commonwealth, Defender of the Faith.

TO ALL TO WHOM these Presents shall come or whom the same may in anywise concern,

GREETING:

WHEREAS representations have been received respecting the coasting trade of Canada, including the coasting trade on the Great Lakes, and that it is deemed expedient in the public interest to inquire into the matters involved, in order that all questions within the jurisdiction of Parliament, including questions with respect to the provisions of Part XIII of the Canada Shipping Act, Coasting Trade of Canada, arising out of the transportation by water, or by land and water, of goods and passengers from one place in Canada to another place in Canada, including the Great Lakes, may be inquired into and reported upon.

AND WHEREAS it is expedient and Our Governor in Council has, by Order P.C. 1955-308 of the first day of March in the year of Our Lord one thousand nine hundred and fifty-five (copy of which is hereto annexed) authorized the appointment under Part I of the Inquiries Act, Chapter 158 of the Revised Statutes of Canada, 1952, of our Commissioners therein and hereinafter named to inquire into and report upon all questions within the jurisdiction of Parliament, including questions with respect to Part XIII of the Canada Shipping Act, Coasting Trade of Canada, arising out of the transportation by water, or by land and water, of goods and passengers from one place in Canada to another place in Canada, including the Great Lakes, and upon relevant matters which may in the course of the Inquiry arise or develop and which, in the opinion of the Commissioners, should be included within the scope of the Inquiry and Report and, without restricting the generality of the foregoing, in particular to inquire into and report upon the following:

(a) the relationship of the coasting trade of Canada, including the Great Lakes, to Canadian shipping and ship building, and the effect on such shipping and ship building of the participation in the coasting trade of Canada, including the Great Lakes, of ships or other marine craft registered or built outside of Canada;

(b) the probable effects of the development of the St. Lawrence Seaway upon the coasting trade of Canada, including the Great Lakes;

(c) the relationship of the coasting trade of Canada, including the Great Lakes, to the domestic and international trade of Canada and to Canada's external relations; and the effect of the participation in the coasting trade of Canada, including the Great Lakes, by ships or other marine craft registered or built outside of Canada upon the domestic and international trade of Canada, and Canada's external relations; and

(d) the necessity, if any, of establishing different policies and prescribing special conditions with respect to the coasting trade of Canada, including the Great Lakes, applicable to particular parts of Canada.

NOW KNOW YE that by and with the advice of Our Privy Council for Canada, We do by these Presents nominate, constitute and appoint the HONOURABLE MR. JUSTICE W. F. SPENCE, of The High Court of Justice for Ontario, of the City of Toronto, in the Province of Ontario; W. N. WICKWIRE, ESQUIRE, Barrister at Law, of the City of Halifax, in the Province of Nova Scotia; and MARCEL BELANGER, ESQUIRE, Chartered Accountant, of the City of Quebec, in the Province of Quebec, to be Our Commissioners to hold and conduct such inquiry.

TO HAVE, HOLD, EXERCISE and ENJOY the said office, place and trust unto you the said W. F. SPENCE, W. N. WICKWIRE, and MARCEL BELANGER, together with the rights, powers, privileges and emoluments unto the said office, place and

trust of right and by law appertaining, and as are more particularly set out in the said Order in Council, during Our pleasure.

AND We do hereby authorize Our said Commissioners

(i) to adopt such procedure and methods as they may deem expedient for the conduct of the Inquiry and to alter or change the same from time to time;

(ii) to engage the services of such technical advisers, clerks, reporters and assistants as they may deem necessary or advisable at rates of remuneration and reimbursement of expenses to be approved by the Treasury Board.

AND We do hereby require all government departments to afford to Our said Commissioners such assistance and co-operation as may be required in the matter of the said Inquiry.

AND We do hereby require and direct Our said Commissioners to report to Our Governor in Council the result of their investigation.

AND We do further appoint the said W. F. SPENCE, to be Chairman of Our said Commissioners.

IN TESTIMONY WHEREOF We have caused these Our Letters to be made Patent and the Great Seal of Canada to be hereunto affixed.

WITNESS; Our Right Trusty and Well-beloved Counsellor, Vincent Massey, Member of Our Order of the Companions of Honour, Governor General and Commander-in-Chief of Canada.

AT OUR GOVERNMENT HOUSE, in Our City of Ottawa, this First day of March in the year of Our Lord one thousand nine hundred and fifty-five and in the Fourth year of Our Reign.

BY COMMAND,
(sgd.) C. Stein
UNDER SECRETARY OF STATE.

P.C. 1955-308

Certified to be a true copy of a Minute of a Meeting of the Committee of the Privy Council, approved by His Excellency the Governor General on the 1st March 1955.

The Committee of the Privy Council have had before them a report from the Minister of Transport, submitting:

That representations have been received respecting the coasting trade of Canada, including the coasting trade on the Great Lakes, and that it is deemed expedient in the public interest to inquire into the matters involved, in order that all questions within the jurisdiction of Parliament, including questions with respect to the provisions of Part XIII of the Canada Shipping Act, Coasting Trade of Canada, arising out of the transportation by water, or by land and water, of goods and passengers from one place in Canada to another place in Canada, including the Great Lakes, may be inquired into and reported upon.

The Committee, therefore, on the recommendation of the Minister of Transport, advise that:

(1) a Commission do issue, pursuant to Part I of the Inquiries Act, appointing The Honourable Mr. Justice W. F. Spence, of the High Court of Justice for Ontario, of the City of Toronto in the Province of Ontario, as Chairman, W. N. Wickwire, Barrister at Law, of the City of Halifax, in the Province of Nova Scotia; and
Marcel Bélanger, Chartered Accountant, of the City of Quebec in the Province of Quebec,

as Commissioners to inquire into and report upon all questions within the jurisdiction

of Parliament, including questions with respect to Part XIII of the Canada Shipping Act, Coasting Trade of Canada, arising out of the transportation by water, or by land and water, of goods and passengers from one place in Canada to another place in Canada, including the Great Lakes, and upon relevant matters which may in the course of the Inquiry arise or develop and which, in the opinion of the Commissioners, should be included within the scope of the Inquiry and Report and, without restricting the generality of the foregoing, the Commissioners shall inquire into and report upon the following matters:

(a) the relationship of the coasting trade of Canada, including the Great Lakes, to Canadian shipping and ship building, and the effect on such shipping and ship building of the participation in the coasting trade of Canada, including the Great Lakes, of ships or other marine craft registered or built outside of Canada;

(b) the probable effects of the development of the St. Lawrence Seaway upon the coasting trade of Canada, including the Great Lakes;

(c) the relationship of the coasting trade of Canada, including the Great Lakes, to the domestic and international trade of Canada and to Canada's external relations; and the effect of the participation in the coasting trade of Canada, including the Great Lakes, by ships or other marine craft registered or built outside of Canada upon the domestic and international trade of Canada, and Canada's external relations; and

(d) the necessity, if any, of establishing different policies and prescribing special conditions with respect to the coasting trade of Canada, including the Great Lakes, applicable to particular parts of Canada;

(2) the powers hereby conferred on the said Commissioners may be exercised by any two of the said Commissioners;

(3) the said Commissioners be authorized to adopt such procedure and methods as they may deem expedient for the conduct of the Inquiry and to alter or change the same from time to time;

(4) the said Commissioners be authorized to engage the services of such technical advisers, clerks, reporters and assistants as they may deem necessary or advisable at rates of remuneration and reimbursement of expenses to be approved by the Treasury Board;

(5) the said Commissioners be granted travelling expenses and a living allowance in such amount as may be approved by the Treasury Board, while absent from their place of residence and engaged in the conduct of the said Inquiry;

(6) all government departments afford to the said Commissioners such assistance and co-operation as may be required in the matter of the said Inquiry;

(7) the said Commissioners submit their report to the Governor in Council; and

(8) the expenses of and incidental to the said Inquiry be paid out of money appropriated by Parliament.

R. B. BRYCE,
Clerk of the Privy Council.

APPENDIX II

List of Briefs

Briefs 1—112 inclusive were published in 4 separate volumes. They are indicated in this index as B-1, B-2, etc. (Brief 1, Brief 2, etc.). Subsequent briefs must be sought in transcript, references to which are given thus: T.4075 means page 4075 of the transcript of public hearings.

Where briefs were presented or explained in public hearings, references are also given to these passages in the transcript.

Alberta Federation of Agriculture	Edmonton	B-119	Ex. 64	T.2506
Alberta, Province of, (Department of Agriculture)	Edmonton	B-2		
Alberta, Province of (additional submission)	Edmonton	B-126	Ex. 162	T.4748
Algoma Steel Corporation Ltd.	Sault Ste. Marie, Ont.	B-106		T.4414
Alport, Frederic	Orillia, Ont.	B-137		T.4435
Aluminum Company of Canada Ltd.	Montreal	B-41		T.3282
Anticosti Shipping Company	Montreal	B-19		T.3145
Atlas Steels Limited	Welland, Ont.	B-33		T.4652
Bathurst Mining Corporation Ltd.	Toronto	B-40		
Bowater's Newfoundland Pulp and Paper Mills Limited	Corner Brook, Nfld.	B-17		T.697
Bowater Steamship Co. Ltd. (submitted on their behalf by Furness, Withy & Co. Ltd., Montreal, P.Q.)	London, England	B-14		
Branch Lines Limited	Montreal	B-78		T.4278
British Columbia, Province of	Victoria	B-111		T.1917
British Columbia Loggers' Assoc.	Vancouver	B-59		T.2268, 5412
British Columbia Lumber Manufacturers Association; Consolidated Red Cedar Shingle Association of B.C.; The Plywood Manufacturers' Association of B.C.	Vancouver	B-55		T.2178, 5412
British Columbia Towboat Owners' Association	Vancouver	B-57		T.2122, 2431
British Shipping, General Council of	London, England	B-26		
British Yukon Ocean Services Ltd.	Vancouver	B-98		T.2240
Burin District, Joint Councils of	Burin, Nfld.	B-72		T.1076
Burrard Dry Dock Company Limited	Vancouver	B-139		T.2446
Cabot Carbon of Canada Ltd.	Sarnia, Ont.	B-8		
Canada Steamship Lines Ltd.	Montreal	B-80		T.3790
Canada Steamship Lines Ltd. (additional submission)	Montreal	B-140	Ex. 95	T.3790
Canada Steamship Lines Ltd. (additional submission)	Montreal	B-161		T.4925

Canada Steamship Lines Ltd. (additional submission)	Montreal	B-163	T.4968
Canada Steamship Lines Ltd. (additional submission)	Montreal	B-171	T.5189, 5845
Canadian Atlantic Fishing Assoc.	Halifax	B-141	T.1342
Canadian Blower & Forge Co. Ltd.	Kitchener, Ont.	B-43	T.4795
Canadian Car & Foundry Co. Ltd.	Montreal	B-1	
Canadian and Catholic Confederation of Labour and National Metal Trades Federation	Montreal	B-101	T.105
Canadian Congress of Labour	Ottawa	B-75	T.65
Canadian Federation of Agriculture	Ottawa	B-127 Ex. 161	T.4663
Canadian Federation of Agriculture (additional submission)	Ottawa	B-172	T.5245, 5430
Canadian Industrial Preparedness Association	Montreal	B-52	T.3104
Canadian Industrial Traffic League Inc.	Toronto	B-69	T.326
Canadian Marconi Company	Montreal	B-88	T.3242
Canadian Maritime Transport Workers' Assoc.	Montreal	B-51	
Canadian National Railways	Montreal	B-92	T.8
Canadian National Railways (additional submission)	Montreal	B-142	T.4084, 5636
Canadian Pacific Railway Company	Montreal	B-87	T.28
Canadian Pacific Railway Company (additional submission)	Montreal	B-143	T.3952, 5610
Canadian Pulp and Paper Assoc.	Montreal	B-71	T.3664
Canadian Shipbuilding and Ship Repairing Association	Ottawa	B-82	T.216
Canadian Shipbuilding and Ship Repairing Association (additional submission)	Ottawa	B-166	T.5060, 5711
Canadian Shipbuilding and Ship Repairing Association, British Columbia Member Shipyards of	Victoria	B-103	T.1943
Canadian Shipowners Association	Ottawa	B-38	T.289, 2263
Canadian Shipowners Association (additional submission)	Ottawa	B-169	T.5155, 5900
Canadian Shipping and Marine Engineering News	Toronto	B-12	T.4597
Canadian Shipping and Marine Engineering News (additional submission)	Toronto	B-144	T.4600, 5693
Canadian Vickers Limited	Montreal	B-81	T.4193
Canadian Vickers Limited (additional submission)	Montreal	B-164	T.5039
Canadian Westinghouse Co. Ltd.	Hamilton	B-60	T.4538
Cap-de-la-Madeleine, Cité de	Cap-de-la Madeleine, P.Q.	B-145	T.3055
Clarke Steamship Co. Ltd.; Terra Nova Steamship Co. Ltd.; Gulf Ports Steamship Co. Ltd.; La Cie de Transport du Bas St-Laurent Ltée; Magdalen Islands	Montreal	B-68	T.3437, 5503

Transportation Co. Ltd.; La Traverse Rivière-du-Loup-St-Siméon, Ltée			
Collingwood Shipyards Limited and Town of Collingwood	Collingwood, Ont.	B-63	T.4452, 4498
Collingwood, Town of	Collingwood, Ont.	B-138	T.4445
Consolidated Paper Corp. Ltd.	Montreal	B-37	T.3115
Constantine Lines Limited	Middlesbrough, England	B-66	T.802
Crane Limited	Montreal	B-74	T.3215
Darling Brothers Ltd.	Montreal	B-5	T.3222
Davie Shipbuilding Limited	Lauzon, P.Q.	B-79	T.2943
Davie Shipbuilding Limited (additional submission)	Lauzon, P.Q.	B-136	T.2917, 4928
Davie & Sons Ltd., Geo. T.	Lauzon, P.Q.	B-135	T.2883
Desgagnés, Capt. Roger	St-Joseph-de-la Rive (Charlevoix), P.Q.		
Dingwall Shipping Co. Ltd.	Halifax	B-85	
Dingwall Shipping Co. Ltd. (additional submission)	Halifax	B-167 Ex. 207	T.5057
Dominion Marine Association	Toronto	B-28	T.341
Dominion Marine Association (additional submission)	Toronto	B-146 Ex. 7	T.353
Dominion Marine Association (additional submission)	Toronto	B-147	T.3690
Dominion Marine Association (additional submission)	Toronto	B-148	T.3947
Dominion Marine Association (additional submission)	Toronto	B-160 Ex. 165	T.4921
Dominion Marine Association (additional submission)	Toronto	B-168	T.5115, 5660
Dominion Steel & Coal Corporation Ltd.	Sydney, N.S.	B-149	T.1098
Dundee, Perth and London Shipping Co. Ltd.	Dundee, Scotland	B-97	
Ecole de Marine de Rimouski	Rimouski, P.Q.	B-10	T.3015
Fairbanks-Morse Co. Limited, Canadian	Montreal	B-83	T.3267
Federated Co-operatives Limited	Saskatoon	B-45	
Ferguson Industries Limited	Pictou, N.S.	B-102	T.1276
Fisheries Council of Canada	Ottawa	B-104	
Fort William, City of	Fort William, Ont.	B-46	T.1605, 1682
Foster Wheeler Limited	St. Catharines, Ont.	B-7	T.4841
Furness, Withy & Co. Ltd.	Montreal	B-13	T.856
Furness, Withy & Co. Ltd. (additional submission)	Montreal	B-170	T.5185, 5390
Gillespie-Munro Limited	Montreal	B-91	T.3395
Grand Manan Board of Trade	Grand Manan, N.B.	B-24	
Gypsum, Lime and Alabastine Canada Ltd.	Toronto	B-94	T.4804

Hamilton Chamber of Commerce	Hamilton	B-61	T.4503
Hamilton Chamber of Commerce (additional submission)	Hamilton	B-128 Ex. 154	T.4504
Hudson Bay Route Association	Saskatoon	B-58	
Hudson Bay Route Association (additional submission)	Saskatoon	B-124 Ex. 69	T.2740
Industrial Union of Marine and Shipbuilding Workers of Canada, Local No. 3 and Associated Groups	Saint John, N.B.	B-16	T.1513
Inglis Co. Ltd., John	Toronto	B-99	T.4855
Inglis Co. Ltd., John (additional submission)	Toronto	B-151	T.4857
Interprovincial Farm Union Council	Saskatoon	B-112	T.2715
Iron Ore Company of Canada	Montreal	B-108	T.3425
Iron Ore Transport Co. Ltd.	Montreal	B-109	T.3432
Island Tug & Barge Limited and Young & Gore Tugboats Ltd.	Victoria	B-54	T.2022
Kennedy & Sons Ltd., William	Owen Sound, Ont.	B-18	T.4482
Kent Lines Limited; Brunswick Motors Limited; Irving Pulp & Paper Ltd.	Saint John, N.B.	B-129 Ex. 164	T.4481
Kent Lines Limited; Brunswick Motors Limited; Irving Pulp & Paper Ltd. (additional submission)	Saint John, N.B.	B-173	T.5254, 5374
Labour Progressive Party, B.C.	Vancouver	B-118 Ex. 63	T.2489
Lunenburg Foundry & Engineering Ltd.	Lunenburg, N.S.	B-130 Ex. 34	T.1299
MacMillan & Bloedel Limited	Vancouver	B-42	T.2200
Manitoba Federation of Agriculture and Co-operation	Winnipeg	B-125 Ex. 70	T.2765
Manitoba, Province of	Winnipeg	B-77	T.1761, 5563
Manson's Landing Community Activities Committee	Manson's Landing, B.C.	B-116	T.2294
Marine Industries Limited	Sorel, P.Q.	B-152	T.4311
Marine Industries Limited (additional submission)	Sorel, P.Q.	B-165	T.5052, 5885
Maritime Marine Workers' Federation (C.C.L.)	Halifax	B-15	T.1160
Maritimes Transportation Commission	Moncton, N.B.	B-100	T.1088, 1431, 5397
Markland Shipping Co. Ltd.	Liverpool, N.S.	B-131 Ex. 35	T.1349
McAvity & Sons Ltd., T.	Saint John, N.B.	B-32	
Midland Shipyards Limited and Town of Midland, Ont.	Midland, Ont.	B-64	T.4452, 4498
Montreal, St. Lawrence Municipal Bureau of	Montreal	B-84	T.3076
Montreal Trades and Labour Council	Montreal	B-153	T.3648
National Association of Marine Engineers of Canada, Inc.	Vancouver	B-3	T.2370, 2429
National Council of Shipyard Unions	Halifax	B-107	T.1553
Newfoundland Canada Steamships Ltd.	Halifax	B-132 Ex. 33	T.1244
Newfoundland, Committee on Coastal Shipping of	St. John's, Nfld.	B-76	T.956

Newfoundland, Committee on Coastal Shipping of (additional submission)	St. John's, Nfld.	B-162 Ex. 236	T.5941
Newfoundland Fluorspar Limited	St. Lawrence, Nfld.	B-48	T.783
Newfoundland, Province of	St. John's, Nfld.	B-56	T.503, 5334
Newfoundland-Great Lakes Steamships Limited	Toronto	B-70	T.901, 5930
Newfoundland Transportation Co. Ltd.	St. John's, Nfld.	B-4	
Nicholson, George	Victoria	B-20	T.2081
North Star Cement Limited	Corner Brook, Nfld.	B-11	
Ontario Mayors and Reeves, Assoc. of	Toronto	B-53	
Ont. Shipping Intelligence Publishing Co.	Toronto	B-95	T.4822
Owen Sound Chamber of Commerce	Owen Sound, Ont.	B-27	T.4406
Parrsboro and District Board of Trade	Parrsboro, N.S.	B-31	T.1229
Peacock Brothers Limited	Montreal	B-23	
Plymouth Cordage Co. of Canada Ltd.	Welland, Ont.	B-86	
Port Arthur Chamber of Commerce	Port Arthur, Ont.	B-35	T.1607
Port Arthur Shipbuilding Co. Ltd.	Port Arthur, Ont.	B-73	T.1639
Prince Edward Island, Province of	Charlottetown	B-154	T.1350
Project Sales Ltd.	Montreal	B-105	T.3187
Quebec Board of Trade	Quebec	B-89	T.2811
Quebec Board of Trade (additional submission)	Quebec	B-133 Ex. 71	T.2811
Quebec Federation of Labour	Montreal	B-155	T.3622
Rimouski Marine School	Rimouski, P.Q.	B-10	T.3015
Saguenay Terminals Ltd.	Montreal	B-62	T.3330
Saint John Dry Dock Company Ltd.	Saint John, N.B.	B-156	T.1464
Saskatchewan Farmers Union	Saskatoon	B-121 Ex. 66	T.2587
Saskatchewan, Province of	Regina	B-90	T.2507
Saskatchewan, Province of (additional submission)	Regina	B-120 Ex. 65	T.2509
Saskatchewan, Province of (Department of Agriculture)	Regina	B-21	
Saskatchewan Wheat Pool	Regina	B-122 Ex. 67	T.2602, 2741
Shaw Steamship Co. Ltd.	Halifax	B-6	
Shipbuilding Conference of the United Kingdom	London, England	B-25	T.3201
Shipping Federation of Canada	Montreal	B-65	T.3735, 5701
Shipping Federation of Canada (additional submission)	Montreal	B-157	T.3786
Simcoe County Council, Industrial Committee of, and Advisory Committee on Local Employment, Midland Area	Midland, Ont.	B-30	T.4368
St. Lawrence Corporation Limited	Trois-Rivières, P.Q.	B-159	T.3063
St. Lawrence Shipowners' Assoc. Inc.	Quebec	B-49	T.2974
St. Lawrence Shipowners' Assoc. Inc. (additional submission)	Quebec	B-158	T.2975

Straits Towing Ltd.	Vancouver	B-117	Ex. 62	T.2481
Sun Steamships Limited	Toronto	B-22		
Swainson, Neil A.	Victoria	B-113	Ex. 53	T.2105
Three Rivers, City of (See Trois-Rivières, Cité des)				
Tombs Limited, Guy	Montreal	B-44		
Toronto Board of Trade	Toronto	B-50		T.4584
Toronto Harbour Commissioners	Toronto	B-134	Ex. 155	T.4578
Trades and Labour Congress of Canada	Ottawa	B-34		T.170
Trois-Rivières, Cité des	Trois-Rivières, P.Q.	B-110		T.3026
Union Steamships Limited	Vancouver	B-93		T.2312
Union Steamships Limited (additional submission)	Vancouver	B-115	Ex. 57	T.2307
United Steelworkers of America, Local 5055	Port Arthur, Ont.	B-114		T.1706
Vancouver, New Westminster and District Metal Trades Council; Victoria & District Metal Trades Council; Shipyard General Workers' Federation	Vancouver	B-36		T.2393
Watts Limited, A. E.	Ville-St-Laurent, P.Q.	B-39		T.3231
West Point Ferries Limited	O'Leary, P.E.I.	B-29		T.1414
Windsor Chamber of Commerce	Windsor, Ont.	B-47		T.4846
Winnipeg Chamber of Commerce	Winnipeg	B-96		T.2657
Winnipeg Chamber of Commerce (additional submission)	Winnipeg	B-123	Ex. 68	T.2657
Zwicker & Company Limited	Lunenburg, N.S.	B-67		T.1329

APPENDIX III

List of Exhibits

Most of the exhibits numbering 1-257 were collected and bound in six separate volumes, entitled Appendix I, II, etc., and are referred to in this index as appearing in App. I, p. 10; App. V, p. 913, etc.

Certain exhibits were read into the transcript and were not included in the bound Appendix. Other exhibits such as publications and maps were not duplicated. In these cases references are given thus: T.4958, meaning page 4958 of the transcript of public hearings.

1. Queen's Commission and Terms of Reference—March 1, 1955, P.C. 1955-308, March 1, 1955—(setting up Royal Commission on Coasting Trade).
   —App. I, p.1
2. Canadian Shipbuilding and Ship Repairing Association.
   Report on "Revision of Federal Transportation Policy" prepared for President of U.S.A. by Presidential Advisory Committee on Transport Policy and Organization—April 1955. (Recommended greater reliance on competitive force in transportation, and maintenance of strong common carrier system for expanding economy and national security.) —App. I, p.10
3. Canadian and Catholic Confederation of Labour, and National Metal Trades Federation.
   Letter from Hon. Ian A. MacKenzie, Minister of Veterans' Affairs to the "Shipyard Workers of Vancouver"—June 4, 1945—(with regard to postwar shipbuilding in Canada).
4. Canadian Shipbuilding and Ship Repairing Association.
   List of orders for commercial vessels on hand in shipyards, May 1, 1955.
   —App. I, p.51
5. Canadian Shipowners Association.
   List of member companies. —App I, p.53
6. Canadian Industrial Traffic League.
   List of member companies. —App. I, p.55
7. Dominion Marine Association.
   Supplementary brief submitted at first Ottawa Hearings outlines Association's aims, lists member and associate companies and their gross tonnage, describes navigation schools operated by Association, and includes statistical data showing:
   (1) variability of ocean tramp freight rates over time, and between routes and cargoes. (Ex. 3 & 4)
   (2) Lake freight rates on wheat, comparison of Lake rates and ocean rates. (Ex. 5 & 6)
   (3) movement of grain from Lakehead and storage on Lake ships 1945-1954. (Ex. 7 & 8)
   (4) movement of iron ore to and from Canadian Great Lakes ports in 1953. (Ex. 9) —App. I, p.56
8. Dominion Marine Association.
   Proposal for Great Lakes Treaty between U.S.A. and Canada for mutual defence (prepared by Lake Carriers' Association, Cleveland, Ohio).
   —App. I, p.81

9. Dominion Marine Association.
   Annual Report of the Lake Carriers' Association, 1954, Cleveland, Ohio. —T.366
10. Dominion Marine Association.
    (a) Report of Conference on the Operation of Dominion Legislation and Merchant Shipping Legislation—London, 1929.
    (b) Summary of Proceedings of Imperial Conference—London, 1930.
    (c) Appendices to Summary of Proceedings of Imperial Conference—London, 1930. —App. I, p.123B
11. Dominion Marine Association.
    Commonwealth of Australia Navigation Act, 1912-1953. —App. I, p.123C
12. Dominion Marine Association.
    Agreed Statement of the Law. (Deals with British Commonwealth Merchant Shipping Agreement, December 10, 1931; international law; Boundary Waters Treaty, January 11, 1909; St. Lawrence Deep Waterway Treaty, July 18, 1932; Agreement Between Canada and the United States of America for the Promotion of Safety on the Great Lakes by means of Radio, February 21, 1952; control of grain-carrying ships; Commission's terms of reference; Australian regulation of coasting trade (letter from Malleson Stewart & Co., Melbourne, Australia, June 27, 1955); U.K. Navigation Acts 1651-1849; applicable law of the United States.)
    Table comparing crew complement and basic wage rates for 10,000-ton bulk carrier, ocean-going, on United Kingdom and on Canadian registry.
    Tabulation of statistical data on vessels of Canadian registry trading on the Great Lakes. —App. I, p.124
13. Dominion Marine Association.
    Charts showing distance between points on Great Lakes; Lake Superior; Lake Michigan; Lake Huron and St. Mary's River; Lake Erie and St. Clair, Detroit and Niagara Rivers; Lake Ontario and St. Lawrence River.
    —App. I, p.145A
14. Dominion Marine Association.
    Annual Report of Great Lakes Protective Association, 1954, Cleveland, Ohio.
    —T.462
15. Dominion Marine Association.
    Two charts of statistical data on Canadian-registered vessels trading on Great Lakes, and carrying capacity of fleets of member companies—1945-1954. (Letter from Thorne, Mulholland, Howson & McPherson, Toronto.)
    —App. I, p.146
16. Government of the Province of Newfoundland.
    Statements showing class rates from Halifax, N.S. and Saint John, N.B. to Corner Brook and to St. John's, Newfoundland, effective 1954 and 1955; class rates from illustrative Canadian origins to special Newfoundland destinations and percentage increases resulting from application of rate increases to a base year compared with present rate levels. —App. I, p.151
17. Government of the Province of Newfoundland.
    Statement of all rail and rail/water class rates (March 1, 1951) compared with normal class rates from illustrative Canadian origins to specified Newfoundland destinations. —App. I, p.162
18. Government of the Province of Newfoundland.
    Statements showing history of normal all rail, rail/water and all water class rates, also resulting summer rate differential from Montreal and from Toronto to St. John's, Newfoundland.

Statement showing commodities and freight rates from Montreal to St. John's, Newfoundland, during open navigation period. —App. I, p.165

19. Government of the Province of Newfoundland.
Agreement between Canadian National Railways and Furness, Withy & Company Limited. —App. I, p.178
20. Government of the Province of Newfoundland.
Statistical data on Corner Brook shipments of Bowater's Pulp and Paper Mills Limited including incoming and outgoing cargoes 1951-54, cost of marine transportation, total sales and freight rates in 1954, and types of ships used. —App. II, p.193
21. Government of the Province of Newfoundland.
List of main industries in Newfoundland.
List of current members of Newfoundland Branch of the Canadian Manufacturers Association.
Copy of Branch's Annual Report—1955 (gives background of Confederation and its effect on industry and transportation). —App. II, p.196
22. Government of the Province of Newfoundland.
Table showing means of transport used by 8 manufacturing industries for importing raw materials. —App. II, p.213
23. Government of the Province of Newfoundland.
Number of cod fishermen operating in 1953. (Letter from Department of Fisheries, St. John's, Newfoundland to Newfoundland Associated Fish Exporters Ltd.) —App. II, p.214
24. Government of the Province of Newfoundland.
Statement of shipments of 1953 production salt codfish to and through Canadian ports and New York by Newfoundland Associated Fish Exporters Ltd. —App. II, p.216
25. Government of the Province of Newfoundland.
Montreal Shipping Company Limited Charter Party. —App. II, p.217
26. Government of the Province of Newfoundland.
Canadian National Railways Charter Party. —App. II, p.224
27. Government of the Province of Newfoundland.
A. Willard Ivers Inc., Charter Party. —App. II, p.228
28. Government of the Province of Newfoundland.
Americanized Welsh Coal Charter Party. —App. II, p.236
29. Newfoundland-Great Lakes Steamships Co.
British Commonwealth Merchant Shipping Agreement (1931) —App. II, p.248
30. Committee on Newfoundland Coastal Shipping.
Supplementary brief,
    (1) Opposes extension of Transport Act to coastal trade of Newfoundland.
    (2) Stresses Newfoundland's urgent need for a buoy boat.
    (3) Claims differences in wages paid by C.N.R. and other Newfoundland vessels not unreasonable considering types of service provided.
    (4) Includes schedule comparing wages of crews on C.N.R. operated ships in various tonnage groups with wages of unorganized crews and typical Newfoundland coasting vessels. —App. II, p.263
31. Maritime Marine Workers' Federation (C.C.L.)
Summary of assistance provided for shipbuilding and shipping industries in other maritime nations, (Argentina, Australia, Belgium, Brazil, Chile, Denmark, France, Germany, Greece, India, Italy, Japan, Netherlands, Norway, Panama, Spain, Sweden, U.K., U.S.A.) —App. II, p.281

32. Maritime Marine Workers' Federation (C.C.L.)
    (a) Letter from Rt. Hon. C. D. Howe (possibility that U.S.S.R. might place orders with Canadian shipyards for vessels, other than strategic, if price competitive).
    (b) Letter from J. C. MacKinnon to East West Export Import Co. Ltd., Vancouver. (Application for export permit of one general cargo motor ship to U.S.S.R. refused.) —App. II, p.321
33. Newfoundland Canada Steamships Limited.
    Submission entered at Halifax Hearings. —App. II, p.324
34. Lunenburg Foundry & Engineering Ltd.
    Brief submitted at Halifax Hearings. —App. II, p.329
35. Markland Shipping Company Limited.
    Submission filed at Halifax Hearings—(recommends no change in coastal trading regulations that might increase costs, strict enforcement of Section 54 of the Customs Act, and suggests that freight earned on Canadian cargoes by foreign vessels be taxable). —App. II, p.337
36. Government of the Province of Prince Edward Island.
    Maxwell Harris Company Inc., Charter Party. —App. II, p.343
37. Government of the Province of Prince Edward Island.
    Telegram addressed to Rand H. Matheson from Maxwell Harris Company Inc. (quotes rate for potatoes shipped from Maine to Florida). —App. II, p.346
38. Government of the Province of Prince Edward Island.
    Schedule of rail rates on potatoes from points in P.E.I. and N.B. to points in Quebec and Ontario indicating freight rate increases from April 7, 1948, to July 18, 1955. —App. II, p.347
39. Government of the Province of Prince Edward Island.
    Canadian Freight Association contract on agreed charges (potatoes) effective March 1, 1954, between Algoma Central and Hudson Bay Railway Company, C.N.R., C.P.R., Essex Terminal Railway Co., Wabash Railroad Co., and the P.E.I. Potato Marketing Board. —App. II, p.349
40. Government of the Province of Prince Edward Island.
    Schedule of total exports and imports shipped by rail in Prince Edward Island—1953 and 1954. —App. II, p.359
41. City of Port Arthur.
    Report of Transportation Committee on deep water situation as at Nov. 20, 1954, concerning the Canadian Lakehead (minimum depths on traffic by water as at present time, and as under "St. Lawrence Deep Waterway Plan" and "All Canadian Plan", from Montreal, and eastbound from and westbound to Lakehead; notes with reference to foreign vessels, imports, volume of cargoes and rates). —App. II, p.362A
42. City of Port Arthur.
    Transportation Report on Duluth Trip. (Report of Mr. E. G. Charnock, Chairman of Transportation Committee, member of the Canadian Lakehead delegation, on his visit to the Duluth Chamber of Commerce, April 1955.) —App. II, p.362B
43. Government of the Province of Manitoba.
    Material concerning operational costs of a Canadian laker and U.K. ocean ship between Lakehead and Montreal to be supplied by Dr. E. Solomon. —See Ex. 187

44. J. L. McDougall, Queen's University, Kingston, Ont.
Transcript corrections of the testimony given to the Commission on July 14th, 1955, in Ottawa. —App. II, p.362C
45. Topographic Map of British Columbia, 1955, Victoria, B.C.
(Places, airports, airstrips, railroads, roads, pipe lines.) —T.1960
46. General Map of the Pacific Ocean (Southeastern Asia and Australia).
(Shipyards and ship repair facilities as listed by Lloyds Register of Shipping.) —T.1962
47. B.C. Member Shipyards of the Canadian Shipbuilding and Ship Repairing Association, Victoria, B.C.
Ocean-going Merchant Ships under Construction as at June 30, 1955, by Countries. —App. II, p.363
48. B.C. Member Shipyards of the Canadian Shipbuilding and Ship Repairing Association, Victoria, B.C.
Ships in service in Coasting Trade of B.C. since 1900 by Three Major Coastwise Steamship Lines (C.P.R., C.N. Steamships, Union Steamships, Limited.) —App. II, p.365
49. B.C. Member Shipyards of the Canadian Shipbuilding and Ship Repairing Association, Victoria, B.C.
Table of Wage Rates in the Canadian Shipyards, 1955. —App. II, p.371
50. B.C. Member Shipyards of the Canadian Shipbuilding and Ship Repairing Association, Victoria, B.C.
Wage Rates in Construction and Basic Industries of B.C. —App. II, p.373
51. Nicholson, George, Victoria, B.C.
Photographs of SS. "Princess Maquinna", "Princess Norah" and "Princess of Alberni". —App. II, p.374A
52. Nicholson, George, Victoria, B.C.
Five letters (a,b,c,d,e) supporting the submission made by Mr. G. Nicholson. (Letters are from Ucluelet and Port Albion Chamber of Commerce, Tofino Chamber of Commerce, Zeballos Board of Trade, Mr. Ivan H. Clarke, Hot Springs Cove, B.C. and from Mr. W. C. Youell.) —App. II, p.375
53. Swainson, Neil A., Victoria, B.C.
Brief submitted at Victoria Hearings. —App. II, p.386
54. MacMillan & Bloedel Limited, Vancouver, B.C.
Annual Report for Year Ended Sept. 30, 1954. —App. II, p.393A
55. B.C. Lumber Manufacturers Association, Vancouver, B.C.
Annual Report, 1954. —App. II, p.393B
56. Manson's Landing Community Activities Committee, Vancouver, B.C.
Extracts from "The Campbell River Courier", August 3, 1955. —App. II, p.393C
57. Union Steamships Limited, Vancouver, B.C.
Supplementary Brief submitted at Vancouver Hearings. (Corrections to statements in other briefs, comments on other brief, request to amend the Trade Union Act in connection with the strike, excerpts from the B.C. Labour Relations Act.) —App. II, p.394
58. National Association of Marine Engineers of Canada, Vancouver, B.C.
Extract from "The Log", June, 1955. —App. II, p.408A
59. B.C. Towboat Owners' Association, Vancouver, B.C.
List of Members of the Association. —App. II, p.409
60. B.C. Towboat Owners' Association, Vancouver, B.C.
Schedule of Rates, Jan. 1946. —App. II, p.411A

61. B.C. Towboat Owners' Association, Vancouver, B.C.
Schedule of Rates, 1951. —App. II, p.411B
62. Straits Towing Limited, Vancouver, B.C.
Brief submitted at Vancouver Hearings. —App. II, p.412
63. Labour-Progressive Party, B.C. Provincial Committee, Vancouver, B.C.
Brief submitted at Vancouver Hearings. —App. II, p.418
64. Alberta Federation of Agriculture, Edmonton, Alta.
Brief submitted at Regina Hearings. —App. II, p.426
65. Government of the Province of Saskatchewan.
Submission of the Province of Saskatchewan to the Royal Commission on Transportation, Sept. 10, 1949. —T.2509
66. Saskatchewan Farmers Union, Regina.
Brief submitted at Regina Hearings. —App. II, p.438
67. Saskatchewan Wheat Pool, Regina.
Brief submitted at Regina Hearings. —App. II, p.451
68. Winnipeg Chamber of Commerce, Winnipeg.
Brief submitted at Winnipeg Hearings. —App. II, p.461
69. Hudson Bay Route Association, Winnipeg.
Letter addressed to the Royal Commission. —App. II, p.479
70. Manitoba Federation of Agriculture and Co-operation, Winnipeg.
Brief submitted at Winnipeg Hearings. —App. II, p.482
71. Chamber of Commerce of the City of Quebec.
Supplementary brief submitted at Hearings in Quebec City. (Description of shipbuilding and shipping situation at Port of Quebec including: tariff structure, labour, high top wharfage charges, port rights, recommend institution in special zone in Quebec Port of lower rates similar to Lachine Canal rates for ships 600 tons and under, port facilities, shipyards, navigation season.) —App. II, p.488A
72. Geo. T. Davie & Sons Ltd.
List of men employed in shipyard at Lauzon, Quebec—March 31, 1955, (broken down by trades). —App. III, p.489
73. Davie Shipbuilding Ltd.
Letter from American Bureau of Shipping—August 18, 1955. (Indicates possibility that giant upper lakers could be built in Europe and brought to Canada.) —App. III, p.491
74. Davie Shipbuilding Ltd.
Letter from Lloyd's Register of Shipping—September 6, 1955. (Indicates possibility that giant upper lakers could be built in Britain and brought to Canada.) —App. III, p.495
75. Corporation of the City of Three Rivers.
Statistics on Port of Three Rivers.
Table I —Fixed assets, revenues, expenditures, interest on loans, deficit and surplus accumulated 1936-1953.
Table II —Amounts invested yearly in Port of Three Rivers and four other Canadian ports 1936-1953.
Table III —Number of incoming and outgoing ocean and coastal ships and cargo tonnages 1936-1953.
Table IV—Comparative statement of fixed assets, surplus and reserves 1925-1954. —App. III, p.497
76. City of Cap de la Madeleine.
Memorandum presented to National Harbours Board—May 30, 1955 (outlining inadequacy of port and dock facilities and land approaches). —App. III, p.503

77. City of Cap de la Madeleine.
Nine photographs showing various aspects of wharf area. —App. III, p.509A
78. Canadian Industrial Preparedness Association.
List of member companies and personal members as of October 4, 1955.
—App. III, p.510
79. Canadian Industrial Preparedness Association.
List of officers and directors (including aims and objects of Association).
—App. III, p.518
80. Clarke Steamship Company Limited.
Statement showing rate changes from 1949 to 1955 using Lake Freight Association rates from Windsor and Toronto to St. John's; Clarke Steamship rates from Montreal to St. John's; rail and water rates from Windsor, London, Toronto to St. John's. —App. III, p.527
81. Clarke Steamship Company Limited.
Graph indicating fluctuations in freight rates 1949-54, (prepared from Exhibit 80).
—App. III, p.529
82. Clarke Steamship Company Limited.
Graph indicating fluctuations in ocean charter rates 1949-54. —App. III, p.530
83. Clarke Steamship Company Limited.
Statement showing retail prices in St. John's, Newfoundland, on September 20, 1955, in relation to freight rates—Montreal to St. John's. —App. III, p.531
84. Clarke Steamship Company Limited.
Statement of cargo carried by Clarke Steamship Company Limited and associated companies during 1954 in net weight tons, (including breakdown by destination of cargo to Newfoundland). —App. III, p.534
85. Clarke Steamship Company Limited.
Statement comparing breakdown of application of freight dollar on Montreal to St. John's, Newfoundland, service during 1954, for
(1) Canadian ship "SS. Novaport" and similar U.K. ship "SS. Sheldrake",
(2) for new U.K. built diesel-type vessels with 45% larger cubic capacity.
—App. III, p.535
86. Clarke Steamship Company Limited.
Statement of breakdown of application of freight dollar on Montreal to St. John's, Newfoundland, service for U.K. ship at distressed rates. —App. III, p.537
87. Canadian Pulp and Paper Association.
(1) "Reference Tables"—March 1955, containing detailed statistical material on Canadian pulp and paper industry;
(2) "Quick Facts"—basic statistics on pulp and paper industry.
—App. III, p.537A&B
88. Canadian Pulp and Paper Association.
(1) "The Pulpwood Harvest"—describes woods operation of pulp and paper industry;
(2) "From Watershed to Watermark"—describes mill operation of pulp and paper industry. —App. III, p.537C&D
89. Dominion Marine Association.
Letter from Messrs. Malleson Stewart & Co., Melbourne, Australia, to attention Mr. F. O. Gerity, September 27, 1955, (concerning Australian legislation governing coastal trade—see Exhibit 12). —App. III, p.538
90. Dominion Marine Association.
Copy of Dominion Coal Board Act—1947. —App. III, p.541A

91. Dominion Marine Association.
Copy of Canada Gazette—April 13, 1955, containing P.C. 1955-367—March 18, 1955, (under which coal subventions are paid to Dominion Coal and Steel Company on movement of coal mined in Nova Scotia). —App. III, p.541B

92. Dominion Marine Association.
Copy of Canada Gazette—May 26, 1954, containing P.C. 1954-685—May 6, 1954, (under which coal subventions are paid to Dominion Coal and Steel Company on movement of coal mined in Nova Scotia). —App. III, p.541C

93. Dominion Marine Association.
Schedule of daily operating costs, based on figures for 1951 to 1954 seasons provided by Association members, for 2 different type vessels. —App. III, p.542

94. Shipping Federation of Canada, Inc.
List of members as at December 31, 1954. —App. III, p.545

95. Canada Steamship Lines, Limited.
Supplementary submission presented by Mr. T. R. McLagan, at Montreal Hearings—October 12, 1955—and mostly read into transcript (see T.3790-3835). (Schedule comparing operating costs of Canadian ship of Hochelaga-Thunder Bay class and possible U.K. ship of comparable size.—pp. 2-4.) —App. III, p.548A

96. Canada Steamship Lines, Limited.
Financial Post statement, complete story on Company's various interests and subsidiary companies to September 14, 1955. —App. III, p.548B

97. Canada Steamship Lines, Limited.
Statement "Nature of the Relationship Between Canada's Purchases From the United Kingdom and Canada's Sales to the United Kingdom" from International Monetary Fund Yearbook—May 1955. —App. III, p.549

98. Canada Steamship Lines, Limited.
Statement "Trading and Financial Relationship of the United Kingdom with Canada—1950-1954" from D.B.S. Canadian Balance of International Payments, 1954. —App. III, p.559

99. Canada Steamship Lines, Limited.
"Montreal Harbour and the St. Lawrence Seaway"—report made to Manager of Port of Montreal and endorsed by seven inland shipping companies and Shipping Federation of Canada. (Explains that to achieve proposed 4½ to 5 cent reduction in cost of transporting grain from Lakehead to Montreal, on completion of seaway, will mean:
(a) only large Upper Lakers can be used
(b) present transhipment points will be by-passed
(c) tolls must not nullify such reduction
(d) storage and handling facilities at St. Lawrence Ports (Montreal) must be increased to prevent costly delays for lake boats.) —App. III, p.561
(Statement showing incoming and outgoing shipments of grain by rail or water through Vancouver, Churchill, and Montreal or St. Lawrence Ports, by crop year from 1949-53). —App. III, p.561

100. Canada Steamship Lines, Limited.
Map of Great Lakes System showing "Transfer Points". —T.3807

101. Canada Steamship Lines, Limited.
Statement of grain shipments received by rail and water at Montreal and other St. Lawrence elevators by crop year from 1949-53. —App. III, p.582

102. Canada Steamship Lines, Limited.
A. Map of Welland Canal (first section).
B. Map of Welland Canal (second section). —T.3814

103. Canada Steamship Lines, Limited.
Statement showing time lost by company vessels waiting to enter Welland Canal during 1955 season—April to August 31, 1955. —App. III, p.584
104. Canada Steamship Lines, Limited.
Statement showing average time taken to complete passage (upbound and downbound) by lakers and by canallers over period 1935 to 1953. —App. III, p.585
105. Canada Steamship Lines, Limited.
Graph showing average time taken to complete passage of Welland Canal by lakers, downbound. —App. III, p.588A
106. Canada Steamship Lines, Limited.
Graph showing average time taken to complete passage of Welland Canal by lakers, upbound. —App. III, p.588B
107. Canada Steamship Lines, Limited.
Graph showing average time taken to complete passage of Welland Canal by canallers, downbound. —App. III, p.588C
108. Canada Steamship Lines, Limited.
Graph showing average time taken to complete passage of Welland Canal by canallers, upbound. —App. III, p.588D
109. Canada Steamship Lines, Limited.
Statement showing annual movement of traffic through Welland Canal (total passages and cargo for each year during period 1932-1954). —App. III, p.589
110. Canada Steamship Lines, Limited.
Copy of Aeronautics Act—Air Regulations—November 23, 1954.—App. III, p.590
111. Canada Steamship Lines, Limited.
Technical paper "Modern Ore Carriers" presented by Mr. J. J. Henry to Society of Naval Architects and Marine Engineers in New York, 1955. —App. III, p.593A
112. Canada Steamship Lines, Limited.
Sketch of typical midship section of Great Lakes ore carrier. —App. III, p.594
113. Canada Steamship Lines, Limited.
Sketch of typical midship section of Great Lakes ore/grain carrier. —App. III, p.595
114. Canada Steamship Lines, Limited.
Sketch of typical midship section of ocean-going Great Lakes ore/oil carrier. —App. III, p.596
115. Canada Steamship Lines, Limited.
Graph indicating on a base of "year of build" the deadweight carrying capacity and age of existing Great Lakes fleet. —App. III, p.597
116. General Council of British Shipping.
Communication August 22, 1955, containing replies to questions submitted by Royal Commission on Coasting Trade.

Number, tonnage, routes and cargo of U.K. ships engaged in Canadian coasting trade.

U.K. shipping for Canadian account contributes $40 million per year towards U.K. balance of payments.

U.K. shipping spent $28 million in Canada for fuel, repairs, provisions, etc. in 1952.

Completion of Seaway will not mean increased operations of U.K. ocean-going tramps in coastal trade because of limited draught in Seaway.

Fact that U.K. ships (liners and tramps) operating regularly in Canadian coastal trade until end of navigation season are profitably employed elsewhere (Mediterranean) in winter enable them to provide competitive rates during open season.

Appendix I—table showing wage rates on U.K. vessels engaged in Canadian trade (including bonus).

Appendix II—table showing number and tonnage of U.K. and foreign vessels trading U.K. coast in 1954.

Appendix III—resolution against "Flag Discrimination" adopted by International Chamber of Commerce, Tokyo—May 1955.

Specialized ships (Great Lakers) could be built economically in U.K. with temporary structural modifications and moved across Atlantic.

NATO would allocate tonnage to meet Canada's national needs in time of emergency if foreign shipping withdrawn. —App. III, p.598

117. Canadian Pacific Railway.
Map of Western Canada showing breaking point for grain rates between Fort William and Vancouver. —App. III, p.629A

118. Canadian Pacific Railway.
Statement showing rates on grain from representative points in Western Canada to Fort William and to Vancouver for export. —App. III, p.630

119. Canadian Pacific Railway.
Statement of import, export and domestic traffic likely to be exposed to increased water competition resulting from building of Seaway and based on traffic handled between April to November 1953. —App. III, p.631

120. Canadian National Railways.
List of ships in Newfoundland and Pacific Coast service, including routes, dimensions, capacity and type of service. —App. III, p.635

121. Canadian National Railways.
Timetable No. 85 for coastal services in Atlantic waters, particularly Newfoundland (Page 90—Summer Season Services). —App. III, p.642A

122. Canadian National Railways.
Timetable No. 86 for coastal services to and around Newfoundland (Page 90—Winter Season Services). —App. III, p.642B

123. Canadian National Railways.
Timetable for services in Pacific coastal waters (Page 69—Winter Season Services, September 25, 1955, to April 28, 1956). —App. III, p.642C

124. Canadian National Railways.
Timetable for services in Pacific coastal waters (Page 69—Summer Season Services, April 24 to September 24, 1955). —App. III, p.642D

125. Canadian National Railways.
Statement showing tonnage and revenue on traffic that will be exposed to increased water competition on completion of Seaway and based on traffic handled during 1953. —App. III, p.643

126. Canadian National Railways.
Statement showing total bushels of bulk grain shipped by C.N.R. per month to export elevators at British Columbia ports, and Port Churchill, Manitoba, during 1953, 1954, and first 8 months 1955. —App. III, p.646

127. Canadian National Railways.
Statement showing total bushels bulk grain handled by C.N.R. per month from Canadian Lake, Bay and River ports to Eastern ports for export during 1953, 1954, and first 8 months 1955. (Breakdown showing type and quantity of grain exported through Eastern ports in 1953.) —App. III, p.648

128. Canadian National Railways.
Statement showing total bushels bulk grain shipped all-rail C.N.R. per month

from Lakehead to Eastern ports for export during 1953, 1954, and first 8 months 1955. (Breakdown showing type of grain and quantity exported through Eastern ports in 1953.) —App. III, p.651

129. Canadian National Railways.
Statement showing carload rail rates on bulk grain, soya beans and flaxseed shipped from Lakehead, Bay, Lake and River ports and Buffalo, N.Y., to Eastern Canadian and U.S. ports for export. —App. III, p.654

130. Canadian National Railways.
Statement showing comparison of First, Fifth and Tenth Class Rates from illustrative origins in Ontario and Quebec to specified destinations in Newfoundland and in effect prior to Confederation on March 31, 1949, with rates effective April 1, 1949, and October 1, 1955. —App. III, p.657

131. Canadian National Railways.
C.N.R. Tariff No. CM. 195, C.T.C. No. E. 2115. —App. IV, p.663A

132. Canadian National Railways.
C.N.R. Tariff No. CM. 300-15, C.T.C. No. E.4014. —App. IV, p.663B

133. Canadian National Railways.
C.N.R. Tariff No. CM. 267-18. —App. IV, p.663C

134. Canadian National Railways.
C.N.R. Tariff No. C.89—(Supplement 79—page 29), C.T.C. No. E.3967.
—App. IV, p.663D

135. Canadian National Railways.
Statement showing comparison of freight rates on representative commodities actually transported from various points in Canada to Newfoundland prior to March 31, 1949, and freight rates in effect on March 31, 1949, April 1, 1949 and October 1, 1955. —App. IV, p.664

136. Canadian National Railways.
Additional statement omitted from Exhibit No. 135 showing comparison of freight rates on flour from Port Arthur and Port Colborne to Newfoundland in effect March 31, 1949, April 1, 1949, and October 1, 1955. —App. IV, p.672

137. Canadian Pacific Railway.
Statement showing movement of bulk grain from Fort William, Bay ports, and local Ontario points to St. Lawrence River ports, Canadian Atlantic ports and Northern U.S. Atlantic ports. —App. IV, p.674

138. Canadian Vickers Limited.
Financial Post statement giving complete story on activities and statistics of company, (additional statement giving particulars of Vickers' engineering services).
—App. IV, p.674A

139. Canadian Vickers Limited.
Shares held by Canadian residents and others as of June 30, 1955.
—App. IV, p.675

140. Canadian Vickers Limited.
Statement showing number and tonnage of naval and commercial ships built per year between 1911 and 1954, and number under construction as of October 12, 1955.
Summary of naval vessels built since 1911 for Canadian, British, Italian and U.S. Navy. —App. IV, p.676

141. Canadian Vickers Limited.
Statement of October 12, 1955, showing turnover in technical staff during previous six months and previous six weeks indicating tapering off of naval programme. —App. IV, p.679

142. Canadian Vickers Limited.
Statement showing average employment over past 10 years for hourly rated productive employees up to September 22, 1955. —App. IV, p.680

143. Canadian Vickers Limited.
Statement showing number of employees working and weekly payroll on week ending September 22, 1955. —App. IV, p.681

144. Canadian Vickers Limited.
Statement showing peak employment for productive employees during past 15 years for year ended February 28, 1945. —App. IV, p.682

145. Canadian Vickers Limited.
Extract from Minutes of House of Commons Standing Committee on Railways, Canals and Telegraph Lines—June 20, 1950—covering discussion on reasons for including Section 21 (a) in the Canada Shipping Act (now Section 22). (Conferring discretionary powers on Minister of Transport to prevent importation of ships which are not built in Canada.) —App. IV, p.683

146. Branch Lines Limited.
Branch Lines Limited Tanker Time Charter Party. —App. IV, p.690

147. Branch Lines Limited.
Map of Newfoundland showing harbours from which company transports pulpwood to Corner Brook. —T.4285

148. Branch Lines Limited.
Statement listing Newfoundland and Nova Scotian harbours, their respective distances from Corner Brook, and amount of pulpwood moved from each harbour to Bowater's Pulp and Paper Mills at Corner Brook during period 1949 to 1954 and rate per cord. —App. IV, p.713

149. Branch Lines Limited.
Photograph of large pulpwood barge pulled by tug at Lomond, Newfoundland. —App. IV, p.715

150. Marine Industries Limited.
A. Graph showing employment during period 1937 to 1955.
B. Graphs showing distribution of workers by occupation during building period of one vessel.
C. Graph showing savings available to Canadian shipowners (based on construction of 15 trawlers for France).
D. Graph showing savings available to Canadian shipowners (based on construction of 6—2600 ton vessels for France).
E. Graph showing savings available to Canadian shipowners (based on construction of 10—10,000 ton cargo vessels for Canadian Government.)
List of ships showing type, name, gross tonnage, and date built during period 1926 to 1955. —App. IV, p.736

151. Midland Shipyards Limited and Town of Midland, Ontario.
Statement showing distribution of salaries and wages paid for ship construction, ship repairs and miscellaneous during period 1951-1954. —App. IV, p.755

152. Collingwood Shipyards Limited and Town of Collingwood, Ontario.
Statement showing distribution of salaries and wages paid for ship construction, ship repairs, and miscellaneous during period 1950-1954. —App. IV, p.756

153. Port Weller Dry Docks Limited.
History of Muir Bros. Dry Dock at Port Dalhousie from 1849 to 1954 when it was taken over by Port Weller Dry Docks Limited.
History and description of Welland Canal from 1824 to present day.

Description of operations of Port Weller Dry Docks Limited and list of large lakers built during last four years. —App. IV, p.757

154. Hamilton Chamber of Commerce.
Brochure on Port of Hamilton (copy of brief, description of port facilities and list of shipping lines using Port of Hamilton, copy of Hamilton District Industrial Index, comparative statement of commodity tonnages incoming and outgoing during 1953-1954, Hamilton Harbour Commission booklet—1951—covering history of port). —App. IV, p.766

155. Toronto Harbour Commissioners.
Brief submitted at Toronto Hearings. Outlines pertinent facts concerning harbour and area served by Port of Toronto.

44% of total Canadian purchasing power concentrated in Ontario and 33⅓% within 100 mile radius of Toronto.

Incoming shipments totalled 3,613,889 tons and outgoing 1,171,048 tons in 1954.

Recent harbour improvements to accommodate present package freight business and increased cargo expected on completion of Seaway.

Seaway will increase waterborne trade from (1) direct overseas shipments (2) transhipment to Great Lakes ports (3) coasting trade with four Atlantic Provinces. —App. V, p.775

156. Toronto Harbour Commissioners.
Annual Report of the Commissioner of Finance (1954) for Municipality of Metropolitan Toronto. —App. V, p.785A

157. Toronto Harbour Commissioners.
Canadian Statistical Review—August 1955 (Table 38—"Value of Building Permits" on Page 44). —App. V, p.785B

158. Toronto Harbour Commissioners.
Letter from Editor, Maclean's Building Guide—October 18, 1955 (including schedule of cumulative construction contract award totals for Metropolitan Toronto, Ontario and Canada covering period from July 1954 to June 1955).—App. V, p.786

159. Toronto Harbour Commissioners.
Annual Report of Toronto Industrial Commission—1954. —App. V, p.787A

160. Toronto Harbour Commissioners.
Business Year Book—1955 published by the Financial Post. —App. V, p.787B

161. Canadian Federation of Agriculture.
Brief submitted at Toronto Hearings. —App. V, p.788

162. Government of the Province of Alberta.
Brief submitted at Toronto Hearings. —App. V, p.837

163. Ontario Shipping Intelligence Publishing Company.
Collection of clippings, maps and photographs. —T.4828

164. Kent Lines Limited, Brunswick Motors Limited and Irving Pulp and Paper Ltd.
Brief submitted at Toronto Hearings. —App. V, p.853

165. Dominion Marine Association.
Answers to questions asked.

I. (1) Notes on the reality of competition faced by Great Lakes vessels upon completion of the Seaway.

(a) Graph 165.1—Freight Charges on Wheat per Ton-Mile, St. Lawrence Ports to the United Kingdom, and Across the Great Lakes, 1950-1955.

(b) A note or explanation of Graph 165.1

(c) A further explanation of daily operating costs arising out of Exhibit 93.

(d) Answer to remark of the Chairman, Vol. 11, p.3719, lines 8-19.

(2) A note on naval architecture as to the type of vessel from which competition is to be expected.

(a) Drawing 165.6, outline arrangement of a combined oil or ore carrier suitable for ocean and/or lake and St. Lawrence waterways trade.

(b) Drawing 165.7, outline arrangement of a combined ore or grain carrier suitable for ocean and/or lake and St. Lawrence waterways trade.

II. The balance of merchandise trade between Canada and the United Kingdom.

Appendix I—Answers to questions arising out of the transcript.

Appendix II—Tables of general steaming times, load, unload and lay times, large and medium vessels. —App. V, p.874

166. Canadian Shipbuilding and Ship Repairing Association.
Statement showing progress of Newfoundland compared with progress achieved elsewhere in Canada during period 1949-1954. —App. V, p.872

167. Canadian Fairbanks-Morse Company Limited.
Letter from Mr. G. R. Wyer, Executive Vice-President, to Royal Commission on Coasting Trade—November 9, 1955—(indicating value of marine engines as percentage of total value of shipments from Canadian Locomotive Company, Kingston, Ontario). —App. V, p.874

168. Canadian Maritime Commission.
Statement showing number of ships and total tonnage in Canadian Merchant Fleet as of September 1, 1955, (including breakdown of Canadian vessels in Ocean-Going Fleet, Coastwise Trading Fleet, Great Lakes Fleet and Canadian vessels on U.K. register under transfer plan). —App. V, p.875A

169. Algoma Steel Corporation Limited.
Letter and photographs from Mr. D. S. Holbrook, Executive Vice-President, to Royal Commission on Coasting Trade—November 4, 1955. (Letter indicates value of direct iron and steel sales to shipbuilding industry and photographs show:

A. Three ships in berth at dock, with coal and ore unloading bridges in background.

B. Actual coal unloading operations.

C. General view of Algoma Works at Sault Ste. Marie and storage piles containing twelve different raw materials from nine different Lake ports.)

—App. V, p.876

170. Union Steamships Limited.
Letter from Mr. J. F. Ellis, General Manager, to Royal Commission on Coasting Trade—November 3, 1955, (including four schedules:

A. List of ships owned by Union Steamships Limited showing tonnage, date and place of construction.

B. Copy of Articles of Agreement with Canadian Maritime Commission.

C. Statement showing daily operating costs of Union Steamships Limited vessels in 1954.

D. Statement of cargo tonnage and number of passengers transported between various areas during 1954.

Comments relative to Brief submitted at Vancouver hearings concerning subsidies, free ports in southeastern Alaska, regulation of freight rates, restriction of coastal trade to vessels owned by Canadian citizens).

—App. V, p.879

171. Saguenay Terminals Limited.
Letter from Mr. W. Baatz, Treasurer, to Royal Commission on Coasting Trade —October 31, 1955 (explains that Exhibit No. 172 shows difference of $94,000 a year between operation of Canadian vessel (10,000 tons) and a similar U.K. flag vessel, but actual difference between two such ships operated by Saguenay Terminals Limited would be $58,000.
Oppose anomaly under Transport Act whereby eligible ship can move cargo from one point to another on either coast without licence, unless engaged on intercoastal voyage.
On completion of Seaway owners of Great Lakes vessels may operate in world trade during winter season). —App. V, p.913

172. Saguenay Terminals Limited.
Statement showing cost experience in operating 10,000-ton vessels during 12 months prior to and 12 months following transfer from Canadian to U.K. registry. —App. V, p.920

173. Shipping Federation of Canada.
Letter from Mr. C. T. Mearns, Secretary, to Royal Commission on Coasting Trade —November 7, 1955.
Statement showing names, gross tonnage, port of registry, place of construction for vessels entered in Shipping Federation of Canada and engaged in coasting trade—1955.
Statement showing liner grain freight rates from Eastern Canada to United Kingdom—May 1950 to January 1956.
Statement showing tramp grain freight rates from Eastern Canada to United Kingdom—January to October 1955.
Statement showing cost per ton mile of tramp vessel carrying grain from Montreal to United Kingdom.
Letter from Maritimes Research Inc., New York, to Shipping Federation of Canada —October 14, 1955—indicating difficulty involved in securing reliable figures for grain rates from 1951 to June 1953.
Names and particulars of vessels delayed in 1954 in Montreal Harbour and Sydney, N.S. due to strikes by crew members. —App. V, p.921

174. Branch Lines Limited.
Letter from Managing Director to Royal Commission on Coasting Trade—October 31, 1955 (describing movement of pulpwood to Cornerbrook, Newfoundland prior to 1949). —App. V, p.928

175. Owen Sound Chamber of Commerce.
Letter from President to Royal Commission on Coasting Trade, October 26, 1955. (Corrects statement made at Midland Hearings on capacity of grain elevator at Owen Sound. Elevator handles 4 million bushels and an additional 4 million has been stored on ships wintering in harbour.) —App. V, p.930

176. Clarke Steamship Company Limited.
Statement showing method used to obtain figures presented in Exhibits 85 and 86. —App. V, p.931

177. Canada Steamship Lines Limited.
Letter from President to Royal Commission on Coasting Trade—August 18, 1955 (correcting statement made at Ottawa Hearings regarding cost of building ships in Canada and U.K.).
Schedule of tariffs for elevation, storage and handling charges effective August 1, 1954, for Kingston Grain Elevator, Cataraqui Bay, Kingston, Ontario.
—App. V, p.936

178. Furness, Withy & Company Limited.
Letter from Messrs. Halley, Hickman and Hunt to Royal Commission on Coasting Trade—October 13, 1955 (correcting errors appearing in transcript of proceedings, Volume 2, Part B). —App. V, p.939

179. British Columbia Loggers' Association.
Letter from Secretary-Manager to Royal Commission on Coasting Trade—September 19, 1955 (supplying information indicating what percentage of total cost of logs is represented by transportation of logs and transportation of supplies and machinery).
List of Association members. —App. V, p.942

180. Canadian Pulp and Paper Association.
Proceedings of the Annual Meeting—1955. —App. V, p.944A

181. Canadian Wheat Board.
Letter from Mr. F. T. Rowan, Manager, to Royal Commission on Coasting Trade —October 25, 1955—enclosing compilations on ocean freight rates, particularly for wheat.
Chamber of Shipping Index Number of Tramp Shipping Rates 1952-1955.
Chamber of Shipping Index Number of Tramp Shipping Rates 1948-1952.
Statement showing rates on grain from St. Lawrence Ports to United Kingdom.
Statement showing fluctuations in ocean grain freight rates Canada to United Kingdom.
Notes on Statistical Supplement to Annual Report on Maritime Transport published by the Organization for European Economic Co-operation, Paris—September 1955 (containing numerous tables relevant to Canadian coasting trade).

182. Government of the Province of Nova Scotia. —App. V, p.945
Letter from Minister of Trade and Industry for Nova Scotia to Royal Commission on Coasting Trade—October 11, 1955 (opposes restrictions of coasting trade to Canadian flag ships and estimates the increase in shipping costs in Nova Scotia if U.K. ships excluded). —App. V, p.962

183. Canada Steamship Lines Ltd.
Letter from Mr. T. R. McLagan, President, to Royal Commission on Coasting Trade—October 20, 1955, including several documents. Statement showing total package freight tonnage and percentage of total tonnage carried during period 1950-1954.
Three Canada Steamship Lines schedules listing 1955 package freight services and timetables.
Booklet on "How Modern Handling Methods Are Used To Provide Faster, Safer Package Freight Service." —App. V, p.967

184. Canadian Shipping and Marine Engineering News.
Letter from Editor to Royal Commission on Coasting Trade—November 1, 1955 (describes freight rate competition between Canadian and U.K. ships and forecasts U.K. competition for Canadian bulk carriers). —App. V, p.971

185. Shipbuilding Conference of the United Kingdom.
Statement describing vessels built in U.K. since 1921 for Canadian and Newfoundland owners and engaged in international trade. —App. V, p.974

186. St. Lawrence Municipal Bureau of Montreal.
Proposal advocating surcharge to equate the costs of U.K. and Canadian shipping in inland St. Lawrence system. —App. V, p.977

187. Government of the Province of Manitoba.
Statement showing relative cost of moving grain from Lakehead to Montreal (a) by present method, (b) direct by upper lake vessels after opening of Seaway and (c) direct by U.K. flag ocean vessel after opening of Seaway.—App. V, p.980

188. Branch Lines Limited.
Letter to Branch Lines Limited from W. A. Phillips, Anderson & Co. Ltd., London, England—October 28, 1955 (offering, in view of construction of St. Lawrence Seaway, to convert canallers from steam to diesel during winter months at minimum cost and offering to charter such vessels for subsequent off-seasons if profitable trading foreseen). —App. V, p.990

189. Windsor Chamber of Commerce.
A. Letter from Windsor Chamber of Commerce to Royal Commission on Coasting Trade—November 14, 1955. (Commonwealth registered ships operate no regular service in coastal package freight trade from Windsor, but occasionally Newfoundland-Great Lakes Steamships Company loads cargo at Windsor.)
B. Membership Directory—1954 (950 members)—T.4934. —App. V, p.992A

190. Marine Industries Limited.
Statement listing definition of technical terms and typical values for various types of vessels (diagram). —App. V, p.992C

191. Canadian Shipowners Association.
Letter from Mr. W. J. Fisher, General Manager, to Royal Commission on Coasting Trade—December 15, 1955.
Statement showing comparison of average daily operating costs on 10,000 DWT "Park" vessel under Canadian and U.K. registries.
Statement showing pro forma crew lists and union wages on 10,000 DWT "Park" vessel under Canadian and U.K. registries. —T.4936

192. Saint John Dry Dock Co. Ltd.
Letter from Mr. F. G. Wilson, Vice-President, to Royal Commission on Coasting Trade, December 8, 1955.
Statement showing analysis of income of above company and its subsidiaries from shipbuilding, ship repairing and subsidiary industries. —T.4943

193. Saguenay Terminals Limited.
Letter from Mr. W. Baatz, Treasurer, to Royal Commission on Coasting Trade, November 30, 1955 (concerning (1) conditions precedent to obtaining a licence under the Transport Act to operate a water carrier service, (2) discriminatory use by railways of through rail and water tariffs, (3) actual number of sailings during period, 1952-1954).
Copy of application form to obtain a licence to transport passengers and/or goods by water. —T.4946

194. Marine Industries Limited.
Corrected graph replacing Exhibit 150 (c) showing savings available to Canadian shipowners (based on construction of 15 trawlers for France). —App. V, p.992D

195. Kent Lines Limited.
Letter from Teed & Teed, Saint John, N.B. to Royal Commission on Coasting Trade—November 16, 1955.
Statement showing number and registered net tonnage of vessels arriving at and departing from Canadian ports in Canadian coastwise shipping during 1954. —T.4951

196. Kent Lines Limited.
A. Letter from Teed & Teed, Saint John, N.B., to Royal Commission on Coasting Trade—November 18, 1955.
B. Booklets entitled "The Story Of The Chignecto Barrier" and "The Voice Of The Maritimes" (advocating construction of Chignecto Canal).
C. Booklet entitled "The Case For The Chignecto Canal". —App. VI, p.992E

197. Iron Ore Transport Company Limited.
Statement showing characteristics of "SS. Sept Iles" and "SS. Ruth Lake". (Letter Magee, O'Donnell & Byers to Royal Commission on Coasting Trade—December 5, 1955, explaining that contracts were awarded in 1951 but delivery not requested before 1955.) —T.4953

198. Government of the Province of Manitoba.
Statement showing earnings, net income, dividends and stock prices for Canada Steamship Lines Limited for period 1940-1955. —T.4957

199. Shipbuilding Conference of the United Kingdom.
Supplementary Submission December 14, 1955. (Correcting inaccurate statements in Brief 36 submitted by Vancouver, New Westminster and District, Metal Trades Council, Victoria and District Metal Trades Council, Shipyard General Workers Federation—regarding assistance provided in recent years to U.K. shipbuilders. British Shipbuilding Industry does not receive direct financial assistance from government, and long term, low interest money was provided during depression period only by British (Shipping) Assistance Act 1935. So-called "bounties" do not exist, and accelerated depreciation is available to all industry.) —T.4958

200. Canada Steamship Lines, Limited.
Statement (enlarging Exhibit 95) showing difference in operating costs between Canadian built and manned large upper lakers and U.K. built and manned ships of various types of the largest size capable of navigating the Seaway in connection with:
(a) carrying wheat from Fort William to Kingston,
(b) carrying ore from Seven Islands to Hamilton,

201. Canada Steamship Lines, Limited.
Design characteristic details of the seven ships (Types A-G) referred to in Exhibit 200. —App. VI, p.992G

202. Canada Steamship Lines, Limited.
Descriptive folder giving complete explanation of Exhibit 200.
—App. VI, p.992H

203. Canada Steamship Lines, Limited.
Article from magazine "Fairplay"—October 20, 1955, (outlines Moore-McCormack's ship construction programme and indicates that U.S. Maritime Commission estimates U.S.-built ships cost 65% more than European-built ships). —App. VI, p.9921

204. Canada Steamship Lines, Limited.
Article from British magazine "The Shipping World"—July 6, 1955 entitled, "The Cost of A Cargo Ship". —App. VI, p.992J

205. Canada Steamship Lines, Limited.
Statement comparing relative cost of moving grain from Lakehead to Montreal via Seaway as estimated by C.S.L. in Exhibit 200 and as estimated in Government of Manitoba Exhibit 187. —T.5024-A
—App. VI, p.992K

206. Canadian Vickers Ltd.
Summary of additional cost of building a vessel in Canadian shipyards versus British shipyards. (Presented by Mr. J. A. S. Peck and based on Exhibit 204).
—T.5041 App. VI, p.992L

207. Dingwall Shipping Co. Ltd.
Letter from McMichael, Common, Howard, Ker & Cate to Royal Commission on Coasting Trade—December 29, 1955 (information concerning the organization

and activities of Dingwall Shipping Co. Ltd. and their connections with Scandinavian Ore Tankers Inc. and Iron Ore Company of Canada).
—App. VI, p.993

208. Government of the Province of New Brunswick.
Letter from the Hon. Hugh John Fleming, Premier of New Brunswick, to Royal Commission on Coasting Trade—December 12, 1955 (opposes any changes in shipping regulations which might increase transportation charges on goods moving between Atlantic region and central Canada). —App. VI, p.996

209. Canadian Pacific Railway.
Letter from Mr. J. A. Wright, Solicitor, to Royal Commission on Coasting Trade—December 20, 1955 (listing corrections to be made in transcript of C.P.R. evidence appearing in Volumes 5 and 12). —App. VI, p.998

210. Chamber of Commerce of the City of Québec.
Letter from Mr. Yves Poisson, Secretary-Treasurer, to Royal Commission on Coasting Trade—December 23, 1955 (listing corrections to be made in transcript of French testimony of Mr. M. Turcotte at Québec City Hearings).
—App. VI, p.1002

211. Chamber of Commerce of the City of Québec.
Letter from Mr. Yves Poisson, Secretary-Treasurer, to Royal Commission on Coasting Trade—December 15, 1955 (listing corrections to be made in transcript of French testimony of Mr. Yves Poisson at Québec City Hearings).
—App. VI, p.1009

212. Shipping Federation of Canada.
Letter from Mr. C. T. Mearns, Secretary, to Royal Commission on Coasting Trade —December 30, 1955 (listing corrections to be made in transcript of testimony of Mr. J. P. Boyle at Montreal Hearings). —App. VI, p.1016

213. General Council of British Shipping.
Letter from Mr. H. E. Gorick, Joint Secretary, to Royal Commission on Coasting Trade—December 23, 1955, in reply to questions submitted by Economic Advisor to Royal Commission. (Expresses doubt that U.K. shipowners will invest in large laker-type vessels on completion of Seaway, and suggests that although U.K. ocean-going ships would not be able to compete with large lakers, they might provide valuable service in ore and grain trade through Seaway.)
—App. VI, p.1025

214. Shipbuilding Conference of the United Kingdom.
Letter from Mr. S. G. Dixon to Royal Commission on Coasting Trade—December 27, 1955 in reply to questions submitted by Royal Commission.
(Possibility of building specially-designed bulk carriers for use on Seaway discussed but no precise designs developed. Adaptation of ocean-going ships for use on Seaway restricted by limited draft in seaway channels. Present day cost for building ship similar to "Scott Misener" in U.K. estimated at from £1,420,000 to £1,530,000.) —App. VI, p. 1030

215. Canadian Shipbuilding and Ship Repairing Association.
Copy of brief presented by Government of Newfoundland to Royal Commission on Canada's Economic Prospects. —T.5062

216. Canadian Shipbuilding and Ship Repairing Association.
Statistics on waterborne trade of Newfoundland.
Tables I and III ..... Cargoes loaded and unloaded at Nfld. ports in coasting and foreign service 1950-54.
Table II ..... Seaborne trade of Nfld. as a percentage of Canadian seaborne trade—1954.
Tables IV and V ..... Cargoes loaded and unloaded in Nfld. ports in coasting and foreign service by commodities—1954. —App. VI, p.1034

217. Canadian Shipbuilding and Ship Repairing Association.
Statistics on domestic waterborne commerce of the United States 1924-53.
—App. VI, p.1041

218. Canadian Shipbuilding and Ship Repairing Association.
List of new construction on order (commercial and naval) in Canadian shipyards as of December 1, 1955. —App. VI, p.1042

219. Canadian Shipbuilding and Ship Repairing Association.
Circular letter from Atlantic Shipbuilding Company, Wales, received by Canada Steamship Lines, Ltd., December 12, 1955 (soliciting business and quoting delivery dates for various types of ships). —App. VI, p.1047

220. Canadian Shipbuilding and Ship Repairing Association.
Department of Transport Press Release No. 462, November 12, 1953 (announced modifications in the use of escrow funds). —App. VI, p.1048

221. Canadian Shipowners Association.
Statement showing decline in size of Merchant Marine of Great Britain and Northern Ireland relative to world shipping. (See also Exhibit 230.)
—App. VI, p.1050

222. Canada Steamship Lines, Limited.
Additional data to be included in Exhibits 200, 201 and 202 showing operating costs of vessel "T. R. McLagan" for moving wheat from Lakehead to Kingston. —App. VI, p.1052

223. Canada Steamship Lines, Limited.
Graph showing clearance of grain out of Lakehead by water during 1955 navigation season. —App. VI, p.1053A

224. Canada Steamship Lines, Limited.
Statement showing tramp ship sizes and capacities supplementary to Mr. Lowery's comments on Government of Manitoba Exhibit 187 (including excerpts from an article "Modern Standard Tramp Ship" from December 1955 issue of "The Motor Ship"). —T.5200
—App. VI, p.1053B

225. Canada Steamship Lines, Limited.
Lloyd's Register Shipbuilding Returns for Quarter Ended 30th, June, 1955.
—App. VI, p.1053C

226. Canada Steamship Lines, Limited.
Lloyd's Register Annual Summary of Merchant Ships Launched In The World During Year 1954. —App. VI, p.1053D

227. Canadian Federation of Agriculture.
Statement showing lake freight rates on grain moving from Fort William to Montreal during period 1947-1955. (See also Exhibit 234.)
—App. VI, p.1054

228. Canadian Federation of Agriculture.
Graph showing monthly totals of shipping losses, British, Allied and Neutral by enemy action, and total number of U-boats and operated U-boats between 1939-1945. —App. VI, p.1054A

229. Canadian Federation of Agriculture.
Clipping from "Montreal Gazette"—January 4, 1956—entitled " 'Seamew' Aircraft Unveiled in U.K." —App. VI, p. 1055

230. Canadian Shipowners Association.
Comparison of Merchant Fleet of Great Britain and Northern Ireland with World's Fleet during period 1905-1955. —App. VI, p.1056

231. Union Steamships Limited, Vancouver, B.C.
Letter from Mr. J. F. Ellis, General Manager, to Royal Commission on

Coasting Trade—January 3, 1956, listing corrections to be made in transcript of testimony of Mr. J. F. Ellis at Vancouver Hearings.
(Suggests that the people of Alaska favour freedom of action in water transportation between points in Washington State, B.C., and Alaska.)
—App. VI, p.1058

232. Aluminum Company of Canada, Limited.
Letter from Mr. L. P. Leduc, Secretary, to Royal Commission on Coasting Trade, January 3, 1956, listing corrections to be made in transcript of Mr. R. B. Graham's evidence at Montreal Hearings.
Supplementary information submitted in answer to questions asked at Montreal Hearings.
(Statement showing operating materials moved from Port Alfred to Kitimat via coasting trade during period 1953-1955. Cost of shipping 1 ton of alumina from Arvida to Kitimat via rail and water in 1955.
Delivered prices for aluminum ingot delivered in Canada, U.S.A., and U.K. as of December 1955.
List of tariffs affecting aluminum products.
Cost per ton mile of shipping aluminum ingot from Arvida to various international destinations compared with cost of shipments to Kingston and Chicago). —App. VI, p.1066

233. Canadian Shipbuilding and Ship Repairing Association.
Statement showing volume of U.S.A. waterborne commerce, including coasting trade between mainland and U.S.A. overseas territories, during period 1947-1953.
—App. VI, p.1074

234. Canadian Federation of Agriculture.
Statement (amending Exhibit 227) showing lake freight rates on grain moving from Fort William to Montreal during period 1947-1955. —App. VI, p. 1076

235. Canadian Shipbuilding and Ship Repairing Association.
Statement showing bulk cargoes as a percentage of total cargoes carried in U.S.A. domestic waterborne commerce for selected years 1938 through 1952.
—App. VI, p.1077

236. Committee on Newfoundland Coastal Shipping.
Supplementary brief presented at Ottawa Hearings—January 1956 (emphasizing need for improved docking facilities in Newfoundland). —App. VI, p.1080

237. Committee on Newfoundland Coastal Shipping.
Memorandum of Agreement between The 'Longshoremen's Protective Union and The Newfoundland Employers' Association, Ltd.—1954. —T.5976
Statement showing Newfoundland Employers' Association, Ltd. Longshore Rates of Wages—effective May 1, 1955. —App. VI, p.1099

238. Committee on Newfoundland Coastal Shipping.
C.N.R. Timetable 85 for Atlantic Region and Newfoundland District—June 12, 1955. —T.5977

239. Committee on Newfoundland Coastal Shipping.
Regulations governing marine slip at Selkirk, Manitoba. —App. VI, p.1101B

240. Canadian National Railways.
Letter from Mr. L. Coté, Assistant General Solicitor, March 12, 1956, in reply to letter from Mr. H. R. Kemp, Royal Commission on Coasting Trade (concerning construction cost of Canadian-built SS. "Prince George"). —App. VI, p. 1102

241. Canadian Pacific Railway.
Letter from Mr. J. A. Wright, Solicitor, March 27, 1956, in reply to letter from Mr. H. R. Kemp, Royal Commission on Coasting Trade, (concerning construction cost of U.K.-built SS. "Princess Marguerite"). —App. VI, p.1105

242. Union Steamships Limited.
Letter from Mr. J. F. Ellis, General Manager, to Royal Commission on Coasting Trade—February 29, 1956, enclosing circular letter of February 27, 1956, sent to B.C. Members of Parliament and Senators with regard to Bill No. 107, introduced in House of Commons—February 15, 1956, to amend the Transport Act.
(Outlines change in recommendations as submitted at Vancouver Hearings and:
(1) opposes any extension of licensing under Transport Act to B.C. coasting trade as impracticable.
(2) if licensing regulations instituted they should apply to all types of vessels engaged in water or air transport.
(3) if regulation of fare or freight rates instituted it should apply to all passenger and cargo traffic by water or air transport, and through rates covering in part water movement should be abolished or prohibited.) —App. VI, p.1108

243. General Council of British Shipping.
Letter from Mr. H. E. Gorick, Joint Secretary, to Royal Commission on Coasting Trade—February 29, 1956, commenting on tables of construction and operational costs of U.K.-built and Canadian-built ships submitted in Exhibit 200 by Canada Steamship Lines, Limited.
(Suggests that length of vessels "E", "F" and "G" in relation to beam and depth would be unsuitable for ocean-going service. Believes gap between operating costs of Canadian laker and U.K. laker trading solely within Seaway would be small. Suggests that construction cost figure for type "B" vessel should be about $4,200,000, or 37% greater than figure quoted.
Inappropriate to compare vessels "C" to "F", having lake draft of 25'6", with vessel "A", having draft of 23'9".) —App. VI, p. 1119

244. British Columbia Lumber Manufacturers Association.
Letter from Messrs. Herridge, Tolmie, Gray, Coyne & Blair to Royal Commission on Coasting Trade—February 1, 1956, supplying information requested at Vancouver Hearings. (Annual Report 1954—lists Association members. Statement showing number of member companies owning tugs, number of tugs and origin, and proportion of total involved in B.C. coastal towing.
Statement showing shipments by rail and water in Canada in 1954. Tables I and II in Annual Report show shipments to principal markets since 1945.
Statement showing average estimated lumber value including loading and freight within B.C.) —App. VI, p. 1123

245. Royal Netherlands Shipowners Association.
Letter from President to Royal Commission on Coasting Trade—January 24, 1956, clarifying certain references made in Brief 101, submitted by the Canadian and Catholic Confederation of Labour and National Metal Trades Federation, in regard to assistance provided by Netherlands Government to shipping industry. —App. VI, p. 1126

246. Canadian Shipbuilding and Ship Repairing Association.
Letter from Mr. T. R. McLagan, President, to Royal Commission on Coasting Trade, February 8, 1956, stating stand in respect to non-Canadian built ships engaged in Canadian coasting trade at such time as trade is restricted to Canadian-built and registered ships.
(Suggests that U.K. ships on liner berth service, regularly employed in Canadian coasting trade for at least five years prior to restriction, would be permitted, if remaining under present owners, to continue under U.K. registry in present service for remainder of natural life, and only be replaced by vessels built and registered in Canada.
Opposes permitting U.K. ships, chartered by Canadian companies to continue

in coasting trade, but suggests special arrangements might be necessary for a limited time to avoid hardship or disorganization in essential services.)
—App. VI, p.1132

247. Canada Steamship Lines, Limited.
Letter from Mr. R. Lowery, March 29, 1956, in reply to letter from Mr. G. G. McLeod, Royal Commission on Coasting Trade, regarding the ability of CSL vessels to trade to Seven Islands.
(List of existing upper lake bulk vessels and freighters capable of trading to Seven Islands on completion of Seaway.
Such ships, if engaged exclusively in Seven Islands ore trade, could move 7 million tons of ore to Hamilton and Lake Erie ports in one season.
CSL has no intention of using small canallers on Seven Islands run.
"T. R. McLagan" is certified to operate as far east as Havre St-Pierre, but smaller upper lake-type vessels would probably be more suitable for operations off west coast of Newfoundland.
Dual purpose vessel has advantage of flexibility, but not as efficient in any particular trade as specialized vessel.) —App. VI, p. 1135

248. Canadian Shipowners Association.
Letters from Mr. W. J. Fisher, General Manager, February 14, 1956, and March 6, 1956, in reply to request from Mr. G. G. McLeod, Royal Commission on Coasting Trade, for estimate of operating costs of vessels engaged in Great Lakes and St. Lawrence River trade. Statement showing operating costs of various types of vessels moving grain from Fort William to Kingston, and ore from Seven Islands to Montreal and Ashtabula. —App. VI, p.1141

249. Commonwealth of Australia.
Tariff Board's Report on Shipbuilding Industry, June 16, 1955.
—App. VI, p.1187A

250. Canadian Pacific Railway.
Letter from Mr. J. A. Wright, Solicitor, to Royal Commission on Coasting Trade—April 18, 1956 (concerning construction cost and cost of transporting U.K.-built SS. "Princess Marguerite" to Victoria). —App. VI, p.1188

251. Canadian Shipowners Association.
Reconciliation of data supplied in Exhibits 191 and 248 on operating costs of vessels engaged in Great Lakes-St. Lawrence trade.
—App. VI, p.1189

252. Canadian Shipowners Association.
Additional data on wages for Exhibit 248. —App. VI, p. 1193

253. Commonwealth of Australia.
Press Release issued in Melbourne, April 12, 1956, concerning "Merchant Shipbuilding in Australia", (announcing continuation of subsidy assistance up to 33 1/3% in respect of merchant shipbuilding and control of importation of ships). —App. VI, p.1194

254. Canada Steamship Lines, Limited.
Letter from Mr. C. P. Reddall, Chief Statistician, to Royal Commission on Coasting Trade—April 19, 1956, with details of various load draughts of the "T. R. McLagan". —App. VI, p.1196

255. Canadian Maritime Commission.
Statement showing particulars of vessels in preparation or under construction in Canadian shipyards as of June 30, 1956 (excluding naval vessels).
—App. VI, p.1198

256. Canada Steamship Lines, Limited.
Letter from Mr. T. R. McLagan to Royal Commission on Coasting Trade,

May 3, 1956, commenting on operating cost statement in Exhibit 248, submitted by Canadian Shipowners Association.
Statement comparing figures in Exhibit 248 and Exhibit 200, on a time basis, in respect to operating costs on movement of grain from Lakehead to Kingston.
—App. VI, p. 1202

257. Commonwealth of Australia.
Second reading speech by Senator, the Honourable Shane Paltridge, Australian Minister for Shipping and Transport, introducing the Australian Coastal Shipping Commission Bill—1956.

I — An Act to establish an Australian Coastal Shipping Commission to operate certain shipping services, and to repeal the Shipping Act—1949.
—App. VI, p.1210

II — An Act to approve an Agreement entered into by the Commonwealth with respect to Australian Coastal Shipping, and for purposes connected with that Agreement. —App. VI, p.1226

APPENDIX IV

Hearings of the Royal Commission

Place, Date and Transcript Reference

Place	*Date*	*Transcript Page*
Ottawa—I	July 11—14, 1955	1—501
St. John's, Nfld.	July 25—28, 1955	502—1087
Halifax	August 2—3, 1955	1088—1349
Charlottetown	August 5, 1955	1350—1430
Saint John, N.B.	August 8—9, 1955	1431—1603
Port Arthur	August 22—23, 1955	1604—1753
Winnipeg—I	August 24, 1955	1754—1914
Victoria	August 29—30, 1955	1915—2118
Vancouver	August 31—September 2, 1955	2119—2501
Regina	September 7, 1955	2502—2655
Winnipeg—II	September 8, 1955	2656—2802
Quebec City	September 27—28, 1955	2803—3025
Trois-Rivières	September 29, 1955	3026—3072
Montreal	October 4—6, 1955 October 11—15, 1955	3073—4364
Midland	October 25, 1955	4365—4501
Hamilton	October 28, 1955	4502—4574
Toronto	October 31—November 2, 1955	4575—4930
Ottawa—II	December 19, 1955	4931—5055
Ottawa—III	January 4—11, 1956	5056—5993

APPENDIX V

Witnesses, Counsel, and Others Appearing

A

Allinson, C. L. C.	Ontario Shipping Intelligence Publishing Company	T.4822
Alport, F.		T.4435
Anderson, E. A.	Manson's Landing Community Activities Committee	T.2293
Andrews, L. R.	British Columbia Lumber Manufacturers Association	T.2178
Anthony, Rev. W. R.	Parrsboro and District Board of Trade	T.1229
Armstrong, E. L.	Foster Wheeler Limited	T.4841
Armstrong, G.	Hamilton Chamber of Commerce	T.4516
Axelson, E.	Canadian Shipping and Marine Engineering News	T.4597, 5693

B

Baatz, W.	Saguenay Terminals Limited	T.3330
Bailey, C. L.	Atlas Steels Limited	T.4652
Baldwin, P. J.	John Inglis Co. Ltd.	T.4855
Ballock, A. E.	Bowater's Newfoundland Pulp and Paper Mills Limited, and Province of Newfoundland	T.697
Barrett, O. H.	Canadian Shipbuilding and Ship Repairing Association and Canadian Vickers Ltd.	T.270, 4193, 5079
Baxter, Capt. H. R.	Dominion Marine Association	T.425
Bell, J. K.	Maritime Marine Workers' Federation and National Council of Shipyard Unions, 1296, 1462, 1497, 1522, 1553	T.1160,
Berthiaume, A., Q.C.	St. Lawrence Municipal Bureau of Montreal	T.3075
Bisson, C.	Cité des Trois-Rivières	T.3049
Black, R.	Davie Shipbuilding Ltd.	T.2943
Blair, G.	British Columbia Loggers Assoc. and British Columbia Lumber Manufacturers Association	T.5412
Bonner, Hon. R., Q.C.	Province of British Columbia	T.1917
Boyle, J. P.	Shipping Federation of Canada	T.3736
Braniff, Mayor G.	Collingwood Shipyards Limited and Town of Collingwood	T.4445
Brayshaw, W.	Port Arthur Chamber of Commerce	T.1607
Brisset, J., Q.C.	Shipping Federation of Canada	T.3735, 3786, 5701
Bruce, D. I. W.	Canadian Westinghouse Co. Ltd.	T.4538
Bruce, J. W.	Vancouver, New Westminster and District Metal Trades Council, Victoria and District Metal Trades Council, Shipyard General Workers' Federation	T.2393
Bustard, E.	Dominion Marine Association	T.3696

C

Campanaro, G. A.	Canadian Westinghouse Co. Ltd.	T.4538
Campbell, Premier D. L.	Province of Manitoba	T.1754

G

Gendron, Capt. J.	Ecole de Marine de Rimouski	T.3015
Gerard, R.	Montreal Trades and Labour Council	T.3648
Gerity, F. O.	Dominion Marine Association	T.44, 93, 323, 335, 341, 559, 581, 593, 646, 849, 854, 952, 955, 1227, 1268, 1458, 1492, 1850, 1909, 1928, 1943, 2056, 2112, 3101, 3134, 3174, 3209, 3690, 3947, 4534, 4571, 4593, 4662, 4780, 4911, 4921, 5168, 5249, 5320, 5115, 5660
Glover, M.	Province of British Columbia	T.1918
Graham, R. B.	Aluminum Company of Canada Ltd.	T.3282
Greene, J. J.	Committee on Coastal Shipping of Newfoundland	T.563, 956, 5941
Grieve, J.	Committee on Coastal Shipping of Newfoundland	T.1022
Griffith, E. B.	Toronto Harbour Commissioners	T.4577

H

Halley, J.	Furness, Withy & Co. Ltd.	T.562, 856, 5185, 5390
Hamel, Mayor W. M.	Quebec Chamber of Commerce	T.2803
Handley, J.	Gypsum, Lime and Alabastine Canada Limited	T.4804
Hansard, H., Q.C.	Canada Steamship Lines Ltd.	T.4008
Harvey, R. A.	Committee on Coastal Shipping of Newfoundland	T.1043
Hawken, C.	Marine Industries Limited	T.4318
Hayes, Capt. A.	Committee on Coastal Shipping of Newfoundland	T.1064
Hickman, T. A.	Joint Councils of Burin District, Newfoundland	T.843, 899, 1017, 1037
Hill, J. C.	United Steelworkers of America, Local 5055	T.1705
Himmelman, Capt. E. H.	Zwicker & Company Limited	T.1338
Holbrook, D.	Algoma Steel Corporation Ltd.	T.4414
Hope, E. C.	Canadian Federation of Agriculture	T.4664, 5036, 5103, 5129, 5181, 5245, 5430, 5497
Horwood, C.	Province of Newfoundland	T.853
Houston, G.	City of Fort William	T.1605
Howard, Maj. Gen. G. B.	Canadian Industrial Preparedness Association	T.3104
Hunt, D. C.	Province of Newfoundland	T.511, 900, 1035, 3573, 3592, 4081, 4186, 5334
Husband, H.	Canadian Shipbuilding & Ship Repairing Association	T.1959
Hutcheson, J.	Clarke Steamship Co. Ltd.	T.3449, 3555

I

Irving, K. C.	Kent Lines Ltd., Brunswick Motors Ltd., Irving Pulp & Paper Ltd.	T.5255

J

Jackson, Gilbert	Canadian Shipbuilding and Ship Repairing Association and Canada Steamship Lines Ltd.	T.216, 1909, 3138, 3789, 4725, 4915, 4925, 5060, 5175, 5331, 5711
Jentz, C. D.	St. Lawrence Corporation Ltd.	T.3063
Jodoin, C.	Trades and Labour Congress of Canada	T.170
Johnson, A.	Province of Newfoundland	T.719
Julien, Mayor A. ...	Cité de Cap-de-la-Madeleine	T.3055

R

S

T

V

W

Wallace, H. A.	Canadian Shipbuilding and Ship Repairing Association	T.1944
Walton, H. W.	Collingwood Shipyards Limited and Town of Collingwood, Midland Shipyards and Town of Midland	T.4367, 4452, 4498
Whelan, T.	Province of British Columbia	T.1917
Whitson, T. H.	British Columbia Loggers' Assoc.	T.2274
Wilson, F. G.	Saint John Dry Dock Co. Ltd.	T.1464
Wismer, L. E.	Trades and Labour Congress of Canada	T.170
Wray, H. W.	A. E. Watts Limited	T.3231
Wright, J. A.	Canadian Pacific Railway Company	T.27, 208, 1877, 1935, 2020, 2075, 2164, 2195, 2227, 2258, 2286, 2349, 2392, 2554, 2702, 3365, 3952, 5610
Wyer, G. R.	Canadian Fairbanks-Morse Co. Ltd.	T.3267

Y

Young, J. E.	City of Fort William	T.1605
Young, R.	Committee on Coastal Shipping of Newfoundland	T.974

Z

Zlotnik, S. P.	Labour-Progressive Party, B.C.	T.2489
Zwicker, F. H.	Zwicker & Company Limited	T.1329

APPENDIX VI

List of Organizations, Briefs, Representatives, Witnesses and Counsel Appearing

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Alberta Federation of Agriculture	Edmonton	B-119 Ex. 64	T.2506
Alberta, Province of (Department of Agriculture)	Edmonton	B-2	
Alberta, Province of (additional submission) J. J. Frawley, Q.C., Counsel	Edmonton	B-126 Ex. 162	T.4748
Algoma Steel Corporation Ltd. D. S. Holbrook, Executive Vice-President	Sault Ste. Marie, Ont.	B-106	T.4414
Alport, Frederic, Consulting Engineer, Collingwood and Midland Shipyards	Orillia, Ont.	B-137	T.4435
Aluminum Company of Canada Ltd. R. Barry Graham, General Traffic Manager	Montreal	B-41	T.3282
Anticosti Shipping Company C. G. Savage, General Manager	Montreal	B-19	T.3145
Atlas Steels Limited C. L. Bailey, Vice-President	Welland, Ont.	B-33	T.4652
Bathurst Mining Corporation Ltd.	Toronto	B-40	
Bowater's Newfoundland Pulp and Paper Mills Limited Anthony E. Ballock, Assistant to General Manager	Corner Brook, Nfld.	B-17	T.697
Bowater Steamship Co. Ltd. (submitted on their behalf by Furness, Withy Co. Ltd., Montreal, P.Q.)	London, England	B-14	
Branch Lines Limited Arthur Simard, Director Henri Tellier, Director and Manager	Montreal	B-78	T.4278
British Columbia, Province of Hon. R. W. Bonner, Q.C., Attorney-General M. Glover, Assistant Director, Bureau of Economics and Statistics T. Whelan, Research Assistant, Bureau of Economics and Statistics	Victoria	B-111	T.1917
British Columbia Loggers' Association James C. Sheasgreen, Director and Logging Manager, Crown Zellerbach, Canada, Limited T. H. Whitson, Traffic Department, Crown Zellerbach, Canada, Limited Gordon Blair, Counsel	Vancouver	B-59	T.2268, 5412

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
British Columbia Lumber Manufacturers Association, Consolidated Red Cedar Shingle Association of B.C., The Plywood Manufacturers Association of B.C. L. R. Andrews, Executive Vice-President Gordon Blair, Counsel	Vancouver	B-55	T.2178, 5412
British Columbia Towboat Owners' Association O. H. New, Member of Executive and Managing Director, Coastal Towing Company	Vancouver	B-57	T.2122, 2431
British Shipping, General Council of	London, England	B-26	
British Yukon Ocean Services Ltd. C. J. Rogers, President	Vancouver	B-98	T.2240
Burin District, Joint Councils of T. A. Hickman, Counsel	Burin, Nfld.	B-72	T.1076
Burrard Dry Dock Company Limited C. S. Thicke, Executive Vice-President	Vancouver	B-139	T.2446
Cabot Carbon of Canada Ltd.	Sarnia, Ont.	B-8	
Canada Steamship Lines Ltd. T. R. McLagan, President R. Lowery, Vice-President N. W. Van Wyck, Vice-President Hazen Hansard, Q.C., Counsel Gilbert Jackson, Economist	Montreal	B-80	T.3790
Canada Steamship Lines Ltd. (additional submission)	Montreal	B-140 Ex. 95	T.3790
Canada Steamship Lines Ltd. (additional submission)	Montreal	B-161	T.4925
Canada Steamship Lines Ltd. (additional submission)	Montreal	B-163	T.4968
Canada Steamship Lines Ltd. (additional submission)	Montreal	B-171	T.5189, 5845
Canadian Atlantic Fishing Association W. R. Ritcey, Ritcey Brothers Fisheries	Halifax	B-141	T.1342
Canadian Blower & Forge Co. Ltd. John McMillan, Vice-President	Kitchener, Ont.	B-43	T.4795
Canadian Car & Foundry Co. Ltd.	Montreal	B-1	
Canadian and Catholic Confederation of Labour and National Metal Trades Federation T. S. Payne, Representative, National Metal Trades Federation Raymond Parent, Secretary of Central Council of the Catholic Syndicates of Quebec Inc.	Montreal	B-101	T.105
Canadian Congress of Labour Donald MacDonald, Secretary-Treasurer	Ottawa	B-75	T.65
Canadian Federation of Agriculture Dr. E. C. Hope, Economist	Ottawa	B-127 Ex. 161	T.4663

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Canadian Federation of Agriculture (additional submission)	Ottawa	B-172	T.5245, 5430
Canadian Industrial Preparedness Association Major-General G. B. Howard, Executive Vice-President and General Manager	Montreal	B-52	T.3104
Canadian Industrial Traffic League Inc. H. A. Mann, General Secretary	Toronto	B-69	T.326
Canadian Marconi Company R. E. Foreman, Manager, Marine Division	Montreal	B-88	T.3242
Canadian Maritime Transport Workers' Assoc.	Montreal	B-51	
Canadian National Railways Lionel Coté, Q.C., Solicitor J. A. McDonald, Assistant to Vice-President, Research and Development Department C. L. McCoy, Assistant General Freight Traffic Manager, Canadian Lines Jurisdiction	Montreal	B-92	T.8
Canadian National Railways (additional submission)	Montreal	B-142	T.4084, 5636
Canadian Pacific Railway Company J. A. Wright, Q.C., Solicitor C. D. Edsforth, Assistant General Traffic Manager F. V. Stone, Manager, Department of Research	Montreal	B-87	T.28
Canadian Pacific Railway Company (additional submission)	Montreal	B-143	T.3952, 5610
Canadian Pulp and Paper Association R. M. Fowler, President G. S. Pincott	Montreal	B-71	T.3664
Canadian Shipbuilding and Ship Repairing Association T. R. McLagan, President; President and General Manager, Canada Steamship Lines Ltd. R. Lowery, President, Davie Shipbuilding Limited, Lauzon E. Simard, Vice-President, Sorel Industries Ltd. and Marine Industries Ltd. Col. O. H. Barrett, President, Canadian Vickers Ltd. J. A. S. Peck, Executive Assistant to General Manager, Canadian Vickers Ltd. F. Paul-Hus, Naval Architect, Marine Industries Limited, Sorel, P.Q. Gilbert Jackson, Economist	Ottawa	B-82	T.216
Canadian Shipbuilding and Ship Repairing Association (additional submission)	Ottawa	B-166	T.5060, 5711

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Canadian Shipbuilding and Ship Repairing Association, British Columbia Member Shipyards of, H. A. Wallace, Vice-President and Managing Director, Yarrows Ltd., Victoria Harold Husband, President, Victoria Machinery Depot Co. Ltd., Victoria Col. C. C. I. Merritt, V.C., Counsel	Victoria	B-103	T.1943
Canadian Shipowners Association W. J. Fisher, General Manager	Ottawa	B-38	T.289, 2263
Canadian Shipowners Association (additional submission)	Ottawa	B-169	T.5155, 5900
Canadian Shipping and Marine Engineering News Eric R. Axelson, Editor	Toronto	B-12	T.4597
Canadian Shipping and Marine Engineering News (additional submission)	Toronto	B-144	T.4600, 5693
Canadian Vickers Limited Col. O. H. Barrett, President R. K. Thoman, Vice-President and General Manager	Montreal	B-81	T.4193
Canadian Vickers Limited (additional submission)	Montreal	B-164	T.5039
Canadian Westinghouse Co. Ltd. G. A. Campanaro, General Manager, Commercial Development D. I. W. Bruce, Assistant Secretary	Hamilton	B-60	T.4538
Cap-de-laMadeleine, Cité de André Julien, Mayor	Cap-de-la-Madeleine, P.Q.	B-145	T.3055
Clarke Steamship Co. Ltd., Terra Nova Steamship Co. Ltd., Gulf Ports Steamship Co. Ltd., La Cie de Transport du Bas St-Laurent Ltée., Magdalen Islands Transportation Co. Ltd., La Traverse Rivière-du-Loup-St-Siméon, Ltée. D. A. Clarke, President S. D. Clarke, General Manager J. Hutcheson, Assistant Traffic Manager Brock F. Clarke, Counsel	Montreal	B-68	T.3437, 5503
Collingwood Shipyards Limited and Town of Collingwood G. Braniff, Mayor of Collingwood W. H. Cranston, Editor and owner of Midland Free Press, Midland, Ont. H. W. Walton, Vice-President and General Manager, Collingwood Shipyards Ltd.	Collingwood, Ont.	B-63	T.4452, 4498
Collingwood, Town of G. Braniff, Mayor	Collingwood, Ont.	B-138	T.4445

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Consolidated Paper Corp. Ltd. J. Henri Plouffe, Traffic Manager	Montreal	B-37	T.3115
Constantine Lines Limited Alexander H. Crosbie, Director, Murray Agencies, St. John's, Newfoundland	Middlesbrough, England.	B-66	T.802
Crane Limited Lucien Cowan, Executive Assistant	Montreal	B-74	T.3215
Darling Brothers Limited John Missler, Engineer, Marine Auxiliary Equipment Division	Montreal	B-5	T.3222
Davie Shipbuilding Limited R. Lowery, President R. Black, General Manager	Lauzon, P.Q.	B-136	T.2917, 4928
Davie Shipbuilding Limited (additional submission)	Lauzon, P.Q.	B-136	T.2917
Davie & Sons Ltd., Geo. T. A. Delagrave, President M. Paquet, General Manager R. Létourneau, Q.C., Counsel	Lauzon, P.Q.	B-135	T.2883
Desgagnés, Capt. Roger	St-Joseph-de-la-Rive (Charlevoix) P.Q.	B-9	
Dingwall Shipping Co. Ltd. B. F. Clarke, Counsel	Halifax	B-85	
Dingwall Shipping Co. Ltd. (additional submission)	Halifax	B-167 Ex. 207	T.5057
Dominion Marine Association Capt. R. S. Misener, President, Colonial Steamships Ltd. Capt. H. R. Baxter, Operating Manager, Canada Steamship Lines Ltd. Harold Crate, Chartered Accountant with firm Thorne, Mulholland, Howson & McPherson Ira McEwen, Traffic Manager, N. M. Paterson & Sons Limited Ernest Bustard, Naval Architect Frank Rowan, Montreal Manager, Canadian Wheat Board, and Assistant Transport Controller George R. Donovan, Secretary F. O. Gerity, Counsel J. L. McDougall, Professor of Economics, Queen's University, Kingston, Ont.	Toronto	B-28	T.341
Dominion Marine Association (additional submission)	Toronto	B-146 Ex. 7	T.353
Dominion Marine Association (additional submission)	Toronto	B-147	T.3690

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Dominion Marine Association (additional submission)	Toronto	B-148	T.3947
Dominion Marine Association (additional submission)	Toronto	B-160 Ex. 165	T.4921
Dominion Marine Association (additional submission)	Toronto	B-168	T.5115, 5660
Dominion Steel & Coal Corporation Ltd. T. S. McLanders, Executive Assistant	Sydney, N.S.	B-149	T.1098
Dundee, Perth and London Shipping Co. Ltd.	Dundee, Scotland	B-97	
Ecole de Marine de Rimouski Capt. Jacques Gendron, Commanding Officer	Rimouski, P.Q.	B-10	T.3015
Fairbanks-Morse Co., Limited, Canadian George R. Wyer, Executive Vice-President James McClure, Assistant Manager, Marine Division	Montreal	B-83	T.3267
Federated Co-operatives Limited	Saskatoon	B-45	
Ferguson Industries Limited A. A. Ferguson, President	Pictou, N.S.	B-102	T.1276
Fisheries Council of Canada	Ottawa	B-104	
Fort William, City of E. W. Charnock, representing City of Fort William and Chamber of Commerce J. E. Young, Alderman J. J. Spooner, Alderman George Houston, Chamber of Commerce	Fort William, Ont.	B-46	T.1605, 1682
Foster Wheeler Limited E. L. Armstrong, Public Relations	St. Catharines, Ont.	B-7	T.4841
Furness, Withy & Co. Ltd. James Halley, Counsel E. P. Rees, Resident Director of Canadian Operations, Montreal	Montreal	B-13	T.856
Furness, Withy & Co. Ltd. (additional submission)	Montreal	B-170	T.5185, 5390
Gillespie-Munro Limited David B. Munro, Vice-President	Montreal	B-91	T.3395
Grand Manan Board of Trade	Grand Manan, N.B.	B-24	
Gypsum Lime and Alabastine Canada Limited J. Handley, Traffic Manager	Toronto	B-94	T.4804
Hamilton Chamber of Commerce J. G. Saunders, General Secretary and Manager, Transportation Department George Armstrong, Chairman, Industrial Transportation Committee	Hamilton	B-61	T.4503
Hamilton Chamber of Commerce (additional submission)	Hamilton	B-128 Ex. 154	T.4504
Hudson Bay Route Association R. H. MacNeill, Executive Director	Saskatoon	B-58	

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Hudson Bay Route Association (additional submission)	Saskatoon	B-124 Ex. 69	T.2740
Industrial Union of Marine and Shipbuilding Workers of Canada, Local No. 3 and Associated Groups J. M. Foster E. Mellis W. McGrath L. Vincent	Saint John, N.B.	B-16	T.1513
Inglis Co. Ltd., John P. J. Baldwin, Executive Assistant W. S. Phillip, Manager, Turbine Division	Toronto	B-99	T.4855
Inglis Co. Ltd., John (additional submission)	Toronto	B-151	T.4857
Interprovincial Farm Union Council Jacob Schultz, Chairman	Saskatoon	B-112	T.2715
Iron Ore Company of Canada Hugh O'Donnell, Q.C., Counsel	Montreal	B-108	T.3425
Iron Ore Transport Co. Ltd. Hugh O'Donnell, Q.C., Counsel	Montreal	B-109	T.3432
Island Tug & Barge Limited and Young & Gore Tugboats Ltd. H. B. Elworthy, President, Island Tug & Barge Limited O. M. Prentice, Secretary-Treasurer and Director	Victoria	B-54	T.2022
Kennedy & Sons Ltd., William A. A. Kennedy	Owen Sound, Ont.	B-18	T.4482
Kent Lines Ltd., Brunswick Motors Ltd., Irving Pulp & Paper Ltd. K. C. Irving, President and Managing Director, Irving Pulp & Paper Ltd., and President of Kent Lines Ltd. J. F. H. Teed, Q.C., Counsel	Saint John, N.B.	B-129 Ex. 164	T.4881
Kent Lines Ltd., Brunswick Motors Ltd., Irving Pulp & Paper Ltd. (additional submission)	Saint John, N.B.	B-173	T.5254, 5374
Labour-Progressive Party, B.C. S. P. Zlotnik	Vancouver	B-118 Ex. 63	T.2489
Lunenburg Foundry & Engineering Limited Hon. J. J. Kinley, President John J. Kinley, Jr., Vice-President and Managing Director	Lunenburg, N.S.	B-130 Ex. 34	T.1299
MacMillan & Bloedel Limited Ralph Shaw, Vice-President (Sales)	Vancouver	B-42	T.2200
Manitoba Federation of Agriculture and Co-operation Robert E. Moffat, Counsel	Winnipeg	B-125 Ex. 70	T.2765

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Manitoba, Province of Hon. D. L. Campbell, Premier G. E. Sharpe, Mayor of Winnipeg C. D. Shepard, Q.C., Counsel Dr. Harold M. Mayer, Assistant Professor of Geography, University of Chicago Dr. Ezra Solomon, Assistant Professor, School of Business, University of Chicago	Winnipeg	B-77	T.1761, 5563
Manson's Landing Community Activities Committee Elton A. Anderson, Executive Member, Manson's Landing Community Club	Manson's Landing, B.C.	B-116	T.2294
Marine Industries Limited Arthur Simard, Director Cameron Hawken, Secretary and Assistant Controller F. Paul-Hus, Naval Architect	Sorel, P.Q.	B-152	T.4311
Marine Industries Limited (additional submission)	Sorel, P.Q.	B-165	T.5052, 5885
Maritime Marine Workers' Federation (C.C.L.) J. K. Bell, Secretary-Treasurer, Maritime Marine Workers' Federation J. Fleming, President, Industrial Shipworkers' Union, Local 1 M. A. Lowe, Executive Member	Halifax	B-15	T.1160
Maritimes Transportation Commission A. M. McKay, President Rand H. Matheson, Executive Manager M. R. Chappell, Cape Breton Associated Boards of Trade A. T. Parkes, Secretary, Maritime Board of Trade T. S. McLanders, Executive Assistant, Dominion Steel & Coal Corporation, Sydney, N.S. H. D. Smith, Counsel C. McKay, Chairman, Transportation Committee, Maritime Lumber Bureau	Moncton, N.B.	B-100	T.1088, 1431, 5397
Markland Shipping Co. Ltd.	Liverpool, N.S.	B-131 Ex. 35	T.1349
McAvity & Sons Limited, T.	Saint John, N.B.	B-32	
Midland, Town of, and Midland Shipyards Limited Charles N. Parker, Mayor of Midland H. W. Walton, Vice-President and Director, Collingwood Shipyards Ltd., and Midland Shipyards Ltd. W. H. Cranston, Editor and owner, Midland Free Press, Midland, Ont.	Midland, Ont.	B-64	T.4452, 4498

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Montreal, St. Lawrence Municipal Bureau of George Mooney, Director Albert Berthiaume, Q.C., Representing the City of Montreal	Montreal	B-84	T.3076
Montreal Trades and Labour Council Roméo Gérard, Secretary John McGough, District Secretary, Great Lakes and Eastern District, National Association of Marine Engineers of Canada Capt. J. J. DesLauriers, Agent, Canadian Merchant Service Guild, Eastern Division Leonard J. McLaughlin, Secretary-Treasurer, Seafarer's International Union of North America, Canadian District	Montreal	B-153	T.3648
National Association of Marine Engineers of Canada, Inc. H. B. McKie, Secretary	Vancouver	B-3	T.2370, 2429
National Council of Shipyard Unions J. K. Bell, Secretary-Treasurer	Halifax	B-107	T.1553
Newfoundland Canada Steamships Limited Lawrence F. Daly, Counsel	Halifax	B-132 Ex. 33	T.1244
Newfoundland, Committee on Coastal Shipping of Ross Young, Chairman, and Member of Newfoundland Fisheries Development Authority James Grieve, Member, and Chairman of Newfoundland Shipowners and Shipbuilders' Advisory Committee Richard A. Harvey, Member, and Director, Vessel Construction and Inspection, Newfoundland Department of Fisheries Capt. Archibald Hayes, President, Newfoundland Coasting Association J. J. Greene, Counsel	St. John's, Nfld.	B-76	T.956
Newfoundland, Committee on Coastal Shipping of (additional submission)	St. John's, Nfld.	B-162 Ex. 236	T.5941
Newfoundland Fluorspar Limited Dr. Warren S. Smith, Manager	St. Lawrence, Nfld.	B-48	T.783
Newfoundland, Province of Hon. J. Smallwood, Premier Hon. P. J. Lewis, Q.C., Minister without Portfolio Douglas C. Hunt, Government Counsel J. A. Crosbie, Assistant Government Counsel Edgar Miller, Chairman, Newfoundland Board of Trade Transportation Commission and Vice-Chairman, Maritimes Transportation Commission	St. John's, Nfld.	B-56	T.503, 5334

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Newfoundland, Province of (Cont'd) Roy Cheeseman, Manager, Bowring Brothers Wholesale and Vice-Chairman, Wholesale Section, Newfoundland Board of Trade Rand H. Matheson, Executive Manager, Maritimes Transportation Commission Dr. Ernest Leja, Managing Director, Atlantic Gypsum Limited. Anthony E. Ballock, Assistant to General Manager, Bowaters' Newfoundland Pulp and Paper Mills Limited Arthur Johnson, Secretary, Gadens Ltd. Frederick A. J. Laws, Manager, Newfoundland Associated Fish Exporters Limited G. Campbell Eaton, Director, Fisheries Products Limited Spencer G. Lake, Managing Director, Gaultois Fisheries and Burger Fish Industries, Limited Alexander H. Crosbie, Director, Murray Agencies, St. John's, Newfoundland Chesley A. Crosbie, President, Chimo Shipping Limited James B. Steinhauer, Managing Director, Newfoundland Coal Company Cyril Horwood, President, Newfoundland Board of Trade	St. John's, Nfld.	B-56	T.503, 5334
Newfoundland-Great Lakes Steamships Limited Charles H. Tregenza, President H. L. Rowntree, Counsel	Toronto	B-70	T.901, 5930
Newfoundland Transportation Company Limited	St. John's, Nfld.	B-4	
Nicholson, George	Victoria	B-20	T.2081
North Star Cement Limited	Corner Brook, Nfld.	B-11	
Ontario Mayors and Reeves, Association of	Toronto	B-53	
Ontario Shipping Intelligence Publishing Co. C. L. C. Allinson, owner	Toronto	B-95	T.4822
Owen Sound Chamber of Commerce J. McCansh, President	Owen Sound, Ont.	B-27	T.4406
Parrsboro and District Board of Trade Rev. W. R. Anthony, Secretary	Parrsboro, N.S.	B-31	T.1229
Peacock Brothers Limited	Montreal	B-23	
Plymouth Cordage Company of Canada Limited	Welland, Ont.	B-86	
Port Arthur Chamber of Commerce Fred Robinson, Mayor of Port Arthur William Brayshaw, Alderman	Port Arthur, Ont.	B-35	T.1607

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Port Arthur Shipbuilding Company Ltd. G. F. McDougall, General Manager	Port Arthur, Ont.	B-73	T.1639
Prince Edward Island, Province of Hon. E. Matheson, Premier Hon. Eugene Cullen, Minister of Agriculture Elric W. Campbell, Secretary, Prince Edward Island Potato Dealers' Association Rand H. Matheson, Executive Manager, Maritimes Transportation Commission J. O. C. Campbell, Q.C., Counsel	Charlottetown	B-154	T.1350
Project Sales Limited P. F. Sorenson, President B. M. Scriver, Vice-President	Montreal	B-105	T.3187
Quebec Board of Trade Yves Poisson, Secretary Marc Turcotte, Professor, Faculty of Commerce, Laval University, Quebec City Louis Pratte, Counsel A. Proteau, President	Quebec	B-89	T.2811
Quebec Board of Trade (additional submission)	Quebec	B-133 Ex. 71	T.2811
Quebec Federation of Labour R. Provost, President J. McGough, District Secretary, National Association of Marine Engineers of Canada Capt. J. J. DesLauriers, representing Canadian Merchant Service Guild Inc.	Montreal	B-155	T.3622
Rimouski Marine School (See Ecole de Marine de Rimouski)			
Saguenay Terminals Limited W. Baatz, Treasurer	Montreal	B-62	T.3330
Saint John Dry Dock Co. Ltd. Frank G. Wilson, Vice-President	Saint John, N.B.	B-156	T.1464
Saskatchewan Farmers Union W. J. Ferguson, Second Vice-President	Saskatoon	B-121 Ex. 66	T.2587
Saskatchewan, Province of Hon. J. T. Douglas, Minister of Highways and Transportation F. L. Cronkite, Q.C., Dean of Law, University of Saskatchewan, Saskatoon, Sask. Bernard Sufrin, Economist, Provincial Government	Regina	B-90	T.2507
Saskatchewan, Province of (additional submission)	Regina	B-120 Ex. 65	T.2509
Saskatchewan, Province of (Department of Agriculture)	Regina	B-21	

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Saskatchewan Wheat Pool Arthur Stevens, Assistant Secretary Percy A. Evans, Export Manager (Winnipeg) R. H. Milliken, Q.C., Counsel J. J. Norquay, Vessel Agent, (Winnipeg)	Regina	B-122 Ex. 67	T.2602, 2741
Shaw Steamship Co. Ltd.	Halifax, N.S.	B-6	
Shipbuilding Conference of the United Kingdom S. G. Dixon, Q.C., Counsel	London, England	B-25	T.3201
Shipping Federation of Canada James B. Boyle, President Charles T. Mearns, Secretary Jean Brisset, Q.C., Counsel	Montreal	B-65	T.3735, 5701
Shipping Federation of Canada (additional submission)	Montreal	B-157	T.3786
Simcoe County Council, Industrial Committee of, and Advisory Committee on Local Employment, Midland Area Charles N. Parker, Mayor of Midland W. H. Cranston, Editor and owner of Midland Free Press, Midland, Ont.	Midland, Ont.	B-30	T.4368
St. Lawrence Corporation Ltd. C. D. Jentz, Manager, Newsprint Division D. Malone, Stevedore	Trois-Rivières, P.Q.	B-159	T.3063
St. Lawrence Shipowners' Association Inc. André Verge, Counsel	Quebec	B-49	T.2974
St. Lawrence Shipowners' Association Inc. (additional submission)	Quebec	B-158	T.2975
Straits Towing Limited Graham Chambers	Vancouver	B-117 Ex. 62	T.2481
Sun Steamships Limited	Toronto	B-22	
Swainson, Neil A., School Teacher	Victoria	B-113 Ex. 53	T.2105
Three Rivers, City of (See Trois Rivières. Cité des)			
Tombs Limited, Guy	Montreal	B-44	
Toronto Board of Trade J. C. Noseworthy, Traffic Manager	Toronto	B-50	T.4584
Toronto Harbour Commissioners E. B. Griffith, General Manager	Toronto	B-134 Ex. 155	T.4578
Trades and Labour Congress of Canada Claude Jodoin, President L. E. Wismer, Director of Research	Ottawa	B-34	T.170
Trois-Rivières, Cité des Laurent Paradis, Mayor Marcel Ouellet, Industrial Commissioner Claude Bisson, representing Junior Chamber of Commerce	Trois-Rivières, P.Q.	B-110	T.3026

Organizations and Persons	*Addresses*	*Briefs*	*Transcript Pages*
Union Steamships Limited John F. Ellis, General Manager G. A. Rushton, Assistant General Manager	Vancouver	B-93	T.2312
Union Steamships Limited (additional submission)	Vancouver	B-115 Ex. 57	T.2307
United Steelworkers of America, Local 5055 James C. Hill, Staff Representative	Port Arthur, Ont.	B-114	T.1706
Vancouver, New Westminster & District Metal Trades Council, Victoria and District Metal Trades Council, Shipyard General Workers' Federation John W. Bruce, Organizer, United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada	Vancouver	B-36	T.2393
Watts Limited, A. E. H. W. Wray, General Manager	Ville-St-Laurent, P.Q.	B-39	T.3231
West Point Ferries Limited Peter M. McCaull, Director J. O. C. Campbell, Q.C., Counsel	O'Leary, P.E.I.	B-29	T.1414
Windsor Chamber of Commerce M. A. Elder, Industrial Commissioner for Chamber of Commerce	Windsor, Ont.	B-47	T.4846
Winnipeg Chamber of Commerce Evan McCormick, Executive Director	Winnipeg	B-96	T.2657
Winnipeg Chamber of Commerce (additional submission)	Winnipeg	B-123 Ex. 68	T.2657
Zwicker & Company Limited F. Homer Zwicker, Managing Director Capt. E. H. Himmelman, Operator of small coasting vessels out of La Have and Lunenburg	Lunenburg, N.S.	B-67	T.1329

APPENDIX VII

Chronological Table of Selected Statutes

Selected Statutes of the United Kingdom Parliament Affecting Coasting Trade of Canada

An Act to Amend the Laws in Force for the Encouragement of British Shipping and Navigation, 1849, 12 and 13 Vict. c. 29, ss. 2-6.

Customs Consolidation Act, 1853, 16 and 17 Vict. c. 107, ss. 151-158, ss. 163 and 164, ss. 190 and 191 and ss. 324-331.

An Act to Admit Foreign Ships to the Coasting Trade, 1854, 17 and 18 Vict. c. 5.

An Act to Consolidate Certain Acts and Otherwise Amend the Laws of the Customs and An Act to Regulate the Office of the Receipt of Her Majesty's Exchequer of Westminster, 1855, 18 and 19 Vict. c. 96, ss. 13-16.

Merchant Shipping Act, 1854, 17 and 18 Vict. c. 104, s. 547.

The Merchant Shipping Acts Repeal Act, 1854, 17 and 18 Vict. c. 120.

The Merchant Shipping (Colonial) Act, 1869, 32 Vict. c. 11.

The Naturalization Act, 1870, 33 Vict. c. 106.

The Merchant Shipping Act, 1894, 57 and 58 Vict. c. 60.

The British Nationality and Status of Aliens' Act, 1914, 4 and 5 Geo. V, c. 17.

The Statute of Westminster, 1931, 22 Geo. V, c. 4.

Statutes of Canada Affecting Coasting Trade and Shipbuilding and Repairing

An Act Respecting the Coasting Trade of Canada, 1870, 33 Vict. c. 14.

An Act to Amend "An Act Respecting the Coasting Trade of Canada" 1875, 38 Vict. c. 27.

An Act to Alter the Duties of Customs and Excise, 1879, 42 Vict. c. 15, Schedule A.

The Naturalization Act, Canada, 1881, 44 Vict. c. 13.

An Act Further to Amend the Several Acts Imposing Duties of Customs Now in Force, 1882, 45 Vict. c. 6, s. 2.

An Act Respecting the Coasting Trade of Canada, R.S.C. 1886, c. 83.

The Naturalization Act, R.S.C. 1886, c. 113.

An Act Respecting the Duties of Customs, R.S.C. 1886, c. 33, Schedule A, item 574.

In the R.S.C. of 1886 the law on shipping was contained in a number of separate Acts with chapter numbers 72 to 86 of the R.S.C.

The Customs Tariff Act, 1897, 60-61 Vict. c. 16, Schedule A, item 409.

An Act Respecting the Coasting Trade of Canada, 1902, 2 Edw. VII, c. 7.

An Act to Amend the Customs Tariff, 1897, 1903, 3 Edw. VII, c. 15, s. 2.

The Canada Shipping Act, R.S.C. 1906, c. 113, consolidating previous separate Acts on Shipping including the Act on Coasting Trade as Part XVI.

The Customs Tariff, R.S.C. 1906, c. 49.

The Naturalization Act, R.S.C. 1906, c. 77.

The Customs Tariff, 1907. 1907, 6-7 Edw. VII, c. 11. Schedule A, items 589 and 590.

An Act to Amend the Customs Act, 1908, 7-8 Edw. VII, c. 19, s. 2.

An Act to Amend the Canada Shipping Act, 1908, 7-8 Edw. VII, c. 64.

The Naturalization Act, 1914. 1914, 4-5 Geo. V, c. 44.

The Special War Revenue Act, 1915. 1915, 5 Geo. V, c. 8.

An Act to Amend the Special War Revenue Act, 1915. 1920, 10-11 Geo. V, c. 71, s. 2.

An Act to Amend the Special War Revenue Act, 1915. 1921, 11-12 Geo. V, c. 50, s. 1.

An Act to Amend the Canada Shipping Act, 1923. 13-14 Geo. V, c. 36.

The Inland Water Freight Rates Act, 1923. 1923, 13 and 14 Geo. V, c. 48.

An Act to Amend the Canada Shipping Act, 1924, 14-15 Geo. V, c. 11.

An Act to Amend The Inland Water Freight Rates Act, 1923. 1924, 14-15 Geo. V, c. 49.

The following chapters of The Revised Statutes of Canada, 1927:

The Canada Shipping Act, c. 186, Part XVI.
The Naturalization Act, c. 138.
The Special War Revenue Act, c. 179, Schedule III.
The Customs Act, c. 42.
The Customs Tariff, c. 44.
The Inland Water Freight Rates Act, c. 208.

An Act Respecting the Department of National Revenue 1927, 17 Geo. V, c. 34.

An Act to Amend the Income War Tax Act, 1928, 18-19 Geo. V, c. 12.

The British Commonwealth Merchant Shipping Agreement. Printed statutes of 1932, Prefix p. IX.

The Canada Shipping Act, 1934, 24-25 Geo. V, c. 44, Part XIII.

The Transport Act, 1938, 2 Geo. VI, c. 53.

An Act to Amend The Transport Act, Statutes of 1944-45, 8-9 Geo. VI, c. 25.

The Canadian Citizenship Act, 1946, 10 Geo. VI, c. 15.

The Canadian Maritime Commission Act, 1947, 11 Geo. VI, c. 52.

An Act to Amend the Canada Shipping Act, 1934. 1948, 11-12 Geo. VI, c. 35, s. 52.

Canadian Vessel Construction Assistance Act, 1949 (2nd Session), 13 Geo. VI (2nd Session), c. 43.

An Act to Approve the Terms of Union of Newfoundland with Canada, 1949, 13 Geo. VI, c. 1, Term 32.

An Act to Amend the Canada Shipping Act, 1950, 14 Geo. VI, c. 26, s. 5.

The following chapters of the Revised Statutes of Canada 1952 dealing with aspects of Coasting Trade and Shipbuilding and Repairing:

The Canada Shipping Act, c. 29, Part XIII.
The Transport Act, c. 271.
The Customs Act, c. 58, ss. 54 and 273.
The Customs Tariff, c. 60, Schedule A, items 440 and 440a.
The Excise Tax Act, c. 100, Schedule III.
The Canadian Citizenship Act, c. 33.
The Inland Water Freight Rates Act, c. 153.
The Income Tax Act, c. 148, s. 10 (1) (c).
The Canadian Vessel Construction Assistance Act, c. 43.
The Maritime Freight Rates Act, c. 174.

An Act to Amend the Canadian Vessel Construction Assistance Act, 1952-53, 1-2 Eliz. II, c. 14.

An Act to Amend the Department of Transport Act, 1954. 2-3 Eliz. II, c. 30, s. 6A.

Transport Control Regulations O in C P.C. 1954-807 of June 1, 1954, Canada Gazette. Part II, p. 499, S.R.O./54-213.

An Act to Amend the Navigable Waters Protection Act, 1954, 2-3 Eliz. II, c. 37, Great Lakes Seamen Security Regulations, O in C P.C. 1954-862 of June 10, 1954, Canada Gazette Part II, 1954, p. 530; S.R.O./54-235.

Ship Construction Drawback Regulations, O in C P.C. 1954-835 of June 3, 1954, Canada Gazette Part II, 1954, p. 512, S.R.O./54-220—under section 273 (k) of Customs Act.

An Act to Amend the Transport Act, 1955, 3 and 4 Eliz. II, c. 59.

APPENDIX VIII

British Commonwealth Merchant Shipping Agreement

Signed at London on 10th December, 1931.

His Majesty's Governments in the United Kingdom of Great Britain and Northern Ireland, Canada, the Commonwealth of Australia, New Zealand, the Union of South Africa, the Irish Free State and Newfoundland, having considered the report of the Conference on the Operation of Dominion Legislation and Merchant Shipping Legislation, 1929, undertake to propose any necessary legislation and take such other steps as may be required for the purpose of giving full effect to the provisions of the present Agreement with regard to Merchant Shipping.

Part I — Common Status.
Part II — Standards of Safety.
Part III — Extra-territorial Operation of Laws.
Part IV — Equal Treatment.
Part V — Ships' Articles, Internal Discipline, and Engagement and Discharge of Seamen.
Part VI — Certificates of Officers.
Part VII — Shipping Enquiries.
Part VIII — Relief and Repatriation of Seamen; Wages and Effects of deceased Seamen.
Part IX — Offences on Board Ship.
Part X — General.

Article 1.—In this agreement, unless the context otherwise requires, the following expression has the meaning hereby assigned to it, that is to say:—

"Part of the Commonwealth" means any Part of the British Commonwealth of Nations the Government of which is a party to this Agreement.

PART I

Common Status
Common Qualifications

Article 2.—(1) No ship shall be registered in any port within the British Commonwealth so as to acquire the status and recognition mentioned in paragraph (2) of this Article unless it is owned wholly by persons of the following description, namely:—

(a) Persons recognized by law throughout the British Commonwealth of Nations as having the status of natural born British subjects;

(b) Persons naturalized by or in pursuance of the law of some part of the British Commonwealth;

(c) Persons made denizens by letters of denization; and

(d) Bodies corporate established under and subject to the law of some part of the British Commonwealth and having their principal place of business within the British Commonwealth.

(2) Every ship so owned and duly registered within the British Commonwealth shall possess a common status for all purposes and shall be entitled to the recognition usually accorded to British ships.

Registry

Article 3.—The laws, regulations, forms and procedure relating to the matters following, that is to say:—

Obligation to Register;
Certificate of Registry;
Transfer and Transmissions;
Mortgages;
Certificates of Mortgage and Sale;
Name of Ship;
Registry of Alterations, Registry Anew, and Transfer of Registry;
Incapacitated Persons;
Trusts and Equitable Rights;
Liability of Beneficial Owner;
Managing Owner;
Declarations, Inspection of Register and Fees;
Returns, Evidence and Forms;
Forgery and False Declarations;
Measurement of Ship and Tonnage;

shall be substantially the same throughout the British Commonwealth and so far as possible be based on Part 1 of the Merchant Shipping Act, 1894.

Article 4.—In order that there may be a complete list of ships registered in all parts of the British Commonwealth for statistical purposes, particulars (such as the name of the ship, the registered number, the port to which she belongs, the name of the registered owner, and the tonnage) relating to all ships registered at their ports, will be forwarded by the Administration of each Part of the Commonwealth at convenient intervals to the Registrar General of Shipping and Seamen in London. Copies of the complete list shall be forwarded annually to the Administration of each Part of the Commonwealth.

National Colours

Article 5.—It being recognized that the proper national colours for all ships registered in any Part of the Commonwealth shall be such as may be determined by the Government of that Part, each Part of the Commonwealth undertakes to prohibit under penalty (a) the use by ships registered in that Part of any national colours other than those determined for those ships; (b) the hoisting on board any ship registered in that Part of colours proper to a ship of war or resembling any of those colours, without proper warrant.

PART II

Standards of Safety

Article 6.—While each Part of the Commonwealth will from time to time determine the standards with which its ships shall be required to comply in all matters relating to safety, every endeavour will be made to preserve uniformity and to maintain the standards at present in force.

Article 7.—Each Government which proposes to make an alteration of substance in these standards will give as long notice as practicable to the other Governments of the proposed alteration and of the reasons for it.

Article 8.—Subject to the provisions of Part IV, nothing in this Agreement affects the right of each Part to apply to any ship trading to its ports its regulations regarding the safety of ships, their crews and passengers, except in so far as the ship complies with regulations accepted by the Part as equivalent to its own regulations.

PART III

Extra-Territorial Operation of Laws

Article 9.—Save as otherwise specially provided in this Agreement, the laws relating to merchant shipping in force in one Part of the Commonwealth shall not be made to apply with extra-territorial effect to ships registered in another Part unless the consent of that other Part of the Commonwealth has been previously obtained:—

Provided that nothing contained in this Article shall be deemed to restrict the power of each Part of the Commonwealth to regulate the coasting trade, sea fisheries and fishing industry of that Part.

PART IV

Equal Treatment

Article 10.—Each Part of the British Commonwealth agrees to grant access to its ports to all ships registered in the British Commonwealth on equal terms and undertakes that no laws or regulations relating to seagoing ships at any time in force in that Part shall apply more favourably to ships registered in that Part, or to the ships of any foreign country, than they apply to any ship registered in any other Part of the Commonwealth.

Article 11.—While each Part of the British Commonwealth may regulate its own coasting trade, it is agreed that any laws or regulations from time to time in force for that purpose shall treat all ships registered in the British Commonwealth in exactly the same manner as ships registered in that Part, and not less favourable in any respect than ships of any foreign country.

Article 12.—Nothing in the present Agreement shall be deemed—

(i) to derogate from the right of every Part of the Commonwealth to impose customs tariff duties on ships built outside that Part: or

(ii) to restrict the right of the Government of each Part of the Commonwealth to give financial assistance to ships registered in that Part or its right to regulate the sea fisheries of that Part.

PART V

Ships' Articles

Internal Discipline and Engagement and Discharge of Seamen.

Article 13.—The form and contents of ships' articles if first opened in a Part of the Commonwealth, shall be those prescribed by the law of that Part, and if first opened elsewhere than within the British Commonwealth, shall be those prescribed by the law of the Part in which the ship is registered.

Article 14.—The powers and duties with respect to discipline on board a ship registered within the British Commonwealth shall, in so far as they are not derived from the ship's articles, be those made and provided by the laws and regulations in force in the Part of the Commonwealth in which the ship is registered.

Provided that if and so long as a ship, registered in one Part of the Commonwealth, is engaged wholly or mainly in the coasting trade of another Part, the powers and duties with respect to such discipline may be those made and provided by the laws and regulations in force in that other Part.

Provided also that in the case of a ship which is trading from a Part of the Commonwealth in which the principal place of business of her owners is situated, and not trading to the Part of the Commonwealth in which she is registered, the powers and duties with respect to such discipline may be those made and provided by the laws and regulations in force in the former Part.

Article 15.—Provision shall be made by law in each Part of the Commonwealth that whenever a seamen or apprentice deserts in that Part from a ship registered in another Part, any Court exercising summary jurisdiction in the Part in which the seamen or apprentice has deserted, and any Justice or Officer of such Court shall, on the application of the master of the ship, aid in apprehending the deserter, and, for that purpose may, on information given on oath, issue a warrant for his apprehension, and on proof of the desertion, order him to be conveyed on board his ship or delivered to the master or mate of his ship, or to the owner of the ship or his agent, to be so conveyed.

PART VI

Certificates of Officers

Article 16.—The standards of qualification to be required of applicants for certificates of competency and of service shall so far as possible be equal and alike throughout the British Commonwealth, and shall not be lower than those at present established.

Article 17.—Subject to any special provisions that may be made by any Part of the Commonwealth as to the qualifications to be required of officers on ships engaged in its coasting trade, a valid certificate of competency or service granted by one Part of the Commonwealth will be recognized throughout the British Commonwealth as indicating that the holder is duly qualified accordingly when serving on board any ship registered in that Part.

PART VII

Shipping Enquiries

Article 18.—The Government of each Part of the Commonwealth agrees to assist the Governments of the other Parts by providing for officers to hold preliminary enquiries (including the taking of depositions) into casualties to ships registered in such other Parts.

Article 19.—No Government of any Part of the Commonwealth will cause a formal investigation to be held into a casualty occuring to a ship registered in another Part save at the request or with the consent of the Government of that Part in which the ship is registered.

Provided that this restriction shall not apply when a casualty occurs on or near the coasts of a Part of the Commonwealth or whilst the ship is wholly engaged in the coasting Trade of a Part of the Commonwealth.

Article 20.—In all Parts of the Commonwealth the laws and regulations relating to the matters following, namely:—

Constitution of Courts having jurisdiction to hold formal investigations;
Holding of such Courts with the assistance of Assessors;
Classification of Assessors according to their qualifications;
Selection of Assessors according to the nature of the questions to be raised;
Notice of investigation and the service thereof;
Opportunity to be given to any person whose conduct may be impugned of making a defence;
Procedure on the hearing;
Rehearings and Appeals;

shall be, so far as possible, alike, and shall be based upon the provisions relating to formal investigations contained in Part VI of the Merchant Shipping Act, 1894, and the Shipping Casualties and Appeals and Rehearings Rules, 1923, made pursuant thereto.

Provided that

(1) the Administration of that Part of the Commonwealth in which a formal investigation is held shall alone be competent to order a rehearing thereof;

(2) an appeal from a decision of a Court of formal investigation shall lie to a Court in the Part of the Commonwealth in which the formal investigation was held and that Court shall be similar in its constitution and jurisdiction to a Divisional Court of Admiralty in England;

(3) a Court of formal investigation shall be empowered to cancel or suspend a certificate of competency or service granted by the Administration of another Part of the Commonwealth so only as to effect its validity within the jurisdiction of the Part in which the investigation is held, but the Administration by which the certificate was granted may adopt such cancellation or suspension.

Article 21.—Provisions shall be in force in each Part of the Commonwealth similar, so far as possible, to those contained in Part VI of the Merchant Shipping Act, 1894, relating to the special enquiry that may be held when there is reason to believe that any master, mate, or certificated engineer is from incompetency or misconduct unfit to discharge his duties.

Provided that the power of a Court holding such enquiry to cancel or suspend a certificate of competency or service granted by a Part of the Commonwealth other than that in which the enquiry is held shall be similar to the power of a Court of formal investigation under the last preceding Article.

PART VIII

Relief and Repatriation of Seamen Wages and Effects of Deceased Seamen

Article 22.—A scheme shall be drawn up to which each Part of the Commonwealth shall give legislative effect, under which provision shall be made:—

(a) for the relief and repatriation of seamen belonging to any Part of the Commonwealth who may be found in distress or left behind in any other Part or in places abroad, and for defraying the expenses;

(b) for payment of the expenses of medical attendance, maintenance, burial and repatriation in case of injury or illness of seamen;

(c) for dealing with the effects and wages of seamen who are left behind or die in a port outside the Part of the Commonwealth to which they belong;

(d) for the recovery from the owner of the ship in proper cases of any expenses incurred by the Administration of any Part of the Commonwealth in the matters referred to in paragraphs (a) and (b).

PART IX

Offences on Board Ship

Article 23.—Reciprocal arrangements shall be made for conferring jurisdiction on the lines of Section 686 of the Merchant Shipping Act, 1894, with respect to offences committed on board ships registered in any Part of the Commonwealth.

PART X

General

Article 24.—The present Agreement shall come into operation on the tenth day of December, 1931, and shall continue in full force for a period of five years and thereafter until the Government of any Part of the Commonwealth gives notice of intention to withdraw therefrom or from any Article thereof. A notice of withdrawal, if sent to the Governments of every other Part of the Commonwealth, shall take effect as regards the Part giving the notice to the extent therein specified at the expiration of twelve months from the date of its despatch, but shall not otherwise affect the continuance in full force of the present Agreement.

Article 25.—The present Agreement may be varied at any time during the continuance thereof by common accord. Proposals for variation shall be sent by the Government of the Part proposing the variation, to the Government of the United Kingdom, to be circulated to the Governments of the other Parts of the Commonwealth, who will consider the proposals and endeavour to agree upon the acceptance of the variation with or without amendment. If a common accord is reached with respect to any proposed variation the present Agreement shall be varied accordingly.

Article 26.—A conference to consider any matter the subject of the present Agreement or any other matter relating to Merchant Shipping which the Government of any Part of the Commonwealth considers to be of common interest, may be called at any time at the instance of the Governments of any three Parts of the Commonwealth.

Article 27.—This Agreement shall apply to all territories administered under the authority of the Government of any Part of the Commonwealth and to ships registered there, or in any foreign port of registry, and fulfilling the requirements as to ownership set out in Article 2 (1).

Signed at London this tenth day of December, 1931.

On behalf of

His Majesty's Government in the United Kingdom of Great Britain and Northern Ireland — J. H. Thomas.

His Majesty's Government in Canada — G. H. Ferguson.

His Majesty's Government in the Commonwealth of Australia — Granville Ryrie.

His Majesty's Government in New Zealand — T. M. Wilford.

His Majesty's Government in the Union of South Africa — C. T. te Water.

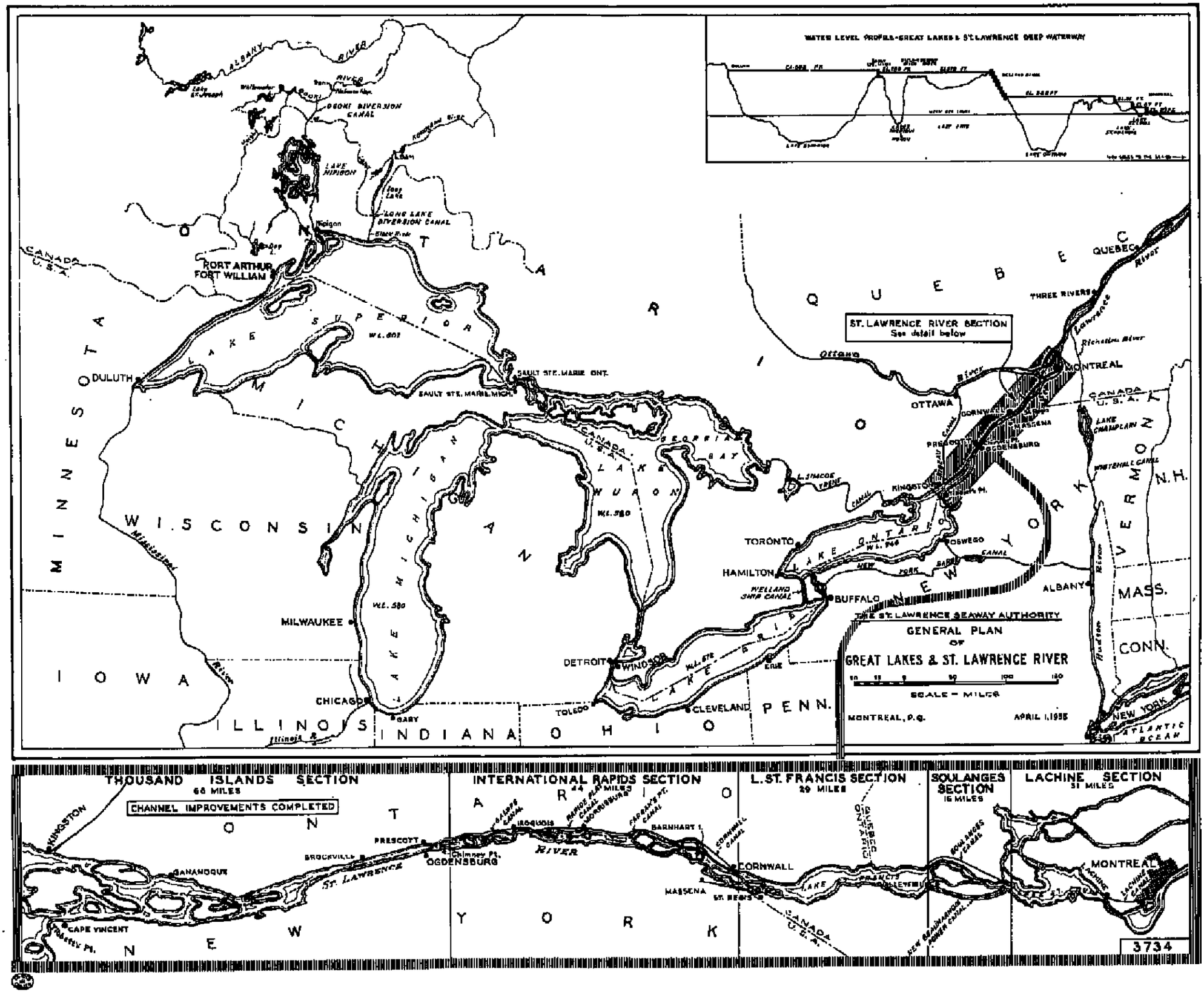
His Majesty's Government in the Irish Free State — John W. Dulanty.

His Majesty's Government in Newfoundland — **Morris.**

APPENDIX IX

General Plan of Great Lakes and St. Lawrence River

Facing Plate


WATER LEVEL PROFILE-GREAT LAKES & ST. LAWRENCE DEEP WATERWAY
ALBANY RIVER
LAKE NIPIGON
LONG LAKE DIVERSION CANAL
ONTARIO
PORT ARTHUR
FORT WILLIAM
CANADA U.S.A.
LAKE SUPERIOR
DULUTH
SAULT STE. MARIE ONT.
SAULT STE. MARIE, MICH.
MINNESOTA
WISCONSIN
LAKE MICHIGAN
GEORGIAN BAY
LAKE HURON
MILWAUKEE
CHICAGO
GARY
ILLINOIS
INDIANA
DETROIT
WINDSOR
LAKE ERIE
TOLEDO
CLEVELAND
PENN.
OHIO
ST. LAWRENCE RIVER SECTION
See detail below
QUEBEC
THREE RIVERS
MONTREAL
OTTAWA
KINGSTON
TORONTO
HAMILTON
LAKE ONTARIO
WELLAND SHIP CANAL
BUFFALO
OSWEGO
NEW YORK BARGE CANAL
ALBANY
NEW YORK
VERMONT
N.H.
MASS.
CONN.
LAKE CHAMPLAIN
ATLANTIC OCEAN
THE ST. LAWRENCE SEAWAY AUTHORITY
GENERAL PLAN
OF
GREAT LAKES & ST. LAWRENCE RIVER
SCALE - MILES
MONTREAL, P.Q.
APRIL 1, 1955
THOUSAND ISLANDS SECTION
66 MILES
CHANNEL IMPROVEMENTS COMPLETED
INTERNATIONAL RAPIDS SECTION
44 MILES
L. ST. FRANCIS SECTION
29 MILES
SOULANGES SECTION
16 MILES
LACHINE SECTION
51 MILES
KINGSTON
PRESCOTT
BROCKVILLE
OGDENSBURG
GANANOQUE
CAPE VINCENT
IROQUOIS
BARNHART I.
CORNWALL
MASSENA
ST. REGIS
MONTREAL
3734

APPENDIX X

CANADIAN MARITIME COMMISSION

Canadian Merchant Fleet

(December 31, 1956)

(Vessels of 1,000 Gross tons and over)

	No.	Gross Tons	Deadweight Tons
OCEAN-GOING FLEET			
War-built dry cargo ships			
10,000-tonners	5	35,672	50,968
4,700-tonners	6	17,650	27,360
Other dry cargo ships	7	36,391	42,760
	18	89,913	121,088
Tankers	8	96,252	148,915
	26	186,165	270,003
COASTWISE TRADING FLEET			
Passenger vessels and dry cargo vessels	55	167,732	82,410
Tankers	8	19,690	26,921
	63	187,422	109,331
GREAT LAKES FLEET			
Passenger vessels	5	13,060	5,710
Vessels limited to operations above the St. Lawrence canals:			
Dry cargo vessels	69	467,474	728,667
Tankers	2	25,233	36,810
	71	492,707	765,477
Vessels capable of traversing the St. Lawrence canals:			
Dry cargo vessels	156	309,820	460,019
Tankers	37	71,969	105,200
	193	381,789	565,219
SUMMARY OF CANADIAN-FLAG MERCHANT FLEET			
Passenger vessels and dry cargo vessels	303	1,048,019	1,397,884
Tankers	55	213,144	317,846
	358	1,261,163	1,715,740
CANADIAN VESSELS ON THE UNITED KINGDOM REGISTER UNDER TRANSFER ARRANGEMENTS			
10,000-tonners	82	585,806	851,774
4,700-tonners	3	8,656	13,872
Ore carriers	2	42,210	62,000
Other dry cargo vessels	3	16,672	21,358
	90	653,344	949,004

Ocean-going Canadian Flag CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OCEAN-GOING FLEET (Dec. 31, 1956)

	Tonnage		Draft	Speed	Fuel	Built[1]	
	Gross	Deadw't	Feet	Knots		Year	Country
DRY CARGO VESSELS							
Canadian National (West Indies) Steamships Limited, 384 St. James Street West, Montreal, Quebec							
Canadian Challenger	6,745	7,500	25.8	14.0	†	1946	Canada
Canadian Conqueror	2,930	4,532	20.9	10.0	*	1945	Canada *d*
Canadian Constructor	6,745	7,452	25.8	14.0	†	1946	Canada
Canadian Cruiser	6,746	7,460	25.8	14.0	†	1946	Canada
Canadian Highlander	2,966	4,532	20.9	10.0	*	1945	Canada *d*
Canadian Leader	2,930	4,532	20.9	10.0	*	1945	Canada *d*
Canadian Observer	2,967	4,532	20.9	10.0	*	1945	Canada *d*
Canadian Victor	2,963	4,532	20.9	10.0	*	1945	Canada *d*
Clarke Steamship Company Limited, Canada Cement Building, Phillips Square, Montreal, Quebec							
Gulfport	2,836	3,430	19.9	10.0	*	1943	Germany
Nocaport	2,828	3,475	19.9	10.0	*	1944	Germany
Dominion Shipping Company Limited, Sydney, Nova Scotia							
Arthur Cross	7,188	10,130	27.0	10.0	§	1944	Canada *ns*
Louisburg	7,183	10,130	27.0	10.0	§	1943	Canada *ns*
Wabana	7,179	10,130	27.0	10.0	§	1943	Canada *ns*
Markland Shipping Company Limited, Liverpool, N.S.							
Liverpool Packet	2,894	4,700	20.8	10.0	§	1945	Canada *rg*
Liverpool Rover	4,464	6,200	24.3	10.0	*	1929	U.K.
Markland	6,087	7,243	24.1	12.0	*	1953	U.K.
Vinland	7,160	10,268	26.9	10.5	*	1944	Canada *c*
Navico Shipping Company Limited, 410 St. Nicholas St., Montreal, Quebec							
Point Aconi	7,162	10,810	27.7	10.0	*	1944	Canada *v*
TANKERS							
Andros Shipping Company Limited, 200 St. James St., Montreal, Quebec							
Andros Fortune	17,847	28,070	34.3	16.5	*	1954	Canada
Andros Venture	17,845	28,070	34.3	16.5	*	1953	Canada

† diesel * bunker oil § coal

[1]Code letters indicating class of ex "Park" ships:
c Canadian *g* Grey *rg* Revised grey
d Dominion *ns* North sands *v* Victory

CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OCEAN-GOING FLEET (Dec. 31, 1956) (*Concl.*) **Ocean-going Canadian Flag**

	Tonnage		Draft	Speed	Fuel	Built[1]	
	Gross	Deadw't	Feet	Knots		Year	Country
Brunswick Motors Limited, P.O. Box 550, Saint John, N.B.							
Irvingdale	7,240	10,232	27.8	10.0	*	1943	Canada *v*
Deep Sea Tankers Limited, 25 Adelaide St. E., Toronto, Ont.							
Paloma Hills	10,632	16,551	30.1	14.3	*	1945	U.S.A.
Pinnacles	10,641	16,538	30.1	14.3	*	1944	U.S.A.
Rincon Hills	10,635	16,514	30.1	14.3	*	1945	U.S.A.
Imperial Oil Limited, Marine Division, 56 Church Street, Toronto 1, Ont.							
Imperial Edmonton	10,702	16,465	30.2	14.6	*	1944	U.S.A.
Imperial Toronto	10,710	16,475	30.2	14.6	*	1944	U.S.A.

CANADIAN-OWNED OCEAN-GOING VESSELS OF 1,000 GROSS TONS AND OVER ON THE UNITED KINGDOM REGISTER UNDER TRANSFER ARRANGEMENTS (Dec. 31, 1956) **Ocean-going U.K. Flag**

	Tonnage		Draft	Speed	Fuel	Built[1]	
	Gross	Deadw't	Feet	Knots		Year	Country
Acadia Overseas Freighters Limited, c/o I. H. Mathers & Son Limited, Foot of Duke Street, Halifax, Nova Scotia — Counties Ship Management Company Limited, 9 St. Helen's Place, London, E.C.3.							
Denmark Hill	7,150	10,287	26.9	10.0	*	1943	Canada *ns*
Malden Hill	7,168	10,290	26.9	10.0	*	1943	Canada *ns*
Streatham Hill	7,130	10,210	27.0	10.0	*	1943	Canada *ns*
Acadia Overseas Freighters (Halifax) Ltd., c/o I. H. Mathers & Son Limited, Foot of Duke Street, Halifax, Nova Scotia — Counties Ship Management Company Limited, 9 St. Helen's Place, London, E.C.3.							
Muswell Hill	7,131	10,384	27.0	10.0	*	1943	Canada *ns*
Notting Hill	7,150	10,330	27.0	10.0	*	1943	Canada *ns*
Tulse Hill	7,120	10,244	27.0	10.0	*	1943	Canada *ns*
Wembley Hill	7,150	10,450	27.0	10.0	*	1943	Canada *ns*

† diesel * bunker oil § coal

[1]Code letters indicating class of ex "Park" ships:

c Canadian *d* Dominion *g* Grey *ns* North sands *rg* Revised grey *v* Victory

Ocean-going U.K. Flag CANADIAN-OWNED OCEAN-GOING VESSELS OF 1,000 GROSS TONS AND OVER ON THE UNITED KINGDOM REGISTER UNDER TRANSFER ARRANGEMENTS (Dec. 31, 1956) (*Con.*)

	Tonnage					Built[1]	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	Knots			
Argonaut Navigation Company, c/o Messrs. Peat, Marwick, Mitchell & Co., P.O. Box 550, Montreal, Quebec			A. Lusi & Company, United Dominions House, Eastcheap, London, E.C.3.				
Argobec	7,138	10,240	26.9	10.0	*	1943	Canada *ns*
Argofax	7,187	10,700	27.7	10.0	*	1943	Canada *v*
Argojohn	7,159	10,775	27.7	10.0	*	1943	Canada *v*
Argovan	7,163	10,700	27.7	10.0	*	1943	Canada *v*
Black Lion Steamship Company Limited, c/o I. H. Mathers & Son Limited, Foot of Duke Street, Halifax, Nova Scotia			Bray Shipping Company Limited, 101 Leadenhall Street, London, E.C.3.				
Bembridge Hill	7,138	10,384	27.0	10.0	*	1944	Canada *ns*
Bristol City Line (Canada) Limited, 315 St. Sacrement Street, Montreal 1, Quebec			Bristol City Line of Steamships, Limited, 129 Cumberland Road, Bristol				
Montreal City	7,145	9,660	26.5	10.5	*	1945	Canada *c*
Canadian Hellenic Enterprises Limited, 2060 Bleury Street, Montreal, Quebec			C. M. Los (London) Limited, Dashwood House, Old Broad Street, London, E.C.2.				
Darton	7,122	10,330	27.0	10.0	*	1943	Canada *ns*
Canadian Tramp Shipping Company Limited, c/o Archibald & Cain, 132 St. James Street, West, Montreal, Quebec			Counties Ship Management Company Limited, 9 St. Helen's Place, London, E.C.3.				
East Hill	7,112	10,349	27.0	10.0	*	1943	Canada *ns*
West Hill	7,132	10,290	26.9	10.0	*	1944	Canada *ns*
Elder Dempster Lines (Canada) Limited, 230 Hospital Street, Montreal 1, Quebec			Elder Dempster Lines, India Buildings, Water Street, Liverpool 2.				
Cabano	7,218	10,270	26.9	10.0	*	1943	Canada *v*
Cambray	7,209	10,310	26.9	10.0	*	1944	Canada *v*
Cargill	7,216	10,270	26.9	10.0	*	1943	Canada *v*
Chandler	7,212	10,310	26.9	10.0	*	1944	Canada *v*
Cottrell	7,217	10,310	26.9	10.0	*	1944	Canada *v*

† diesel * bunker oil § coal

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c Canadian
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ns North sands
rg Revised grey
v Victory

CANADIAN-OWNED OCEAN-GOING VESSELS OF 1,000 GROSS TONS AND OVER ON THE UNITED KINGDOM REGISTER UNDER TRANSFER ARRANGEMENTS (Dec. 31, 1956) (*Con.*)

Ocean-going U.K. Flag

	Tonnage					Built[1]	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	Knots			
Fairview Overseas Freighters Limited, c/o I. H. Mathers & Son Limited, Foot of Duke Street, Halifax, Nova Scotia			C. M. Lemos & Company, Roman Wall House, 1 Crutched Friars, London, E.C.3.				
Johnstar	7,125	10,795	27.7	10.5	*	1942	Canada *ns*
Nordicstar	7,124	10,368	27.0	10.5	*	1943	Canada *ns*
Peterstar	7,119	10,850	27.7	10.5	*	1943	Canada *ns*
Falaise Steamship Company Limited, c/o I. H. Mathers & Son Limited, Foot of Duke Street, Halifax, Nova Scotia			Counties Ship Management Company Limited, 9 St. Helen's Place, London, E.C.3.				
Woldingham Hill	7,113	10,226	27.0	10.0	*	1943	Canada *ns*
Wynchwood Hill	7,137	10,320	26.9	10.0	*	1943	Canada *ns*
Federal Commerce & Navigation Co. Ltd., 410 St. Nicholas Street, Montreal, Quebec			Watts, Watts & Company Limited, 37 Threadneedle Street, London, E.C.2.				
Federal Voyager	7,140	10,750	27.7	10.5	*	1944	Canada *v*
Fort Erie Steamship Company Limited, c/o United Tramp Management Limited, 437 St. James Street, West, Montreal 1, Quebec			J. P. Hadoulis, 6 Lloyd's Avenue, London, E.C.3.				
Maidenhead	7,120	10,384	27.0	10.0	*	1943	Canada *ns*
Furness (Montreal) Limited, 315 St. Sacrement Street, Montreal 1, Quebec			Prince Line Limited, 56 Leadenhall Street, London, E.C.3.				
Brazilian Prince	7,158	9,300	26.9	10.5	*	1944	Canada *c*
Glenrock Shipping Company Limited, c/o Charbonneau & Murray, C.A., 437 St. James Street, West, Montreal 1, Quebec			J. P. Hadoulis, 6 Lloyd's Avenue, London, E.C.3.				
Lord Tweedsmuir	7,136	10,300	26.9	10.0	*	1943	Canada *ns*

† diesel * bunker oil § coal

[1]Code letters indicating class of ex "Park" ships:

c Canadian *g* Grey *rg* Revised grey
d Dominion *ns* North sands *v* Victory

Ocean-going U.K. Flag CANADIAN-OWNED OCEAN-GOING VESSELS OF 1,000 GROSS TONS AND OVER ON THE UNITED KINGDOM REGISTER UNDER TRANSFER ARRANGEMENTS (Dec. 31, 1956) (*Con.*)

	Tonnage					Built[1]	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	Knots			
Halifax Overseas Freighters Limited, c/o I. H. Mathers & Son Limited, Foot of Duke Street, Halifax, Nova Scotia			Counties Ship Management Company Limited, 9 St. Helen's Place, London, E.C.3.				
Beech Hill	7,150	10,290	26.9	10.0	*	1943	Canada *ns*
Cedar Hill	7,156	10,184	27.0	10.0	*	1944	Canada *ns*
Elm Hill	7,138	10,384	27.0	10.0	*	1943	Canada *ns*
Fir Hill	7,119	10,300	27.0	10.0	*	1944	Canada *ns*
Maple Hill	7,139	10,384	27.0	10.0	*	1943	Canada *ns*
Mulberry Hill	7,141	10,226	27.0	10.0	*	1944	Canada *ns*
Oak Hill	7,139	10,230	26.9	10.0	*	1943	Canada *ns*
Pine Hill	7,151	10,384	27.0	10.0	*	1943	Canada *ns*
Poplar Hill	7,127	10,384	27.0	10.0	*	1944	Canada *ns*
Sycamore Hill	7,124	10,384	27.0	10.0	*	1944	Canada *ns*
Iron Ore Transport Company Limited, 810 Cote de Liesse Road, Montreal, Quebec			C. T. Bowring & Company Limited, 52 Leadenhall Street, London, E.C.3.				
Ruth Lake	21,157	31,000	34.0	14.7	*	1956	U.K.
Sept Iles	21,053	31,000	33.9	15.5	*	1955	U.K.
Kawartha Steamship Company Limited, c/o Papachristidis Company, Limited, 28 St. James Street, West, Montreal 1, Quebec			Messrs. Nokomis (London) Limited, 23/24 Wormwood Street, London, E.C.2.				
Grande Hermine	7,151	10,270	27.8	10.0	*	1944	Canada *ns*
Kingsport Shipping Company Limited, 437 St. James Street, West, Montreal 1, Quebec			Camberley Steamship Company Limited, 9 Wormwood Street, London, E.C.2.				
Kingsbridge	7,142	10,372	27.7	10.0	*	1944	Canada *ns*
Kingsmount	7,132	10,310	26.9	10.0	*	1942	Canada *ns*
Laurentian Marine Company Limited, c/o Triton Steamship Company Limited, 485 McGill Street, Montreal, Quebec			Fernhill Steamship Company Limited, 24 Leadenhall Street, London, E.C.3.				
Laurentian Forest	7,144	10,310	27.0	10.0	*	1943	Canada *ns*
Laurentian Valley	7,148	10,310	27.7	10.0	*	1943	Canada *ns*

† diesel * bunker oil § coal

[1] Code letters indicating class of ex "Park" ships:
c Canadian *g* Grey *rg* Revised grey
d Dominion *ns* North sands *v* Victory

CANADIAN-OWNED OCEAN-GOING VESSELS OF 1,000 GROSS TONS AND OVER ON THE UNITED KINGDOM REGISTER UNDER TRANSFER ARRANGEMENTS (Dec. 31, 1956) (*Con.*)

Ocean-going U.K. Flag

	Tonnage					Built[1]	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	Knots			
Laurentide Steamship Company Limited, c/o Papachristidis Company Limited, 28 St. James Street, West, Montreal 1, Quebec			Messrs. Nokomis (London) Limited, 23/24 Wormwood Street, London, E.C.2.				
Petite Hermine	7,131	10,340	27.7	10.0	*	1943	Canada *ns*
Megantic Freighters Limited, c/o Charbonneau & Murray, C.A., 437 St. James Street, West, Montreal 1, Quebec			J. P. Hadoulis, 6 Lloyd's Avenue, London, E.C.3.				
Assimina K	7,142	10,384	27.0	10.0	*	1943	Canada *ns*
Montship Lines Limited, 410 St. Nicholas Street, Montreal, Quebec			Messrs. Buries Markes, Limited, Plantation House, Mincing Lane, London, E.C.3.				
Montclair	1,008	1,450	17.8	13.0	†	1956	Canada
North River Freighters Limited, c/o Nordic Ship Management Limited, 1200 Sherbrooke Street, West, Montreal 1, Quebec			Ships Finance & Management Co. Ltd., Bevis Marks House, Bevis Marks, London, E.C.3.				
Radnor	7,133	10,330	27.7	10.0	*	1943	Canada *ns*
Northeastern Freighters Limited, c/o Charbonneau & Murray, C.A., 437 St. James Street, West, Montreal 1, Quebec			J. P. Hadoulis, 6 Lloyd's Avenue, London, E.C.3.				
Commodore Grant	7,131	10,384	27.0	10.0	*	1943	Canada *ns*
Nova Scotia Marine Enterprise Company Ltd., c/o Nordic Ship Management Limited, 1200 Sherbrooke Street, West, Montreal 1, Quebec			Counties Ship Management Co. Ltd., 9 St. Helen's Place, London, E.C.3.				
Akti Hill	7,123	10,290	27.0	10.0	*	1944	Canada *ns*
Alendi Hill	7,121	10,230	27.0	10.0	*	1944	Canada *ns*
Fry Hill	7,132	10,250	27.0	10.0	*	1943	Canada *ns*
Marina Hill	7,151	10,330	27.0	10.0	*	1943	Canada *ns*

† diesel * bunker oil § coal

[1]Code letters indicating class of ex "Park" ships:

c Canadian *g* Grey *rg* Revised grey
d Dominion *ns* North sands *v* Victory

Ocean-going U.K. Flag CANADIAN-OWNED OCEAN-GOING VESSELS OF 1,000 GROSS TONS AND OVER ON THE UNITED KINGDOM REGISTER UNDER TRANSFER ARRANGEMENTS (Dec. 31, 1956) (*Con.*)

	Tonnage					Built[1]	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	Knots			
Novor Shipping Company Limited, c/o Messrs. Campbell, Glendinning & Dever, Halifax, Nova Scotia			Chandris (England) Limited, 7 St. Helen's Place, London, E.C.3.				
Novor Isobel	7,058	10,385	27.0	10.5	*	1943	Canada *ns*
Novor Jenny	7,135	10,340	27.0	10.5	*	1943	Canada *ns*
Novor Rita	7,133	10,385	27.0	10.5	*	1943	Canada *ns*
Othrys Shipping Company Limited, c/o United Tramp Management Limited, 437 St. James Street West, Montreal 1, Quebec			Marcou & Sons (Shipbrokers) Ltd., 15 Gravel Lane, London				
Othrys	7,128	10,384	27.0	10.0	*	1943	Canada *ns*
Ottawa Steamship Company Limited, c/o United Tramp Management Limited, 437 St. James Street, West, Montreal, Quebec			Coulouthros Limited, 24 Leadenhall Street, London, E.C.3.				
Amersham Hill	7,134	10,384	27.0	10.0	*	1943	Canada *ns*
Andover Hill	7,118	10,384	27.0	10.0	*	1943	Canada *ns*
Arundel Hill	7,119	10,384	27.0	10.0	*	1943	Canada *ns*
Rex Shipping Company Limited, c/o I. H. Mathers & Son Limited, Foot of Duke Street, Halifax, Nova Scotia			Hadjilias & Company Limited, 7-8 Bury Court, London, E.C.3.				
Brookhurst	7,149	10,284	26.9	10.0	*	1944	Canada *ns*
Fernhurst	7,131	10,350	27.7	10.0	*	1942	Canada *ns*
Midhurst	7,132	10,330	27.0	10.0	*	1942	Canada *ns*
Oakhurst	7,120	10,236	27.0	10.0	*	1943	Canada *ns*
Runnymede Steamship Company Limited, c/o Nordic Ship Management Limited, 1200 Sherbrooke Street, West, Montreal, Quebec			Ships Finance & Management Company Ltd., Bevis Marks House, Bevis Marks, London, E.C.3.				
Lake Michigan	7,139	10,384	27.0	10.0	*	1944	Canada *ns*
Saguenay Terminals Limited, Terminal Centre Building, 1060 University Street, Montreal 3, Quebec			John Kilgour & Company Limited, Gresham House, 24 Old Broad Street, London, E.C.2.				
Sundale	2,884	4,624	21.3	10.0	*	1944	Canada *g*

† diesel * bunker oil § coal

[1]Code letters indicating class of ex "Park" ships:
c Canadian *g* Grey *rg* Revised grey
d Dominion *ns* North sands *v* Victory

CANADIAN-OWNED OCEAN-GOING VESSELS OF 1,000 GROSS TONS AND OVER ON THE UNITED KINGDOM REGISTER UNDER TRANSFER ARRANGEMENTS (Dec. 31, 1956) (*Con.*)

Ocean-going U.K. Flag

	Tonnage					Built[1]	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
Saguenay Terminals Limited (*Concl.*)			Feet	Knots			
Sundial	2,877	4,624	21.3	9.7	*	1944	Canada *g*
Sunjarv	7,155	10,713	27.7	10.0	*	1944	Canada *c*
Sunjewel	7,150	10,713	27.7	10.0	*	1945	Canada *c*
Sunkirk	7,157	10,713	27.7	10.0	*	1944	Canada *c*
Sunmont	7,148	10,713	27.7	10.0	*	1945	Canada *c*
Sunprince	2,895	4,624	21.3	10.0	*	1945	Canada *g*
Sunrell	7,155	10,638	27.7	10.0	*	1943	Canada *v*
Sunvalley	7,155	10,716	27.7	10.0	*	1943	Canada *v*
Sunwhit	7,158	10,713	27.7	10.0	*	1944	Canada *c*
Seaboard Owners Limited, c/o Triton Steamship Company Limited, 485 McGill Street, Montreal, Quebec			Goulandris Brothers Limited, 61 St. Mary Axe, London, E.C.3.				
Seaboard Enterprise	7,190	10,750	27.7	10.0	*	1944	Canada *v*
Triton Steamship Company Limited, 485 McGill Street, Montreal, Quebec			Okeanis Shipping Company Limited, 61 St. Mary Axe, London, E.C.3.				
Tricape	7,136	10,310	27.0	10.0	*	1943	Canada *v*
Tridale	7,165	10,240	27.0	10.0	*	1943	Canada *ns*
Triland	7,138	10,380	27.0	10.0	*	1944	Canada *ns*
Vancouver Oriental Line Limited, c/o I. H. Mathers & Son Limited, Foot of Duke Street, Halifax, Nova Scotia			Counties Ship Management Company Limited, 9 St. Helen's Place, London, E.C.3.				
Harrow Hill	7,133	10,320	27.0	10.0	*	1943	Canada *ns*
Sudbury Hill	7,140	10,430	26.9	10.0	*	1943	Canada *ns*
Western Canada Steamship Company Ltd., Marine Building, 355 Burrard Street, Vancouver, B.C.			Lyle Shipping Company Limited, 36 Renfield Street, Glasgow, C.2.				
Lake Pennask	7,829	9,954	26.9	12.5	†	1953	U.K.
Table Bay	7,161	10,750	27.7	10.0	*	1944	Canada *v*

† diesel * bunker oil § coal

[1]Code letters indicating class of ex "Park" ships:

c Canadian *g* Grey *rg* Revised grey
d Dominion *ns* North sands *v* Victory

Ocean-going U.K. Flag CANADIAN-OWNED OCEAN-GOING VESSELS OF 1,000 GROSS TONS AND OVER ON THE UNITED KINGDOM REGISTER UNDER TRANSFER ARRANGEMENTS (Dec. 31, 1956) (*Concl.*)

	Tonnage					Built	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	Knots			
Western Canada Steamship Company Ltd. (*Concl.*)			Sir R. Ropner & Company Limited, 140 Coniscliffe Road, Darlington, Durham				
Lake Atlin	7,835	9,954	26.9	12.5	†	1953	U.K.
Lake Kootenay	7,167	10,710	27.7	10.0	*	1943	Canada *v*
Walvis Bay	7,147	10,705	27.7	10.0	*	1944	Canada *v*
Yamaska Steamship Company Ltd., c/o Hugessen, Macklaier, Chisholm, Smith & Davis, 507 Place d'Armes, Montreal, Quebec			Lambert Brothers Limited, 88 Leadenhall Street, London, E.C.3.				
Yamaska	7,151	10,384	27.0	10.0	*	1944	Canada *ns*

[1]Code letters indicating class of ex "Park" ships:
c Canadian *g* Grey *rg* Revised grey
d Dominion *ns* North sands *v* Victory

Coastal (East) CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER COASTWISE TRADING FLEET (Dec. 31, 1956)

	Tonnage					Built	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	Knots			
ATLANTIC COAST							
PASSENGER VESSELS AND DRY CARGO VESSELS							
Ahern Shipping Limited, Room 3, 354 Youville Street, Montreal 1, Quebec							
Wahcondah	1,575	2,146	17.9	9.0	*	1903	U.K.
Canada Steamship Lines Limited, 759 Victoria Square, Montreal, Quebec							
Richelieu	5,528	500	16.5	18.0	*	1912/23	USA/Can
St. Lawrence	6,328	500	14.8	18.0	*	1927	Canada
Tadoussac	7,013	500	15.9	17.5	*	1928	Canada
Canadian National Railways, 360 McGill Street, Montreal, Quebec							
Abegweit	6,694	2,114	19.0	16.5	†	1947	Canada
Baccalieu	1,421	1,000	18.8	10.0	*	1940	U.K.
Bar Haven	1,138	850	16.5	10.0	*	1948	U.K.
Bluenose	6,419	4,500	16.5	18.0	†	1955	Canada

† diesel * bunker oil § coal

CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER **Coastal (East)** COASTWISE TRADING FLEET (Dec. 31, 1956) (*Con.*)

	Tonnage					Built	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
Canadian National Railways (*Concl.*)			Feet	Knots			
Bonavista	1,174	850	15.5	12.0	†	1956	U.K.
Burgeo	1,421	1,000	18.8	10.0	*	1940	U.K.
Cabot Strait	2,045	1,200	18.5	12.0	*	1947	U.K.
Kyle	1,055	900	17.8	10.0	§	1913	U.K.
Nonia	1,174	850	17.2	12.0	†	1956	U.K.
Northern Ranger	1,365	1,100	18.9	10.0	*	1936	U.K.
Prince Edward Island	2,795	1,190	19.3	15.0	*	1915	U.K.
Random	1,792	2,975	17.8	9.0	*	1921	Germany
Springdale	1,138	850	16.5	10.0	*	1948	U.K.
William Carson	8,273	1,880	19.3	16.5	†	1955	Canada
Canadian Pacific Railway Company, Windsor Station, Montreal, Quebec							
Princess Helene	4,055	1,500	16.0	17.0	*	1930	U.K.
Chebucto Steamship Limited, 50 Sackville Street, Halifax, Nova Scotia							
Bedford II	1,104	785	15.5	11.0	†	1943/47	Canada
Belle Isle II	1,529	1,394	16.6	12.0	†	1944/47	UK/Can.
Clarke Steamship Company Limited, Canada Cement Building, Phillips Square, Montreal, Quebec							
North Coaster	1,387	1,650	16.5	10.5	*	1946	Canada
North Pioneer	1,473	1,560	16.5	10.5	*	1945	Canada
North Shore	1,205	368	15.1	13.0	*	1943	Canada
Kent Line Limited, P.O. Box 1298, Saint John, N.B.							
Irvingwood	2,353	3,380	16.6	11.0	†	1952	Canada
Rexton Kent	1,088	716	15.5	12.0	†	1943/47	UK/Can.
Lake Shore Lines Limited, 755 1st Avenue, Lachine, Quebec							
Island King II	1,256	350	11.0	12.0	§	1911	Canada
Quebec North Shore and Labrador Railway Company, 810 Cote de Liesse Road, Montreal 9, Quebec							
Easton	1,756	2,650	16.1	10.4	§	1912	U.K.

† diesel * bunker oil § coal

Coastal (East) (West) CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER COASTWISE TRADING FLEET (Dec. 31, 1956) (*Con.*)

	Tonnage					Built	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	Knots			
St. Charles Transportation Company Limited, 10 Boulevard des Capucins, Quebec City, Quebec							
Frank J. Humphrey	3,643	3,900	15.0	10.5	†	1943	U.S.A.
Guy Bartholomew	3,636	3,900	15.0	10.5	†	1943	U.S.A.
R. A. McInnis	3,645	3,900	15.0	10.5	†	1944	U.S.A.
Robert McMichael	3,633	3,900	15.0	10.5	†	1943	U.S.A.
TANKERS							
Gayport Shipping Limited, 20 College Street, Toronto, Ontario							
Sea Transporter	3,138	4,293	19.3	12.0	†	1945	U.S.A.
Imperial Oil Limited, Marine Division, 56 Church Street, Toronto, Ontario							
Imperial Halifax	3,734	5,168	22.0	12.2	†	1946	U.K.
Imperial Sarnia	4,947	6,750	21.4	12.0	*	1948/54	Canada
Irving Steamships Limited, 71 Dock Street, Saint John, N.B.							
Seekonk	1,136	1,400	13.1	9.0	†	1944	U.S.A.
Kent Line Limited, P.O. Box 1298, Saint John, N.B.							
Irvinglake	2,338	3,580	18.4	10.0	†	1943	Canada
PACIFIC COAST							
PASSENGER VESSELS AND DRY CARGO VESSELS							
Black Ball Ferries Limited, 814 Wharf Street, Victoria, B.C.							
Chinook II	4,979	900	13.0	18.0	†	1947	U.S.A.
Kahloke	3,911	715	13.0	18.0	†	1903/53	USA/Can
British Yukon Ocean Services Limited, 510 West Hastings Street, Vancouver, B.C.							
Clifford J. Rogers	3,000	4,000	17.8	12.3	†	1955	Canada

† diesel * bunker oil § coal

CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER **Coastal (West)**
COASTWISE TRADING FLEET (Dec. 31, 1956) (*Concl.*)

	Tonnage					Built	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	Knots			
Canadian National Steamships, Foot of Main Street, Vancouver, B.C.							
Canora	2,383	1,500	15.5	10.0	*	1918	Canada
Prince George	5,812	1,050	17.5	16.0	*	1948	Canada
Canadian Pacific B.C. Coast Steamships, Victoria, B.C.							
Princess Elaine	2,125	632	11.5	18.0	*	1928	U.K.
Princess Elizabeth	5,251	775	15.8	16.0	*	1930	U.K.
Princess Joan	5,251	775	15.8	16.0	*	1930	U.K.
Princess Louise	4,032	1,210	16.2	16.5	*	1921	Canada
Princess Marguerite	5,911	985	15.6	23.5	*	1948	U.K.
Princess of Nanaimo	6,787	1,162	14.3	20.5	*	1951	U.K.
Princess of Vancouver	5,554	2,300	14.8	15.5	‡	1955	U.K.
Princess Patricia	5,911	985	15.6	23.5	*	1949	U.K.
Queen of the North	2,731	890	15.4	15.5	*	1928	U.K.
Yukon Princess	1,334	1,660	16.4	10.0	*	1946	Canada
Union Steamships Limited, Foot of Carrall Street, Vancouver, B.C.							
Camosun	1,835	913	16.0	13.0	*	1943	U.K.
Cardena	1,559	725	14.6	12.0	*	1923	U.K.
Cassiar	1,377	1,684	—	11.0	†	1946	Canada
Catala	1,476	720	12.6	12.9	*	1925	U.K.
Chilcotin	1,837	840	16.0	13.0	*	1943	U.K.
Chilkoot	1,336	1,625	—	12.0	*	1946	Canada
Coquitlam	1,883	906	16.0	13.0	*	1943	U.K.
Lady Alexandra (Laid Up)	1,396	600	8.8	14.5	*	1924	U.K.
TANKERS							
Imperial Oil Limited, Marine Division, 56 Church Street, Toronto 1, Ontario							
Imperial Vancouver	1,512	2,040	16.9	11.5	†	1938	Canada
Pacific Bulk Carriers Limited, 2285 Commissioner Street, Vancouver, B.C.							
Pacific Wind	1,561	2,000	14.1	10.6	†	1938	Canada
Standard Oil Company of B.C. Limited, 906 Marine Building, Vancouver, B.C.							
Standard Service	1,324	1,690	14.7	9.0	†	1923	U.S.A.

† diesel * bunker oil § coal ‡Residual fuel oil in diesel engines

Lakers CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956)

	Tonnage					Built[1]	
	Gross	Deadw't	Draft	Speed	Fuel	Year	Country
			Feet	M.p.h.			
PASSENGER VESSELS							
Canadian Pacific Railway Company, Windsor Station, Montreal, Quebec							
Assiniboia	3,925	2,400	17.6	16.0	*	1907	U.K.
Keewatin	3,856	2,400	17.6	16.0	§	1907	U.K.
Cayuga Navigation Company Limited, Suite 60, 330 Bay Street, Toronto, Ontario							
Cayuga	2,196	500	11.0	22.0	§	1907	Canada
Owen Sound Transportation Company Limited, 1101—1st Avenue, West, Owen Sound, Ontario							
Norgoma	1,435	200	13.0	12.0	§	1950	Canada
Norisle	1,668	210	12.8	12.0	§	1946	Canada
DRY CARGO VESSELS LIMITED TO OPERATIONS ABOVE THE ST. LAWRENCE CANALS							
Algoma Central Steamship Company Limited, Sault Ste. Marie, Ontario							
Algocen	6,904	9,800	20.4	11.0	§	1909	U.S.A.
Algorail	3,475	5,600	21.5	11.0	§	1901	U.S.A.
Algosoo	3,373	5,600	21.1	11.0	§	1901	U.S.A.
Algosteel	6,178	8,500	20.8	11.0	§	1907	U.S.A.
Algoway	3,785	6,000	20.8	11.0	§	1903	U.S.A.
E. B. Barber	8,619	13,046	21.9	17.0	*	1953	Canada
Beaconsfield Steamships Limited, 635 Common Street, Montreal, Quebec							
Mohawk Deer	4,423	7,000	—	11.0	§	1896	U.S.A.
Canada Steamship Lines Limited, 759 Victoria Square, Montreal, Quebec							
Ashcroft	7,726	14,100	22.2	11.5	§	1924	Canada
Burlington	4,959	8,300	20.3	11.5	§	1899	U.S.A.
Collingwood	4,545	6,300	20.8	11.0	§	1907	Canada *pf*
Coverdale	11,996	20,000	24.0	14.5	§	1949	Canada
Donnacona	8,611	16,900	21.0	—	§	1914	Canada
Fort Henry	5,729	8,420	23.8	16.0	*	1955	Canada *pf*
Georgian Bay	11,392	18,500	24.5	15.0	*	1954	Canada
Gleneagles	8,233	15,750	21.9	11.5	§	1925	Canada

† diesel * bunker oil § coal

[1]For dry-cargo vessels, the following code letters indicate vessels other than bulk freighters: *pf* package freighter *su* self-unloader

CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Con.*) **Lakers**

	Tonnage		Draft	Speed	Fuel	Built[1]	
	Gross	Deadw't	Feet	M.p.h.		Year	Country
Canada Steamship Lines Limited (*Concl.*)							
Goderich	5,667	10,700	—	11.5	§	1908	U.S.A.
Hagarty	7,462	12,000	21.7	11.5	§	1914	Canada
Hochelaga	11,997	20,000	24.0	12.5	§	1949	Canada
Lemoyne	10,480	18,450	19.3	11.5	§	1926	Canada
Martin	3,493	5,600	21.3	10.5	§	1901	U.S.A. *pf*
Midland Prince	6,339	6,900	21.8	—	§	1907	Canada *su*
Prescott	5,461	9,400	19.1	12.0	§	1903/34	USA/Can
R. O. Petman	7,051	7,500	22.1	—	§	1908/40	Canada *su*
Renvoyle	3,571	5,000	19.1	13.5	§	1925	UK/Can *pf*
Sir James Dunn	12,434	21,000	23.8	13.8	*	1952	Canada
Stadacona	9,181	15,750	21.9	12.0	§	1929	Canada
T. R. McLagan	15,500	22,700	25.3	17.0	*	1954	Canada
Thunder Bay	12,435	21,000	23.7	13.8	*	1952	Canada
Westmount	7,392	12,000	21.7	11.5	§	1917	Canada
Colonial Steamships Limited, 84 West Street, Port Colborne, Ontario							
Bayton	4,176	7,290	19.8	10.0	*	1904	U.S.A.
C. A. Bennett	6,221	9,450	20.8	10.0	§	1908	U.S.A.
Everetton	5,765	9,043	21.3	9.0	§	1908	U.S.A.
John E. F. Misener	13,081	20,000	24.0	16.0	*	1950	Canada
John O. McKellar	13,884	21,000	24.5	16.0	*	1952	Canada
Laketon	4,423	7,560	19.7	10.0	*	1903	U.S.A.
Ralph S. Misener	7,403	12,200	20.8	12.0	§	1922	Canada
Royalton	7,164	12,600	21.3	12.0	§	1924	Canada
Scott Misener	15,279	22,510	25.5	18.0	*	1954	Canada
Lake Erie Coal Company Limited, Walkerville, Ontario							
Alexander Leslie	3,509	4,643	20.0	11.0	§	1901/20	U.S.A.
Mohawk Navigation Company, 635 Common Street, Montreal, P.Q.							
Captain C. D. Secord	6,943	9,000	23.3	12.5	†	1900/19	U.S.A.
Golden Hind	12,304	18,000	24.4	15.0	*	1952/54	Canada
Sir Thomas Shaughnessy	5,846	9,000	—	10.5	§	1906	U.S.A.
N. M. Paterson & Sons Limited, 276 St. James Street West, Montreal, Quebec							
Altadoc	4,266	6,300	20.3	10.0	§	1896	U.S.A.
Bricoldoc	4,364	6,400	20.1	—	§	1902	U.S.A.

† diesel * bunker oil § coal

[1]For dry-cargo vessels, the following code letters indicate vessels other than bulk freighters:
pf package freighter *su* self-unloader

Lakers CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Con.*)

	Tonnage		Draft	Speed	Fuel	Built[1]	
	Gross	Deadw't	Feet	M.p.h.		Year	Country
N. M. Paterson & Sons Limited (*Concl.*)							
Canadoc	4,581	7,100	20.9	—	§	1899	U.S.A.
Fort Willdoc	4,542	6,850	20.2	11.0	§	1900	U.S.A.
Gaspedoc	3,638	4,208	15.0	12.5	†	1944	U.S.A.
Mantadoc	4,466	6,964	20.0	—	§	1903	U.S.A.
Ontadoc	4,467	6,850	20.2	—	§	1903	U.S.A.
Paterson	8,618	13,063	21.9	13.0	*	1954	Canada
Prindoc	4,075	6,400	21.9	11.5	§	1902	U.S.A.
Quedoc	3,072	5,000	—	10.0	§	1890/23	USA/Can
Saskadoc	4,611	7,400	20.5	—	§	1900	U.S.A.
Soodoc	4,575	6,800	20.6	11.0	§	1902	U.S.A.
Vandoc	4,488	7,400	20.9	11.0	§	1898	U.S.A.
Windoc	4,599	7,400	21.9	—	§	1899	U.S.A.
Quebec & Ontario Transportation Company Limited, 680 Sherbrooke Street, West, Montreal, Quebec							
Black River	3,587	5,200	19.9	13.0	†	1896/52	USA/Can
Heron Bay	3,525	5,400	19.2	10.0	*	1902	Canada
Pic River	3,569	5,200	—	13.0	†	1896/52	USA/Can
Upper Lakes & St. Lawrence Transportation Company Limited, 417-419 Queen's Quay West, Toronto 2B, Ontario							
Douglass Houghton	5,107	7,500	19.5	11.0	§	1899	U.S.A.
Gordon C. Leitch	12,460	18,660	23.7	14.5	*	1952	Canada
Howard L. Shaw	4,769	7,500	19.5	11.0	§	1900/22	U.S.A.
James B. Eads	3,865	5,500	19.8	11.5	§	1894	U.S.A.
James Norris	12,464	18,660	23.7	14.5	*	1952	Canada
John Ericcson	3,650	5,300	18.0	11.5	§	1896	U.S.A.
Maunaloa II	4,678	7,500	20.2	11.0	§	1899	U.S.A.
R. Bruce Angus	11,816	15,900	24.5	16.0	*	1951/54	Canada
Ralph Budd	4,537	6,600	21.5	11.5	§	1905	U.S.A.
Victorious	4,676	7,500	19.6	10.5	§	1895	U.S.A.
TANKERS LIMITED TO OPERATIONS ABOVE THE ST. LAWRENCE CANALS							
British American Transportation Limited, 800 Bay Street, Toronto 5, Ontario							
B. A. Peerless	12,638	18,360	26.6	15.0	*	1952	Canada
Canada Steamship Lines Limited, 759 Victoria Square, Montreal, Quebec							
Nipigon Bay	12,595	18,450	26.5	16.0	*	1951	Canada

† diesel * bunker oil § coal

[1]For dry-cargo vessels, the following code letters indicate vessels other than bulk freighters:
pf package freighter *su* self-unloader

CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Con.*) **Canallers**

	Tonnage			Draft	Speed	Fuel	Built[1]	
	Gross	Deadweight at 14′	Deadweight S/d′ft	Feet	M.p.h.		Year	Country
DRY CARGO VESSELS CAPABLE OF TRAVERSING THE ST. LAWRENCE CANALS								
Bayswater Shipping Limited, Box 195, Brockville, Ontario								
Bayanna	1,643	1,486	1,800	15.0	10.0	§	1896	USA *su*
Bayquinte	1,126	—	1,650	13.6	6.5	§	1912/42	USA *su*
George S. Cleet	2,174	1,880	2,500	18.0	9.1	§	1912/51	UK *su*
Beaconsfield Steamships Limited, 635 Common Street, Montreal, Quebec								
Belvoir	2,296	3,150	4,035	16.5	10.0	†	1954	Canada
Griffon	2,292	3,150	3,589	16.5	12.0	†	1955	Canada
Redcloud	1,761	—	3,250	—	9.0	†	1930/33	Canada
Redfern	1,856	—	3,250	—	8.0	†	1930/34	Canada
Redriver	1,838	—	3,250	—	9.0	†	1930/34	Canada
Redwood	1,820	—	3,250	—	9.0	†	1930/34	Canada
Sandland	2,170	—	3,000	16.5	17.0	†	1925/43	UK/Can
Tecumseh	2,293	3,150	4,035	16.5	12.0	†	1955	Canada
William C. Warren	1,745	—	3,000	15.7	10.5	§	1925	UK
Canada Cement Transport Limited, Canada Cement Building, Phillips Square, Montreal, Quebec								
Bulkarier	2,399	—	3,172	18.1	11.0	*	1929	UK *su*
Cementkarrier	2,013	—	2,844	16.2	10.0	†	1930	UK *su*
Canada Steamship Lines Limited, 759 Victoria Square, Montreal, Quebec								
Acadian	1,686	—	2,550	14.8	10.0	§	1913	UK
Barrie	1,824	—	2,600	15.5	9.0	§	1925	Canada
Battleford	2,357	—	2,500	19.9	10.5	§	1925/39	UK/Can *pf*
Beaverton	2,012	—	2,500	16.0	11.0	§	1908	UK *pf*
Calgarian	2,272	—	2,500	19.1	11.5	§	1905	UK *pf*
Canadian	2,214	—	2,500	18.8	10.5	§	1907	UK *pf*
City of Hamilton	1,665	—	2,150	14.0	13.0	§	1927	Can *pf*
City of Kingston	1,690	—	2,150	14.9	13.0	§	1925	Can *pf*
City of Montreal	1,665	—	2,150	14.9	13.0	§	1927	Can *pf*
City of Toronto	1,688	—	2,150	14.9	13.0	§	1925	Can *pf*
City of Windsor	1,905	—	2,400	16.0	11.0	§	1929	Can *pf*
Coalhaven	2,362	—	2,400	17.0	10.0	§	1928	UK *su*
Collier	1,858	—	2,400	16.2	10.5	§	1924	UK *su*

† diesel * bunker oil § coal

[1]For dry-cargo vessels, the following code letters indicate vessels other than bulk freighters: *pf* package freighter *su* self-unloader

Canallers CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Con.*)

	Tonnage						Built[1]	
		Deadweight						
	Gross	at 14′	S/d′ft	Draft	Speed	Fuel	Year	Country
				Feet	M.p.h.			
Canada Steamship Lines Limited (*Concl.*)								
Edmonton	1,983	—	2,500	16.0	11.5	§	1906	UK *pf*
Elgin	1,906	—	2,450	17.4	10.5	§	1923	UK
Fairmount	1,851	—	2,500	15.1	10.0	§	1923	UK
Fernie	2,419	—	2,500	17.5	13.0	§	1929	Can *pf*
Glenelg	2,309	—	2,350	18.1	11.5	§	1923/55	Canada
Grainmotor	1,829	—	3,000	16.5	10.5	†	1929	Canada
Hastings	1,906	—	2,500	17.3	10.5	§	1923	UK
Iroquois	2,300	—	2,500	17.5	11.0	†	1955	Canada
Kenora	1,979	—	2,500	16.0	11.5	§	1907	UK *pf*
Kinmount	1,711	—	2,650	16.0	9.0	§	1923	Canada
Lethbridge	2,407	—	2,500	17.5	11.0	§	1924	UK *pf*
Mapleheath	1,692	—	2,500	15.2	11.5	§	1910	UK
Meaford	1,824	—	2,450	15.5	9.0	§	1925	Canada
Metis	2,332	2,950	3,872	17.5	11.5	†	1956	Canada
Penetang	1,824	—	2,600	15.5	9.0	§	1925	Canada
Saskatoon	2,412	—	2,500	17.5	11.0	§	1927	Can *pf*
Selkirk	2,384	—	2,500	17.5	10.5	§	1926	Can *pf*
Simcoe	1,783	—	2,500	16.3	10.5	§	1923	UK
Starmount	1,859	—	2,500	15.1	10.5	§	1923	UK
Teakbay	1,895	—	2,700	16.0	10.0	§	1929	UK
Weyburn	2,408	—	2,500	17.5	11.0	§	1927	Can *pf*
Winnipeg	2,383	—	2,500	17.5	10.5	§	1926	Can *pf*
Colonial Steamships Limited, 84 West Street, Port Colborne, Ontario								
Acton	1,900	2,600	3,300	16.5	9.2	§	1928	UK
Brampton	1,975	2,520	2,870	15.9	9.0	§	1927	UK
C. A. Ansell	1,940	2,585	2,980	16.9	9.0	§	1929	UK
Clary Foran	1,975	2,585	2,980	16.9	9.0	§	1929	UK
Clayton	1,974	2,520	2,870	15.9	9.0	§	1929	UK
David Barclay	1,900	2,600	3,300	16.5	9.2	§	1928	UK
Donald F. Fawcett	1,915	2,200	3,100	17.2	10.0	§	1924	UK
E. P. Murphy	1,927	2,585	2,980	16.9	9.0	§	1929	UK
F.W. Moore	1,895	2,575	3,275	16.5	9.2	§	1929	UK
Frank H. Brown	1,902	2,200	3,100	17.5	10.0	§	1924	UK
Frank Wilkinson	1,940	2,585	2,980	16.9	9.0	§	1929	UK
George M. Carl	1,938	2,585	2,980	16.9	9.0	§	1928	UK
H. L. Wyatt	1,928	2,585	2,980	16.9	9.0	§	1929	UK
J. G. Irwin	1,927	2,585	2,980	16.9	9.0	§	1929	UK
J. N. McWatters	1,928	2,585	2,980	16.9	9.0	§	1929	UK

† diesel * bunker oil § coal

[1]For dry-cargo vessels, the following code letters indicate vessels other than bulk freighters:
pf package freighter *su* self-unloader

CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Con.*) **Canallers**

	Tonnage			Draft	Speed	Fuel	Built[1]	
	Gross	Deadweight at 14′	Deadweight S/d′ft	Feet	M.p.h.		Year	Country
Colonial Steamships Limited (*Concl.*)								
J. S. Walton	1,900	2,600	3,300	16.5	9.2	§	1928	UK
John A. France	1,938	2,585	2,980	16.9	9.0	§	1929	UK
Paul Manion	1,927	2,585	2,980	16.9	9.0	§	1929	UK
Picton	1,895	2,600	3,300	16.5	9.2	§	1929	UK
Queenston	1,976	2,520	2,870	15.9	9.0	§	1927	UK
R. H. Marshall	1,926	2,585	2,980	16.9	9.0	§	1929	UK
Trenton	1,905	2,575	3,275	16.5	9.2	§	1927	UK
Walter Inkster	2,079	2,420	3,339	18.9	10.0	†	1895	UK
Wheaton	1,900	2,600	3,300	16.5	9.2	§	1928	UK
Gulf & Lake Navigation Company Limited, 275 St. James Street, West, Montreal, Quebec								
Birchton	2,047	2,475	3,016	16.0	8.0	§	1924/50	UK/Can
Cedarton	2,009	2,475	3,016	16.0	8.0	§	1924/51	UK/Can
Hall Corporation of Canada, 637 Common Street, Montreal 3, Quebec								
Coalfax	2,502	—	2,652	16.8	9.0	§	1927	UK *su*
Eastcliffe Hall	2,140	2,900	3,740	16.5	10.3	†	1954	Canada
Frankcliffe Hall	2,127	2,900	3,625	16.5	10.3	†	1952	Canada
Hutchcliffe Hall	2,143	2,900	3,625	16.5	10.3	†	1954	Canada
John H. Price	1,937	2,575	3,275	16.5	9.2	§	1927	UK
Leecliffe Hall	1,985	2,575	3,275	16.5	9.2	*	1947	Canada
Northcliffe Hall	1,986	2,575	3,275	16.5	9.2	*	1947	Canada
Shiercliffe Hall	2,012	2,575	3,275	16.5	9.2	*	1950	Canada
Southcliffe Hall	1,986	2,575	3,275	16.5	9.2	*	1947	Canada
Sterncliffe Hall	1,985	2,575	3,275	16.5	9.2	*	1947	Canada
Westcliffe Hall	2,334	2,870	4,035	16.5	10.3	†	1956	UK
Hindman Transportation Company Limited, 1105—1st Avenue East, Owen Sound, Ontario								
George Hindman	1,913	2,250	3,000	17.3	10.0	†	1920	Canada
Keystone Transports Limited, 435 St. Patrick Street, Ville La Salle, Quebec								
Keybar	1,723	—	2,800	15.8	10.5	§	1923	UK
Keybell	1,730	—	2,550	14.5	11.5	§	1912	Canada
Keydon	1,739	—	3,000	15.6	10.5	§	1927	UK
Keynor	1,806	—	2,800	16.6	10.0	§	1914	UK
Keyport	1,721	—	2,650	17.7	10.0	§	1909	UK
Keyshey	1,796	—	3,100	16.4	11.0	§	1928	UK
Keystate	1,729	—	2,800	15.8	10.5	§	1923	UK
Keyvive	1,768	—	2,800	14.8	10.5	§	1913	UK
Keywest	1,739	—	3,000	15.6	10.5	§	1927	UK

† diesel * bunker oil § coal

[1]For dry-cargo vessels, the following code letters indicate vessels other than bulk freighters: *pf* package freighter *su* self-unloader

Canallers CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Con.*)

	Tonnage						Built[1]	
		Deadweight						
	Gross	at 14′	S/d′ft	Draft	Speed	Fuel	Year	Country
				Feet	M.p.h.			
Leitch Transport Limited, 417-419 Queen's Quay, West, Toronto 2B, Ontario								
Charles R. Huntley	1,760	2,500	2,900	15.5	9.0	§	1926	UK
James Stewart	1,760	2,500	2,900	15.6	9.0	§	1926	UK
Marathon Corporation of Canada Limited, 100 Adelaide Street, West, Toronto, Ontario								
D. C. Everest	2,196	2,345	3,070	16.6	12.0	†	1952	Canada
Norco	1,512	1,750	2,000	15.0	11.3	§	1915	USA
Mohawk Navigation Company Limited, 635 Common Street, Montreal, Quebec								
F. V. Massey	1,895	—	2,500	16.0	10.0	§	1929	UK
National Sand and Material Company Limited, 402 Harbour Commission Building, Toronto, Ontario								
Charles Dick	2,015	—	2,500	15.9	11.5	*	1922	Can *su*
Norris Grain Company Limited, 417-419 Queen's Quay, West, Toronto 2B, Ontario								
John S. Pillsbury	1,754	2,500	2,900	15.6	9.0	§	1926	UK
Judge Kenefick	1,745	2,500	2,900	15.6	9.0	§	1925	UK
Norman B. MacPherson	1,743	2,500	2,900	15.6	9.0	§	1925	UK
Shirley G. Taylor	1,746	2,500	2,900	15.6	9.0	§	1925	UK
Northwest Steamships Limited, 29 Colborne Street, Toronto 1, Ontario								
A. A. Hudson	2,222	—	3,160	18.3	8.0	§	1924	UK
Superior	1,801	—	2,100	17.5	10.0	§	1889	USA
N. M. Paterson & Sons Limited, 276 St. James Street, West, Montreal, Quebec								
Calgadoc	2,293	3,000	3,872	17.5	11.0	†	1956	Canada
Cartierdoc	2,209	—	3,144	16.2	9.0	§	1928	UK
Coteaudoc	1,926	—	3,521	15.8	9.0	§	1929	UK
Farrandoc	1,865	—	2,744	16.1	10.5	†	1926	USA
Ganandoc	2,209	—	3,500	16.3	9.0	*	1929/54	UK/Can
Hamildoc	1,796	—	3,086	16.4	11.0	*	1928	UK

† diesel * bunker oil § coal

[1]For dry-cargo vessels, the following code letters indicate vessels other than bulk freighters:
pf package freighter *su* self-unloader

CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Con.*) **Canallers**

	Tonnage						Built[1]	
	Deadweight							
	Gross	at 14′	S/d′ft	Draft	Speed	Fuel	Year	Country
				Feet	M.p.h.			
N. M. Paterson & Sons Limited (*Concl.*)								
Humberdoc	2,357	—	3,395	16.5	12.5	†	1937/50	USA/Can
Kingdoc	2,211	—	3,152	16.2	9.0	§	1927/49	UK/Can
Lachinedoc	2,193	3,300	3,572	16.5	10.0	†	1956	UK
Lavaldoc	2,173	—	3,263	16.2	9.0	§	1928/50	UK/Can
Lawrendoc	2,188	—	3,150	16.2	9.0	§	1929/50	UK/Can
Mondoc	1,779	—	2,710	15.6	10.0	§	1928	UK
Newbrundoc	2,208	—	3,665	16.3	9.0	§	1928/47	UK/Can
Prescodoc	2,197	—	3,253	16.6	10.0	§	1929/52	UK/Can
Sarniadoc	2,290	3,000	3,872	17.5	11.0	†	1956	Canada
Soreldoc	2,214	—	3,272	16.3	9.0	§	1929/53	UK/Can
Thordoc	1,831	2,425	2,800	16.4	9.5	§	1927	UK
Torondoc	1,926	—	3,000	15.8	9.0	§	1929	UK
Troisdoc	2,211	—	3,671	16.3	10.0	§	1929/39	UK/Can
Wellandoc	2,047	—	2,900	16.2	12.5	§	1922	Canada
K. A. Powell (Canada) Limited, Fort William, Ontario								
Starbelle	2,274	—	3,200	19.5	12.0	*	1913	UK
Starbuck	2,025	—	2,500	17.5	11.5	§	1888	USA
Quebec & Ontario Transportation Company Limited, 680 Sherbrooke Street, West, Montreal, Quebec								
Chicago Tribune	2,960	—	3,530	19.2	10.5	†	1930	UK
Col. Robert R. McCormick	2,314	3,100	3,850	15.5	10.0	†	1955	UK
Franquelin	2,097	—	3,434	15.4	9.5	†	1936	UK
Joseph Medill Patterson	2,300	3,040	3,850	15.5	10.0	†	1954	UK
Manitoulin	1,940	—	3,000	16.9	9.0	§	1929	UK
New York News	2,310	—	3,850	19.6	11.0	§	1925	UK
Outarde	2,241	—	3,600	19.5	10.5	§	1924	UK
Shelter Bay	1,670	—	2,530	15.8	10.0	§	1922	UK
Reoch Transports Limited, 485 McGill Street, Montreal, Quebec								
Brookdale	2,286	1,600	3,750	22.0	9.0	§	1902	Canada
Forestdale	1,896	—	3,210	18.8	9.0	§	1890	USA
Willowdale	2,335	1,500	3,650	22.0	9.5	*	1917/53	Canada

† diesel * bunker oil § coal

[1]For dry-cargo vessels, the following code letters indicate vessels other than bulk freighters: *pf* package freighter *su* self-unloader

Canallers CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Con.*)

	Tonnage						Built[1]	
		Deadweight						
	Gross	at 14'	S/d'ft	Draft	Speed	Fuel	Year	Country
				Feet	M.p.h.			
Upper Lakes & St. Lawrence Transportation Company Limited, 417-419 Queen's Quay, West, Toronto 2B, Ontario								
Blue River	1,818	3,200	3,360	14.6	9.0	†	1930	Canada
Brown Beaver	1,892	2,600	3,200	16.3	9.0	§	1929	UK
Edwin T. Douglass	1,749	2,500	2,900	15.5	9.0	§	1923	UK
Grey Beaver	1,892	2,600	3,200	16.3	9.0	§	1929	UK
Grovedale	1,903	1,850	2,635	17.0	8.0	§	1903/53	USA/Can
John B. Richards	1,743	2,500	2,900	15.6	9.0	§	1925	UK
Norman P. Clement	1,729	2,500	2,900	15.6	9.0	§	1923	UK
Parkdale	1,912	1,850	2,635	17.0	8.0	§	1903/53	USA/Can
Shelton Weed	1,745	2,500	2,900	15.6	9.0	§	1925	UK
Wallaceburg	1,723	2,500	2,900	15.6	9.0	§	1923	UK
William H. Daniels	1,772	2,500	2,900	15.6	9.0	§	1923	UK
Valley Camp Coal Company of Canada Limited, 220 Bay Street, Toronto, Ontario								
Valley Camp	2,878	—	2,678	17.5	10.0	§	1927/51	UK/Can *su*
Yankcanuck Steamships Limited, P.O. Box 517, Sault Ste. Marie, Ontario								
Mancox	1,551	1,850	2,200	16.0	9.0	*	1903/42	USA/Can *su*
Manzzutti	1,528	1,850	2,200	16.0	9.0	*	1903/42	USA/Can *su*
Yankcanuck	1,778	1,625	1,800	15.5	10.5	§	1889/1922	USA *su*
TANKERS CAPABLE OF TRAVERSING THE ST. LAWRENCE CANALS								
Branch Lines Limited, 1405 Peel Street, Montreal, Quebec								
Cedarbranch	2,144	2,695	3,239	16.0	10.0	†	1951	Canada
Elmbranch	2,381	2,230	3,430	18.4	9.0	†	1944	Canada
Firbranch	2,404	2,230	3,430	18.4	9.0	†	1944	Canada
Pinebranch (Laid up)	1,984	1,687	3,100	19.9	8.0	*	1895/1940	USA/Can
Sprucebranch	2,405	2,230	3,430	18.4	9.0	†	1944	Canada
Willowbranch	2,153	2,716	3,260	16.0	10.0	†	1950	Canada

† diesel * bunker oil § coal

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CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Con.*) **Canallers**

	Tonnage						Built[1]	
	Gross	Deadweight at 14'	Deadweight S/d'ft	Draft	Speed	Fuel	Year	Country
				Feet	M.p.h.			
Canadian Coastwise Carriers, Limited, 1948 Dorchester Street, West, Montreal, Quebec								
Coastal Carrier	2,083	2,750	2,750	14.0	9.0	†	1950	Canada
Coastal Cascades	1,239	1,450	1,450	14.0	7.0	*	1919	France
Coastal Cliff	1,072	1,450	1,450	14.0	7.0	*	1935/46	Canada
Coastal Creek	1,752	2,100	3,500	17.0	8.5	†	1910/40	UK/Can
Transbay	1,118	1,200	1,200	14.0	9.0	*	1912/52	USA/Can
Transinland	1,946	2,100	3,500	17.0	8.5	†	1926/48	USA/Can
Translake	1,263	1,450	1,450	14.0	7.0	*	1921/37	France
Transriver	1,238	1,450	1,450	14.0	7.0	*	1920/37	France
Transtream	1,335	2,000	2,000	14.0	7.0	†	1935/42	Canada
Canadian Oil Companies Limited, 204 Richmond Street, West, Toronto, Ontario								
White Rose	2,404	2,230	3,600	18.4	10.3	†	1944	Canada
Gayport Shipping Limited, 20 College Street, Toronto, Ontario								
Blue Cross	1,877	2,350	2,800	14.8	7.0	†	1930/40	Canada
Britamlube	1,932	2,200	2,829	16.5	7.8	*	1932	UK
Britamoco	1,932	2,200	2,829	16.5	9.0	*	1932	UK
Britamoil	1,931	2,200	2,829	16.5	9.0	*	1931	UK
Britamolene	1,931	2,200	2,829	16.5	9.0	*	1931	UK
Fuel Transporter	2,500	1,830	3,925	21.8	9.8	*	1930	UK
Oil Transporter	1,757	—	2,600	13.7	10.0	†	1936	USA
Imperial Oil Limited, Marine Division, 56 Church Street, Toronto, Ontario								
Imperial Collingwood	2,128	2,560	3,250	16.5	10.3	*	1947	Canada
Imperial Cornwall	1,969	2,210	2,800	16.2	9.2	*	1930	UK
Imperial Hamilton	2,060	2,070	2,770	16.6	9.2	*	1916	Canada
Imperial Kingston	1,986	2,045	2,745	16.6	10.3	*	1916	Canada
Imperial London	2,130	2,560	3,250	16.5	10.3	*	1948	Canada
Imperial Simcoe	1,971	2,210	2,800	16.2	10.3	*	1930	UK
Imperial Welland	2,104	2,045	2,745	16.6	8.5	*	1916	Canada
Imperial Windsor	1,990	2,210	2,800	16.2	10.3	*	1927	UK

† diesel * bunker oil § coal

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pf package freighter *su* self-unloader

Canallers CANADIAN FLAG VESSELS OF 1,000 GROSS TONS AND OVER OPERATING ON THE GREAT LAKES (Dec. 31, 1956) (*Concl.*)

	Tonnage						Built[1]	
		Deadweight						
	Gross	at 14′	S/d′ft	Draft	Speed	Fuel	Year	Country
				Feet	M.p.h.			
Lakeland Tankers Limited, 36 Toronto Street, Toronto, Ontario								
Lubrolake	1,645	—	2,678	13.9	9.5	†	1937	USA
Makaweli	2,665	—	4,082	24.1	11.5	*	1919	USA
S/S Texaco Chief Limited, 1425 Mountain Street, Montreal, Quebec								
Texaco Brave	1,926	2,150	2,700	16.0	9.5	*	1929	UK
Texaco Warrior	2,500	1,830	3,925	21.3	9.8	*	1930	UK
Shell Canadian Tankers Limited, 25 Adelaide Street East, Toronto, Ontario								
Eastern Shell	1,876	2,350	2,695	15.3	10.9	*	1932	UK
Lakeshell	2,238	2,980	3,080	14.3	10.3	†	1940	Canada

† diesel * bunker oil § coal

[1]For dry-cargo vessels, the following code letters indicate vessels other than bulk freighters: *pf* package freighter *su* self-unloader

APPENDIX XI

Evidence on the Cost of Operating Former Park Vessels (10,000 deadweight tons) on Canadian and on United Kingdom Registry.

(From Exhibits 171, 172, 191.)

I. Extract from Exhibit 171 (A letter of October 31, 1955, addressed to the Commission by W. Baatz, Treasurer, Saguenay Terminals Ltd.)

"In testifying before the Royal Commission on October 6th during the Montreal hearings the writer was requested and undertook to provide figures on the cost experience of this company in operating its ten thousand ton vessels for 12 months prior to and for 12 months after their transfer from Canadian registry to United Kingdom registry.

"The figures we have been able to develop are set out in the attachment [Exhibit No. 172] to this present letter, in which we show not only the actual cost experience of this company but also our best estimate of the cost experience we could have achieved by operating the ships after their transfer to U.K. registry strictly on the basis of normal costs for a U.K. operator.

"A few words of explanation on this may be helpful to the Commissioners. Even after this company transferred its ships to U.K. registry, it has continued to pay wages to the licensed personnel not very much less than those previously paid while the vessels were on Canadian registry. As the United Kingdom has suffered for several years now from a serious shortage of licensed seagoing personnel, we could not have achieved efficient re-manning there of our transferred ships all at one time; also for the reason that our operation is so largely a Western Hemisphere operation that our licensed personnel—even if recruited in the United Kingdom—tends to establish domicile in Canada, we have considered it improbable that we would be able to keep the ships manned on the basis of normal U.K. wage scales where the operation required the ships and the men to spend so much time in Western Hemisphere waters.

"As a consequence of running a largely Western Hemisphere operation we have a high incidence of maintenance work in Eastern Canada (when the ships become light upon discharge of bauxite), as well as provisioning and storing, the cost to this company being considerably more than the normal cost of these things for an operation based on the United Kingdom for which the major part of maintenance work, provisioning and storing would be carried out in U.K. ports.

"Our figures indicate that the normal difference between Canadian flag operation and U.K. flag operation for our 10,000 tonners for 12 months after their transfer amounts to $94,000 per ship per annum on a 365-day basis and that as a result of the nature of *our* operation and our policies and practices in relation to it at the time, the actual difference in our case amounted to $58,000 per ship per annum for the 12 months following transfer."

II. Exhibit 172 (Attachment referred to above.)

SAGUENAY TERMINALS LIMITED

Cost Experience in Operating 10,000 Ton Vessels during 12 Months Prior to and 12 Months Following Transfer from Canadian Registry to U.K. Registry

(Excluding depreciation)

VESSEL	SAGTERMS COST EXPERIENCE BEFORE	AFTER	ESTIMATED FULL U.K. BASIS
Sunjarv	$ 790.00	$ 547.00	$ 508.00
Sunjewel	596.00	744.00	524.00
Sunkirk	824.00	534.00	517.00
Sunmont	932.00	546.00	509.00
Sunrell	703.00	652.00	509.00
Sunvalley	764.00	612.00	527.00
Sunwhit	802.00	669.00	517.00
Average daily cost per vessel	773.00	615.00	516.00
Average per year per vessel	$282,145.00	$224,475.00	$188,340.00
Annual Reduction		$ 57,670.00	$ 93,805.00

III. Exhibit 191 (A letter of December 15, 1955, with attachments addressed to the Commission by W. J. Fisher, Canadian Shipowners Association.)

"In your letter of November 16th, you asked for a comparative summary of the costs of operating ocean-going vessels on Canadian registry and on United Kingdom registry based on the actual experience of members of the Association.

"Attached is a summary with supporting comments and some particular data on wages calculated on the average experience of several owners operating the same vessels on both registries.

"The average daily difference approximates $294.50. On a basis of 365 days this would give an annual differential of $107,492 which is reasonably close to the calculation used by the Canadian Maritime Commission in their recent submission to the Government on the question of a subsidy for Canadian-flag ocean-going shipping.

"I trust this information will be helpful."

Comparison of Average Daily Voyage Costs on 10.000 DWT "Park" Vessel Operated on Canadian and United Kingdom Registries

	Canadian Costs	United Kingdom Costs
Wages (including overtime leave, etc.—see detailed statement attached.)	$372.00	$165.50
Subsistence	65.00	45.00
Stores and Supplies (including lubricants, oil and water.)	50.00	45.00
Repairs and Maintenance (including reasonable provision for surveys)	160.00	140.00
Insurance (including Marine War Risk, P. & I.[1] and Workmen's Compensation.)	133.00	90.00
Sundries (other voyage expenses)	15.00	15.00
Management (administration)	65.00	65.00
	$860.00	$565.50

[1]Protection and Indemnity. (*Ed.*)

Comments

1. Allowance for depreciation not included. As long as a vessel is Canadian owned, this should be the same. Widely fluctuating value of these vessels makes comparison unrealistic since individual owners' commercial judgment dictates his capital investment.
2. Cost of fuel not included as consumption has direct relation to employment. As such, it is variable and thus attributable to cargo revenue.
3. *Wages*—Attached in support of these estimates are statements showing detailed breakdown. It should be noted that a U.K. registered vessel requires a crew of 36 compared with the Canadian 34. There are substantial variations in the calculation of overtime, leave and other factors. The item "Retained Personnel and Permanent Staff" shown on the U.K. statement covers additional costs for Canadians still employed on the vessel after transfer and would not be reflected in a normal U.K. owned and operated vessel, though a U.K. owner would probably have a similar item in different circumstances.
4. *Subsistence*—It may be noted that there has not been any increase in Canadian subsistence costs in recent years. This is accounted for by the smaller crews and greater efficiency of the catering staff. The difference between Canadian and U.K. figures occurs in the cost of staple items purchased in the sterling area as compared to a vessel regularly storing in the dollar area and in the dissimilarity in tastes and standards of messing demanded by Canadians.
5. *Stores and Supplies*—The small difference between Canadian and U.K. costs is accounted for by the fact that most of these items are purchased in world markets for both types of vessels.
6. *Repairs and Maintenance*—Canadian crews are on an average better workers and do more of the routine repairs and maintenance work. A factor in this item is the time taken to accomplish the work on shore. Canadian experience is much better in recent years, hence costs have not materially increased as compared with the United Kingdom.
7. *Management*—The present transfer arrangement requires a degree of dual management, accounting for the high percentage of total operating cost.

Pro Forma Crew List and Union Wages, 10,000 DWT "Park" Vessel Operated on United Kingdom Registry

		Sterling £	Canadian $ at 2.80 Exch.	
1	Master	£ 106. 0. 0	$ 296.80	
1	1st Mate (Master's Certificate)	69. 7. 6	194.25	Full seniority
1	2nd Mate (1st Mate Certificate)	50. 2. 6	140.35	after 3 years
1	3rd Mate (2nd Mate Certificate)	38.10. 0	107.80	
1	Radio Officer (See Below)	—	—	
1	Carpenter	37. 7. 6	104.65	
1	Bosun	35. 0. 0	98.00	
4	A. B.'s @ £31.10.0	126. 0. 0	352.80	
1	A. B.'s @ £30.10.0	30.10. 0	85.40	
1	A. B.'s @ £29.10.0	29.10. 0	82.60	
2	S.O.S. @ £20.12.6	41. 5. 0	115.50	
2	J.O.S. @ £17.15.0	35.10. 0	99.40	
1	Ch. Engineer	95. 0. 0	266.00	Full seniority
1	2nd Engineer (2nd Cl. Certificate)	60.17. 6	170.45	Full seniority
1	3rd Engineer	41.17. 6	117.25	
1	4th Engineer	33.12. 6	94.15	
1	4th Engineer	31.17. 6	89.25	
3	Greasers @ £34.0.0	102. 0. 0	285.60	
5	Firemen @ £32.0.0	160. 0. 0	448.00	
1	Ch. Steward	44.17. 6	125.65	Incl. £3.0.0 Canteen Bonus
1	2nd Steward	31. 0. 0	86.80	
1	Asst. Steward (2 years)	28.10. 0	79.80	
1	Catering Boy	13.15. 0	38.50	
1	Ch. Cook (Higher Diploma)	41.12. 6	116.55	
1	2nd Cook	32. 0. 0	89.60	
36	Total—Straight Time per month	£1,316. 2. 6	$3,685.15	
	Voyage Leave and Sundays at Sea	209. 0. 0	585.20	
		£1,525. 2. 6	$4,270.35	
	Overtime (9½% of S.T. and Leave)	145. 0. 0	406.00	
	Radio Officer—Wages (Paid by Marconi)	58. 0. 0	162.40	
		£1,728. 2. 6	$4,838.75	
	Retained Personnel and Permanent Staff	45. 0. 0	126.00	
		£1,773. 2. 6	$4,964.75	
	Average Daily Cost per 30-day month		$ 165.50	

May 30th, 1955

Pro Forma Crew List and Union Wages, 10,000 DWT "Park" Vessel Operated on Canadian Registry

Appointment	*Basic Wage*	*Overtime Rate*
Master	$500.00-550.00	$ —
Chief Officer	337.50-387.50	52.50 per month
Second Officer	297.50-337.50	42.50 " "
Third Officer	272.50-287.50	37.50 " "
Radio Officer	277.50	—
1—Bosun	221.00	.95 per hour
1—Carptener	226.00	.95 " "
6—A.B.'s @	204.00	.85 " "
3—O.S. @	178.50	.75 " "
Chief Engineer	475.00-525.00	—
Second Engineer	337.50-387.50	52.50 per month
Third Engineer	297.50-337.50	42.50 " "
Fourth Engineer	262.50-287.50	37.50 " "
Donkeyman	221.00	.95 per hour
3—Oilers @	209.00	.85 " "
4—Firemen @	204.00	.85 " "
Chief Steward	296.00	—
Assistant Steward	204.00	.85 " "
Chief Cook	241.00	.95 " "
Second Cook	204.00	.85 " "
Engineer's Messman	187.00	.85 " "
Utility Man	162.00	.75 " "

Overtime Rates for licensed personnel are fixed monthly as additions to basic rates in lieu of hourly computation.

Deck and Engine Room unlicensed personnel work 8 hours per day, 5 day week.

Stewards' personnel work 7 hours per day, 6 day week.

Total wage cost based on average overtime, officers' leave as arranged and other ratings' leave 14 days per year, approximately $134,875 per annum, $11,240 per 30-day month, or $372 per day.

June 14, 1954

APPENDIX XII

Extracts from
"Estimated Cost of Operating in the Great Lakes"

(Exhibit 248)

Submitted by the

Canadian Shipowners Association

OPERATING COST PER DAY

	1955 Building Cost		1959 Building Cost	
	9,000 DWT	18,500 DWT 15,000 DWT (Lakes)	9,000 DWT	18,500 DWT 15,000 DWT (Lakes)
	$2,200,000 Daily - 20 years 335-day year	$4,000,000 Daily - 20 years 335-day year	$2,550,000 Daily - 20 years 335-day year	$4,600,000 Daily - 20 years 335-day year
Depreciation 7%	$ 328.36	$ 597.01	$ 380.60	$ 686.57
Interest 5%	119.33	216.96	138.31	249.50
Organization, etc.	20.12	34.22	22.86	38.93
Insurance	108.58	166.12	123.90	191.30
Repairs and Surveys	168.66	193.87	168.66	193.87
Portage:				
Basic Wages	140.00	146.87	140.00	146.87
Overtime	23.65	24.95	23.65	24.95
Clerical	.89	.89	.89	.89
Travelling (crews)	8.51	8.96	8.51	8.96
Master Shore Allowance	.81	.81	.81	.81
Leave Pay	7.85	8.36	7.85	8.36
Leave Pay Subsistence	1.33	1.42	1.33	1.42
Sick Pay (Estimated)	1.42	1.49	1.42	1.49
Pension Fund	2.76	2.99	2.76	2.99
B.N. Insurance	5.36	5.72	5.36	5.72
Provisions	49.25	52.24	49.25	52.24
Stores	45.37	72.09	45.37	72.09
Superintendence	11.94	11.94	11.94	11.94
Miscellaneous	22.28	22.78	22.28	22.78
	$1,066.47	$1,569.69	$1,155.75	$1,721.68
Administration and General	35.82*	35.82*	35.82*	35.82*
	$1,102.29	$1,605.51	$1,191.57	$1,757.50
Great Lakes Additional (Basis 185 days trading)				
Insurance	$10.76	$14.68		
Provisions	18.00	19.00		
Stores	4.86	11.89		
Miscellaneous	3.78	4.19		
Wage — (Separately in estimates)	—	—		
	$37.40	$49.76		

*Administration and General
Basis $1,000 per month
12 months
$12,000 per year
Cost per day basis 335 days $ 35.82

OPERATING COST — 20 YEAR PERIOD

Motor Vessel 9,000 DWT, 5,000 HP, 14 Knots on 20 Tons Diesel

	20 Year Total	Daily Cost Basis 6700 Days
1. (A) Capital Cost $2,200,000		
(B) Amortization period 20 years		
(C) Depreciation method 7% straight line	$2,200,000.	$ 328.36
(D) Interest at 5%	799,495.	119.33
(E) Organization, interest during construction, supervising	134,800.	20.12
	$3,134,295.	$ 467.81
2. (A) 335 days per year (30 days repairs, survey and deviation) daily cost	—	$ 467.81
3. Item 1 above	$3,134,295.	$ 467.81
(A) Insurance	727,400.	108.58
(B) Repairs and Surveys	1,130,000.	168.66
(C) Postage	1,290,300.	192.58
(D) Provisions	330,000.	49.25
(E) Stores	304,000.	45.37
(F) Superintendence	80,000.	11.94
(G) Miscellaneous	149,300.	22.28
Totals	$7,145,295.	$1,066.47

ADDITIONAL EXPENSES — GREAT LAKES TRADING

	Yearly	20 Year Total	Daily Cost (185-day Year)
Insurance	$1,990.	$39,800.	$10.76
Portage (Separate charge in Estimates)			
Provisions	3,330.	66,600.	18.00
Stores	900.	18,000.	4.86
Miscellaneous	700.	14,000.	3.78
Total	$6,920	$138,400.	
Daily Cost (185 days)			37.40

OPERATING COST — 20 YEAR PERIOD

Motor Vessel about 15,000 DWT (Lakes), 18,500 DWT, 6,500 HP, 14 Knots on 26 Tons Diesel

	20 Year Total	Daily Cost Basis 6700 Days
1. (A) Capital Cost $4,000,000		
(B) Amortization period 20 years		
(C) Depreciation method 7% straight line	$4,000,000.	$ 597.01
(D) Interest at 5%	1,453,625.	216.96
(E) Organization, interest during construction, supervising	229,300.	34.22
	$5,682,925.	$ 848.19
2. (A) 335 days per year (30 days repairs, survey and deviation) Cost per day	—	$ 848.19
3. Item 1 above	$ 5,682,925.	$ 848.19
(A) Insurance	1,113,000.	166.12
(B) Repairs and Surveys	1,298,960.	193.87
(C) Portage	1,356,500.	202.46
(D) Provisions	350,000.	52.24
(E) Stores	483,000.	72.09
(F) Superintendence	80,000.	11.94
(G) Miscellaneous	152,600.	22.78
Total	$10,516.985.	
Daily Cost 335 days		$1,569.69

ADDITIONAL EXPENSES — GREAT LAKES TRADING

	20 Year Total	Daily Cost (185-day Year)
Insurance	$ 54,300.	$14.68
Portage (Separate Charge in Voyage Estimates)		
Provisions	70,300.	19.00
Stores	44,000.	11.89
Miscellaneous	15,500.	4.19
	$184,100.	
Daily cost 185 days trading		$49.76

9,000 DWT VESSEL

Fort William, Kingston, Fort William
310,000 Bushels of Grain (to Kingston)

	Vessel's Cost or Time Charter Rate		
	$2,200,000 or (1955) $1,102 per day	$2,550,000 or (1959) $1,192 per day	Time Charter at $4.00 $1,221 per day
Vessel's Cost			
11.9 days (Deep Sea Trade)	($1,102) $13,115	($1,192) $14,185	($1,221) $14,530
11.9 days (Lake Trading)	(38) 450*	(39) 465*	(39) 465*
11.9 days (Lake Trading—Add. Wages)	(30) 360	(30) 360	(30) 360
	$13,925	$15,010	$15,355
½ day delay allowance	585	630	645
Fuel			
132 tons Diesel at $42.00 per ton	5,545	5,545	5,545
Miscellaneous			
Fort William	50	50	50
Lake Master	300	300	300
Welland Canal	60	60	60
Kingston	50	50	50
Crew Overtime, Canals	40	40	40
Incidentals	25	25	25
Totals	$20,580	$21,710	$22,070
Cost per bushel (310,000 bu.)	6.639¢	7.003¢	7.119¢

*Additional cost to compensate for Lake trading.

Time Factors

	Miles	Steaming Full	Steaming Reduced	Port	Total
Fort William				36 hrs.	36 hrs.
to	1045	51 hrs.	56 hrs.		107 hrs.
Kingston				36 hrs.	36 hrs.
to	1045	51 hrs.	56 hrs.		107 hrs.
Fort William					
	2090	102 hrs.	112 hrs.	72 hrs.	286 hrs.

Fuel Consumed

In loaded condition	(20 tons per day)	42.3 tons
In ballast condition	(16 tons per day)	34.0 tons
In reduced speed operating	(10 tons per day)	46.7 tons
		123.0 tons
In Port	(3 tons per day)	9.0 tons
Total fuel for voyage		132.0 tons

Reduced speed operating time includes time taken to pass through canals, locks, also approaching and leaving ports, bunkering and all other times when vessel is unable to operate at maximum speed.

We have assumed overall consumption at the rate of 10 tons per day in the case of the 9,000 ton vessel, and 13 tons per day in the case of the 18,500 ton vessel for these operations for estimating purposes.

9,000 DWT VESSEL
Seven Islands, Montreal (B), Ashtabula, Seven Islands
8,595 Tons Iron Ore (to Ashtabula)

	Vessel's Cost or Time Charter Rate		
	$2,200,000 or (1955) $1,102 per day	$2,550,000 or (1959) $1,192 per day	Time Charter at $4.00 $1,221 per day
Vessel's Cost			
10.4 days (Deep Sea Trade)	($1,102) $11,460	($1,192) $12,395	($1,221) $12,700
10.4 days (Lakes Trading)	(38) 395*	(39) 405*	(39) 405*
10.4 days (Add. wages—Lakes Trading)	(30) 310	(30) 310	(30) 310
	$12,165	$13,110	$13,415
½ day allowance delays	585	630	645
Fuel			
134 tons at $37.50 per ton	5,025	5,025	5,025
Miscellaneous			
Seven Islands (in and out)	450	450	450
Montreal (B)	300	300	300
Canal Pilots	120	120	120
Lake Master	195	195	195
Welland Canal	60	60	60
Ashtabula	50	50	50
Crew Overtime, Canals	150	150	150
Seven Islands	—	—	—
Totals	$19,100	$20,090	$20,410
Cost per ton† (8,595 tons)	$ 2.222	$ 2.337	$ 2.375

B—Bunkering. *Additional cost to compensate for Lakes trading. †Ton 2,240 lbs.
Note: No allowance made for Seaway tolls.

Time Factors

	Miles	Steaming Full	Steaming Reduced	Port	Total
Seven Islands				12 hrs.	12 hrs.
to	970	55 hrs.	58 hrs.		113 hrs.
Ashtabula				12 hrs.	12 hrs.
to	970	55 hrs.	58 hrs.		113 hrs.
Seven Islands					
	1,940	110 hrs.	116 hrs.	24 hrs.	250 hrs.

Fuel Consumed

In loaded condition	(20 tons per day)	46.0 tons
In ballast condition	(16 tons per day)	36.7 tons
In reduced speed operating	(10 tons per day)	48.3 tons
		131.0 tons
In Port	(3 tons per day)	3.0 tons
Total fuel for voyage		134.0 tons

Reduced speed operating time includes time taken to pass through canals, locks, also approaching and leaving ports, bunkering and all other times when vessel is unable to operate at maximum speed.
We have assumed overall consumption at the rate of 10 tons per day in the case of the 9,000 ton vessel, and 13 tons per day in the case of the 18,500 ton vessel for these operations for estimating purposes.

9,000 DWT VESSEL
Ashtabula, Montreal, Ashtabula
8,680 Tons Coal (to Montreal)

	Vessel's Cost or Time Charter Rate		
	$2,200,000 or (1955) $1,102 per day	$2,550,000 or (1959) $1,192 per day	Time Charter at $4.00 $1,221 per day
Vessel's Cost			
8.3 days (Deep Sea Trade)	($1,102) $ 9,145	($1,192) $ 9,895	($1,221) $10,135
8.3 days (Lakes Trade)	(38) 315*	(39) 325*	(39) 325*
8.3 days (Add. wages—Lakes Trade)	(30) 250	(30) 250	(30) 250
	$9,710	$10,470	$10,710
½ day allowance delays	585	630	645
Fuel			
84.4 tons at $37.50	3,165	3,165	3,165
Miscellaneous			
Ashtabula	50	50	50
Welland Canal	60	60	60
Canal Pilots	120	120	120
Lake Master	195	195	195
Crew Overtime, Canals	150	150	150
Montreal	225	225	225
Total	$14,260	$15,065	$15,320
Cost per ton† (8,680 tons)	$ 1.643	$ 1.736	$ 1.765

*Additional Cost to compensate for Lakes trading. †Ton 2,240 lbs.

Note: No allowance made for Seaway tolls.

Time Factors

	Miles	Steaming Full	Steaming Reduced	Port	Total
Ashtabula				12 hrs.	12 hrs.
to	480	18 hrs.	63½ hrs.		81½ hrs.
Montreal				24 hrs.	24 hrs.
to	480	18 hrs.	63½ hrs.		81½ hrs.
Ashtabula					
	960	36 hrs.	127 hrs.	36 hrs.	199 hrs.

Fuel Consumed

In loaded condition	(20 tons per day)	15.0 tons
In ballast condition	(16 tons per day)	12.0 tons
In reduced speed operation	(10 tons per day)	52.9 tons
		79.9 tons
In port	(3 tons per day)	4.5 tons
Total fuel for voyage		84.4 tons

Reduced speed operating time includes time taken to pass through canals, locks, also approaching and leaving ports, bunkering and all other times when vessel is unable to operate at maximum speed.

We have assumed overall consumption at the rate of 10 tons per day in the case of the 9,000 ton vessel and 13 tons per day in the case of the 18,500 ton vessel for these operations for estimating purposes.

15,000 DWT VESSEL (LAKE TRADING)
Fort William, Kingston, Fort William
516,000 Bushels of Grain (to Kingtson)

	Vessel's Cost or Time Charter Rate		
	$4,000,000 or (1955) $1,606 per day	$4,600,000 or (1959) $1,757 per day	Time Charter at $3.25 $2,028 per day
Vessel's Cost			
13.4 days (Deep Sea Trade)	($1,606) $21,520	($1,757) $23,545	($2,028) $27,070
13.4 days (Lake Trading)	(50) 670*	(54) 670*	(54) 670*
13.4 days (Add. wages—Lake Trading)	(33) 440	(33) 440	(33) 440
	$22,630	$24,655	$28,180
½ day delay allowance	845	920	1,060
Fuel			
179 tons at $42.00 per ton	7,520	7,520	7,520
Miscellaneous			
Fort William	50	50	50
Lake Master	300	300	300
Welland Canal	60	60	60
Kingston	50	50	50
Crew Overtime, Canals	40	40	40
Incidentals	25	25	25
Totals	$31,520	$33,620	$37,285
Cost per bushel (516,000 bu.)	6.109¢	6.515¢	7.226¢

*Additional cost to compensate for Lake trading.

Time Factors

	Miles	Steaming Full	Steaming Reduced	Port	Total
Fort William				54 hrs.	54 hrs.
to	1045	51 hrs.	56 hrs.		107 hrs.
Kingston				54 hrs.	54 hrs.
to	1045	51 hrs.	56 hrs.		107 hrs.
Fort William					
	2090	102 hrs.	112 hrs.	108 hrs.	322 hrs.

Fuel Consumed

In loaded condition	(26 tons per day)	55.0 tons
In ballast condition	(21 tons per day)	45.0 tons
In reduced speed operating	(13 tons per day)	61.0 tons
		161.0 tons
In Port	(4 tons per day)	18.0 tons
Total fuel for voyage		179.0 tons

Reduced speed operating time includes time taken to pass through canals, locks, also approaching and leaving ports, bunkering and all other times when vessel is unable to operate at maximum speed.
We have assumed overall consumption at the rate of 10 tons per day in the case of the 9,000 ton vessel, and 13 tons per day in the case of the 18,500 ton vessel for these operations for estimating purposes.

15,000 DWT VESSEL (LAKES TRADING)
Seven Islands, Montreal (B), Ashtabula, Seven Islands
14,545 Tons Iron Ore (to Ashtabula)

	Vessel's Cost or Time Charter Rate		
	$4,000,000 or (1955) $1,606 per day	$4,600,000 or (1959) $1,757 per day	Time Charter at $3.25 $2,028 per day
Vessel's Cost			
11.0 days (Deep Sea Trade)	($1,606) $17,665	($1,757) $19,325	($2,028) $22,310
11.0 days (Lakes Trading)	(50) 550*	(54) 595*	(54) 595*
11.0 days (Add Wages — Lakes Trading)	(33) 365	(33) 365	(33) 365
	$18,580	$20,285	$23,270
½ day delay allowance	845	920	1,060
Fuel			
177.1 tons $37.50 per ton	6,640	6,640	6,640
Miscellaneous			
Seven Islands (in and out)	450	450	450
Montreal (B)	300	300	300
Canal Pilots	120	120	120
Lake Master	195	195	195
Welland Canal	60	60	60
Ashtabula	50	50	50
Crew Overtime, Canals	150	150	150
Seven Islands	—	—	—
Totals	$27,390	$29,170	$32,295
Cost per ton (14,545 tons)	$ 1.883	$ 2.006	$ 2.220

B—Bunkering *Additional cost to compensate for Lakes trading.
Note: No allowance made for Seaway tolls.

Time Factors

	Miles	Steaming Full	Steaming Reduced	Port	Total
Seven Islands				20 hrs.	20 hrs.
to	970	55 hrs.	58 hrs.		113 hrs.
Ashtabula				20 hrs.	20 hrs.
to	970	55 hrs.	58 hrs.		113 hrs.
Seven Islands					
	1940	110 hrs.	116 hrs.	40 hrs.	266 hrs.

Fuel Consumed

In loaded condition	(26 tons per day)	59.6 tons
In ballast condition	(21 tons per day)	48.1 tons
In reduced speed operating	(13 tons per day)	62.8 tons
		170.5 tons
In Port	(4 tons per day)	6.6 tons
Total fuel for voyage		177.1 tons

Reduced speed operating time includes time taken to pass through canals, locks, also approaching and leaving ports, bunkering and all other times when vessel is unable to operate at maximum speed.

We have assumed overall consumption at the rate of 10 tons per day in the case of the 9,000 ton vessel, and 13 tons per day in the case of the 18,500 ton vessel for these operations for estimating purposes.

15,000 DWT VESSEL (LAKES TRADING)

Ashtabula, Montreal, Ashtabula
14,645 Tons Coal (to Montreal)

	Vessel's Cost or Time Charter Rate		
	$4,000,000 or (1955) $1,606 per day	$4,600,000 or (1959) $1,757 per day	Time Charter at $3.25 $2,028 per day
Vessel's Cost			
9.3 days (Deep Sea Trade)	($1,606) $14,935	($1,757) $16,340	($2,028) $18,860
9.3 days (Lakes Trade)	(50) 465*	(54) 500*	(54) 500*
9.3 days (Add. wages — Lakes Trade)	(33) 310	(33) 310	(33) 310
	$15,710	$17,150	$19,670
½ day delay allowance	845	920	1,060
Fuel			
114 tons at $37.50 per ton	4,275	4,275	4,275
Miscellaneous			
Ashtabula	50	50	50
Welland Canal	60	60	60
Canal Pilots	120	120	120
Lake Master	195	195	195
Crew Overtime, Canals	150	150	150
Montreal	300	300	300
Totals	$21,705	$23,220	$25,880
Cost per ton† (14,645 tons)	$ 1.482	$ 1.586	$ 1.767

*Additional cost to compensate for Lake trading. †Ton 2,240 lbs.
Note: No allowance for Seaway tolls.

Time Factors

	Miles	Steaming Full	Steaming Reduced	Port	Total
Ashtabula				20 hrs.	20 hrs.
to	480	18 hrs.	63½ hrs.		81½ hrs.
Montreal				41 hrs.	41 hrs.
to	480	18 hrs.	63½ hrs.		81½ hrs.
Ashtabula					
	960	36 hrs.	127 hrs.	61 hrs.	224 hrs.

Fuel Consumed

In loaded condition	(26 tons per day)	19.5 tons
In ballast condition	(21 tons per day)	15.7 tons
In reduced speed operating	(13 tons per day)	68.8 tons
		104.0 tons
In port	(4 tons per day)	10.0 tons
Total fuel for voyage		114.0 tons

Reduced speed operating time includes time taken to pass through canals, locks, also approaching and leaving ports, bunkering and all other times when vessel is unable to operate at maximum speed.

We have assumed overall consumption at the rate of 10 tons per day in the case of the 9,000 ton vessel and 13 tons per day in the case of the 18,500 ton vessel for these operations for estimating purposes.

APPENDIX XIII

Report to the Royal Commission on Coasting Trade in Regard to Questions Respecting Exhibits 200, 201, 202 and 222

MILNE, GILMORE & GERMAN
Naval Architects and Marine Surveyors
Suite 401 Dominion Square Building
Montreal

PREAMBLE

In the endeavour to form replies to the questions asked it has been our object to secure as much relevant and factual data as possible which, together with our accumulated general experience in the field of consulting naval architecture, serves as the basis for our considered opinions appearing in the answers herein.

QUESTION 1

In general, are vessels C, D, E, F and G practical for operation on both ocean and seaway routes, would they do and would they be suitable for doing what it is said they will do, and would they be worthy of consideration by a U.K. operator contemplating regular competition for cargoes to be moved on the Great Lakes?

Answer to Question 1

(Ref. Nos. 1, 2 and 3)

Yes, we consider vessels C, D, E, F and G in general are practical for operation on both seaway and ocean routes, and are suitable for the carriage of grain, ore, oil and other bulk and general cargoes as the case may be.

It will be noted, however, from references #1 and #2 that the net cost per ton deadweight carried varies with these different vessels, and thus competitive conditions could rule out certain of the vessels for practical operation.

From the technical point of view, however, the vessels could operate and would be practical on these services. Certain concessions would have to be made in their design, of course, to enable them to compete at lake ports and take full advantage of their size and capacity, such as care in the design of hatch layouts to suit lake elevators, care in the layout of mooring arrangements to facilitate handling the vessels at lake ports etc. These considerations would not be inconsistent with suitable layouts for the oceangoing portion of their service.

In the case of the three larger vessels, E, F and G, the speed and power used for purposes of general comparison are somewhat lower than in the prevailing present day practice for oceangoing vessels of this type. These vessels would no doubt be designed with from 50% to 150% more power if undertaken today, and it will be observed from Reference #3 that this would be in line with current designs. The main reason for this extra power is due to the fact that the vessels will thereby make more trips per season, which is an advantage in the deep sea ore trades particularly since it is often the case that the vessels so engaged operate one direction in ballast. Since time need not be lost in deviation and loading a return cargo the actual time at sea is much greater compared to the vessel with a return cargo, and the speed of the vessel is consequently a more important factor in gaining additional voyages per season.

In order to test the economic effect of greater speed of such a vessel engaging in the Wheat and Ore movements under present consideration, a calculation has been made based upon a vessel of type similar to F, but with greater power, and suitable for a seagoing speed of 14.76 knots (17.0 statute miles per hour) at a seagoing draught of 32′-0″. It is considered that such a vessel would be in line with current trends as regards speed. For operation on seaway service this vessel, which has been designated FF, has been taken to operate at 17.0 statute miles per hour at a seaway draught of 25′-6″ which speed would be in line with recent lakers such as the "T.R. McLAGAN". Consequently, vessel FF has been considered as operating at something less than its maximum speed on seaway draught and is directly comparable to vessels H, I and J.

It will be noted that while the faster vessel (FF) does not show up as well as vessel F for either the Wheat or Ore movements, it is nevertheless superior to vessel H. The relatively poor showing of vessel FF as compared to vessel F may be attributed to a very large degree to the high percentage of their time that these vessels spend in port on the Wheat and Ore movements being considered. To a lesser degree vessel FF is penalized in carrying a significantly smaller deadweight on the given draught than is carried by vessel F, a factor which would be of reduced importance on deeper seagoing draughts. Higher capital cost of the more powerful machinery plant of vessel FF also works against the vessel for these services, and as remarked in regard to deadweight, this factor would be of less importance for vessels when operating on deeper draughts and carrying greater deadweight.

A second principal difference between the three vessels, E, F and G, and actual vessels in the same tonnage class, is the rather high length/depth ratio for oceangoing service. More will be said about this feature in the answer to Question 2, but our conclusion in the matter is that the vessels could be designed to conform to Classification requirements although special consideration would be necessary.

If, however, such approval could not be obtained on submission of specific design, shorter vessels would have to be considered. The length of these would be about 624 feet in lieu of 640, and the relative economy of the shorter vessels would probably not be very different from those actually considered in this study.

References #1 and #2 set out our views as to the comparative performance of these vessels and standard present-day lake type vessels in the Wheat and Ore movements of Exhibit 200, showing in addition the original Canada Steamship Lines' data. The main points of difference between our estimates and those of the C.S.L. are explained in References #1(a) and #2(a).

With the possible exception of vessel E, which is considerably larger than the majority of dry cargo vessels operating on ocean routes, and is of somewhat non-standard proportion as regards length/depth ratio, we believe they would be worthy of consideration by a U.K. operator for services as mentioned on the Great Lakes and ocean route.

QUESTION 2

Do the vessels conform to technical requirements of official bodies, Classification societies, etc. for oceangoing and Great Lakes vessels?

Answer to Question 2

(Ref. Nos. 3 and 4)

All of the vessels under consideration have principal dimensions and particulars within the scope of standard official and classification requirements for the Great Lakes and could therefore be designed to conform to the standard requirements of the Great Lakes, and it will be observed from the tabulation of particulars of certain lake vessels, in Ref. #3, that vessels of length/depth ratios of up to 18.75 have in fact been built. As regards other principal dimensions of vessels C, D, E, F and G,

these will be seen to be generally within lake practice except for depth. The depth (44 feet), though it exceeds standard Laker depths, is considered however to be satisfactory for use on the wheat and ore movements.

Furthermore, vessels C and D are close to normal proportions for oceangoing vessels. A publication issued in July 1955 by the U.S. Department of Commerce, entitled "New Ship Designs" (Reference #4), shows the proposed new "Freedom" Class and "Clipper" cargo ships are actually quite comparable to vessels C and D as regards overall dimensions. It is considered therefore that these vessels would conform to standard requirements of official bodies for such service.

Vessel E is not within the standard length/depth ratios considered in the Load Line Rules for which the range of length/depth ratios extends from 10 to 13.5 for oceangoing vessels. Shelter deck vessels of type C, D and E, due to the nature of their cargo requirements, normally fall into the 10 to 12 (length/depth ratio) range, e.g., Lloyd's basic depth for a vessel 640 feet in length is 60 feet or 10.7 length/depth ratio. It will be noted that the length/depth ratio for vessel E is 14.55. It should also be noted, however, that the Load Line regulations are based upon a certain standard of strength and seek to avoid abnormal proportions by the selection of range of length/depth ratios mentioned. Vessels whose proportions are outside these limits can usually be approved provided it is shown to the satisfaction of the Load Line assigning authority (the Classification Society) that the strength and freeboard requirements of the authority are met in the proposed design. It is our considered opinion that the proportions for vessel E are not extreme and the vessel could be designed without difficulty to receive Classification approval. It may be observed, however, that this opinion could only be properly supported by submission of a test case to the Load Line assigning authority for consideration and approval.

Vessels F and G are also outside the range for length/depth ratio of oceangoing vessels and would require special consideration by the assigning authority. However, being of the single deck bulk carrying type, these vessels' proportions would normally be worked out in accordance with Rules for Vessels Carrying Petroleum in Bulk, where length/depth ratios approaching 13.5 are common. Classification Rules acknowledge this fact in effect by setting up as a basis standard in the Rules length/depth ratios for vessels of this size of about 13.1, e.g., 47.5 feet depth for a vessel 620 ft. long. As with vessel E, however, special approval is required for the smaller depths though the depth proposed for these vessels is such that there should, in our opinion, be little difficulty in obtaining such approval. As a measure of comparison it may be noted that the "BOMI HILLS", an ore carrier in the Africa-U.S.A. service, measures 600 feet between perpendiculars by 80 ft. breadth by 43 ft. depth, a length/depth ratio of 13.95. Again, the Hanna class ore carriers, for service from Seven Islands to the east coast ore ports are 630 ft. long between perpendiculars by 87 ft. breadth by 45 ft. 6 ins. depth, a length/depth ratio of 13.85. Reference to vessel F shows the proposed dimensions to be about 640 ft. between perpendiculars by 73 ft. breadth by 44 ft. depth (length/depth ratio of 14.55), and it will be noted that the depth is very close to the two actual vessels.

QUESTION 3

Would their physical performance in both ocean and inland trades be acceptable, having regard not only to weather and wave action but also to loading and unloading facilities to be used and any other service considerations?

Answer to Question 3

(Ref. Nos. 3 and 4)

It is considered that their physical performance would be acceptable in both ocean and inland trades, having regard not only to weather and wave action but also to loading and unloading facilities to be used, and general strength considerations.

It may be observed from details listed in the technical paper "Modern Ore Carriers" attached to this report as Reference #3, that the ore and grain carrier vessel F differs from typical Lakers in the matter of depth and in a rather lower power than will be found in the lakes vessels of comparable size. Vessel F differs from oceangoing ore carriers principally as regards breadth and in its somewhat lower power. Neither of these differences as they appear are of sufficient magnitude to be detrimental to vessel F's performance as regards wind and wave action at sea. Loading and unloading arrangements of vessel F would be a matter for detail design but it is considered that a suitable arrangement for both oceangoing service and Lakes service could be worked out. Strength of vessel F for sea service would require to be specially considered due to her somewhat non-standard length/depth ratio but it is considered that this feature could be dealt with without difficulty during the design stages. The same remarks may be applied to vessel G.

Vessels C and D are very common types in regard to most of their features except for the fact that the machinery is arranged aft. This practice, of course, has been very common to-date for specialized bulk carriers such as for ore and oil, both for oceangoing and for lake vessels. For the oceangoing shelterdecker, however, the practice to-date has been very largely in favour of the machinery amidships arrangement. It will be seen from "New Ship Designs" (Ref. 4) and "On Design of Economic Tramp Ships" (Ref. 5) that the thinking for modern tramp and shelterdeck vessels is leaning toward the machinery aft arrangements, in order to gain the best portion of the hull for cargo hold space, i.e. the midships portion. With modern compact machinery arrangements the engine room can now be moved to the more restricted stern area, at least for any but higher speed vessels where the finer stern might make such an arrangement impracticable. It is considered that the arrangement proposed for vessels C and D, provided suitable ballasting arrangements are included in the design for proper trim and suitable seagoing qualities when running in ballast, are satisfactory for wind and weather action on both Lakes and ocean service.

As regards cargo handling facilities, it is fairly clear that the arrangements on vessels of this type are not ideal for grain and ore service, particularly on the Great Lakes, where a clear run of deck with properly spaced hatches is preferable. This fact has been considered in the calculations concerning the comparative performance of the vessels (reference sheets 1 and 2) where a penalty in loading time has been applied against vessels C, D and E. It is considered, however, that they would be acceptable with regard to loading and unloading facilities likely to be used, though care must be taken in the design stages to ensure an optimum arrangement of hatches and cargo handling gear on board.

Vessel E would be a very uncommon vessel if built, but this is due to the fact that very few shelterdeck type tramp ships have been built of comparable size probably because the prospects for keeping such a vessel in continued employment in the tramp trade are very small. Her behaviour at sea, as regards waves and weather, however, would be quite satisfactory. Her cargo handling arrangements could be made operable on the Great Lakes, with the same provisions as mentioned for vessels C and D. Special approval would be required from the Classification society for her structural design due to her somewhat low depth, but it is felt that this could be obtained in the design stages. (See answer to Question 2.) Her physical performance in ocean ports would be satisfactory in ports where berthing facilities are large enough, but her large size would certainly result in a degree of inflexibility, as regards ocean tramp operations which might make her unattractive to the tramp operator.

QUESTION 4

Are there many such ships or similar ships now in existence or under construction or planned in the near future?

Answer to Question 4

(Ref. Nos. 9 and 13)

With the exception of vessel E we consider that there is a significant number of similar vessels now in existence and being planned for the future. It is considered that vessels F and G as proposed are near enough to actual vessels in service today, as regards their overall dimensions and proportions, to enable us to state that they are comparable.

Vessels similar in general size to "C" and "D" are shown in United States thinking (Ref. 4) as the new proposed "Clipper" and "Seafarer" classes which though faster vessels are otherwise quite similar. Dr. Corlett's paper "Design of Economic Tramp Ships" indicates like thinking, but for somewhat slower vessels. A breakdown of ocean tramp vessels in categories of capacity (Ref. 13) shows that as at December 1st 1955 large numbers of tramp vessels in the C and D categories were under construction, of which most were to be propelled by diesel machinery as is the case with vessels C and D. While there are no actual dimensions given with the individual vessels listed in this breakdown it is safe to say that the majority of the vessels would be similar in type. Machinery in the majority of cases would be toward amidships rather than aft, but as mentioned in the answer to question 3 it is considered there is a growing trend toward the machinery aft arrangement.

It is of interest to note from the table (Ref. 13) that several vessels of tramp type (shelterdecker probably not unlike vessel E) of deadweight capacities ranging from 16,100 to 19,000 tons were also under construction at this time. However, the number of these represented about 1.25 percent of the total and tends to confirm the limited possibilities for such vessels in ocean trades.

An indication can also be gained of the relative numbers of such vessels (C, D and E) which were in operation in 1953 on ocean routes from the data given in reference 9 "Number of Dry Cargo Vessels as of Year 1953, in Major Deadweight Capacity Categories". These vessels will include specialized bulk ore carriers, cement carriers, sugar carriers, etc., but the majority will be of the tramp shelterdeck type and again it will be observed that a large number are of the C and D vessel sizes (from 10,000 to 14,500 tons deadweight) and very few of the larger size such as vessel E.

It will be seen from the paper "Modern Ore Carriers" that vessels of F and G types are not unusual, though we are unable to say how many would be in operation at the present time. It may be noted that in addition to the bulk carriers described in the above paper (Ref. 3) that reference numbers 6 and 15 give data on several more somewhat smaller combined type grain and ore or grain and coal carriers built or on order from Swedish Builders. These vessels are similar to vessel F except for their slightly smaller size and higher speed.

The dual type vessel for ore and bulk liquid cargoes such as vessel G is also becoming more common and is represented in ocean trades by the SS. "Californian", "Bomi Hills", "Chateaugay" and "Soya Atlantic" and others (Ref. 3). These vessels are all fairly comparable to vessel G except for comparatively minor differences of dimension and speed which also differ amongst the various vessels mentioned. It should be noted that this type of specialized vessel, while entirely suitable for this dual service are yet comparatively recent types and limited in number.

QUESTION 5

Are the data given concerning all vessels A to G consistent with one another and with your own knowledge as regards:

(a) dimensions
(b) cargo capacity in long tons and in bushels (volume), at 25'-6" fresh water draught and at given salt water draughts
(c) power, speed and fuel consumption
(d) cost of construction in a typical U.K. yard, and a typical Canadian yard
(e) operating costs on U.K. registry and on Canadian registry
(f) annual rate at which depreciation and interest charged
(g) any other relevant matter

insofar as these can be checked conveniently, short of drawing plans and making a detailed engineering study?

Answer to Question 5

(a) The data given concerning all vessels A to G are generally consistent with one another in regard to dimensions, and by this we mean that the basis dimensions of the vessels are such as would be reasonably consistent with the capacity, speed and power freeboard and deadweight capacity stated. This opinion is conditioned somewhat, however, by the fact that we believe the deadweight capacities given for vessels C and D and to a lesser extent vessels E, F and G are conservative. This applies particularly to vessel C. It will be noted that references 1 and 2 make appropriate corrections and give figures based on revised capacity estimates.

(b) The cargo capacities stated, both in bushels and in long tons, are suitable for the fresh water and given salt water draughts.

(c) The power and speed estimates are considered to be fair estimates and mutually consistent. Fuel consumptions, however, are found to be rather liberal and revised estimates have been included in references 1 and 2.

(d) The cost of construction as estimated by us for Canadian yards agreed reasonably well with the given data for all except vessels D and E. We do not consider the difference in the case of vessel D is very significant, since detailed information on all of these vessels is of course very limited and the estimates are of necessity not of a detailed nature. In addition, the difference of approximately 10% between the two estimates comes within the usual differences between actual prices submitted by shipyards based on far more detailed information. Such a variation does not in itself have any appreciable effect upon the final relative comparisons.

The difference, however, between the estimate for vessel E and the given data is more significant, being in the order of 15%, and does have more of an effect upon the final cost comparisons on a "cost per ton" or "cost per bushel" basis.

In the case of estimates of cost in British shipyards an average differential has been assumed to be 2/3, that is, the British price is assumed to be 2/3 of the Canadian price. On the basis of our accumulated general experience it is considered that this average differential is reasonably representative for all of the vessels under consideration.

It should be noted that the cost estimates for construction of these vessels both in the United Kingdom and Canada are based on wages and prices prevailing in 1955 and do not include allowances for possible escalation on materials or wage rates.

It is of interest to note that recently published figures for the approximate costs of new dry cargo ships in the 10,000 deadweight class (similar to vessel C) tend to support the estimate of the U.K. price for vessel C given in Reference #1 (see "European Shipbuilding Prices"—Reference #8), while others tend to indicate that this estimate of price may be high (References #7, 11 and 16).

Still another recent press release, not included in this report as a reference, noted that approximately 100 similar design dry cargo vessels of the 10,000 ton class (similar

to vessel C), are now under construction in British and European shipyards at prices ranging from $2,000,000. to $2,400,000. These vessels are somewhat smaller in dimensions than vessel C, as follows:

	New Vessels	*Vessel C*
Length B.P.	430′-0″	445′-0″
Breadth	60′-9″	62′-0″
Depth	40′-6″	39′-9″
Cubic capacity	600,000 cu. ft.	740,000 cu. ft.
Speed	14 knots	12½ knots
Machinery	Diesel	Diesel

Lower prices should be expected for these vessels than for vessel C, due to the effect of quantity production.

(e) We do not have the extensive and closely detailed records of operating costs for wages, provisions, etc., such as have been submitted to the Commission by the vessel operators, but to the best of our knowledge on this subject the estimates appear to be reasonable. We would not expect to find any large discrepancies which might alter the relative position as regards cost per ton-mile.

(f) The annual rate at which depreciation appears to have been charged on the given data is 5% per annum for ocean-going vessels, and 4% per annum for Great Lakes vessels, both of these depreciations being on a straight line basis. As is well known, Canadian income tax regulations permit depreciation to be written off at 15% on the reducing balance method, though it is common practice for Canadian operators to use the straight line method at the percentages mentioned above. British income tax regulations on the other hand allow depreciation to be written off at 5% per annum on a straight line basis, with a slightly higher rate for tankers. To the best of our knowledge, therefore, the rates used in the given data are suitable. In the case of oceangoing vessels, C, D, E and F and G, the portion of depreciation charged against Lake operations is taken as 230/330 and 210/330 for the wheat and ore movements respectively as explained in Ref. 1(a) and 2(a).

As regards interest, it is considered that 2½% would be a reasonable assumed average rate of interest for such an investment of capital which is being amortized over a period of, say, twenty years.

(g) As mentioned before under question 3, it may be noted that the proposed dry cargo, shelter deck type vessels C, D and E are arranged with machinery aft, a feature which, while common practice on the Great Lakes, has not been so for sea-going vessels. However, several such vessels have been put into service in recent years and there is an increasing trend toward this arrangement. It is considered that such an arrangement is entirely practical for the vessels under consideration. Since it is already common practice for sea-going bulk carriers such as vessels F and G to be arranged with machinery aft, these remarks are confined to vessels C, D and E.

QUESTION 6

In what trades outside of the Great Lakes might vessels C to G find employment during the winter? Would it take only a few or a considerable number of such vessels regularly seeking winter employment to have a significant depressing effect on winter rates in general and on rates in those trades in particular? Hence, what are the prospects for vessels of each type earning during the winter, (a) at least their variable (out-of-pocket) expenses, (b) their total costs, including a pro rata share of the annual charges for depreciation and interest, plus some contribution towards profit? Can any approximate limit be put on the total number of such vessels that might expect these levels of winter earnings?

Answer to Question 6

(Ref. Nos. 3, 4, 9 and 13)

It is considered that vessels C and D could enter the general tramping trade without difficulty and, in general, it is felt that they would be very suitable for general dry cargo trade anywhere on the world ocean routes. As will be noted from references #9 and #13 these vessels fit into the deadweight category of 10,000 to 15,000 tonners (depending on loaded drafts, whether they are open or closed shelter deck types, etc.) of which over 2,200 were in operation in 1953, and over 300 were under construction as at December 31, 1955. It is considered that the prospects for a number of these vessels finding winter employment would be very good, either as tramp vessels or on charter to integrated companies—paper, cement, ore, aluminum, etc.

Vessel E, while a dry cargo shelter deck type vessel might have some difficulty in finding regular winter employment in any numbers, due to her unusually large size and capacity. It will be noted that in 1953 only 60 dry cargo vessels of over 14,500 tons capacity were afloat, of which it is probable only a very small proportion would be of the 'E' type (shelter deckers) while most would be specialized single deck bulk vessels such as vessel F, compared to a total dry cargo fleet of over 6,000 vessels over 5,000 tons capacity i.e. only 1% of the dry cargo vessels afloat were in excess of 14,500 tons capacity. It will also be observed that only 8 dry cargo vessels of over 16,000 tons capacity were under construction in December 1955 out of approximately 300 of over 5,000 tons capacity, or 2.3%.

Vessel E will also be seen to be somewhat at a disadvantage against vessel F, as will be noted from refs. (1) and (2), on both the wheat and ore movements. The disadvantage is marginal, however, and may to some extent be offset by her somewhat greater flexibility when seeking winter cargoes on ocean routes.

Vessel F represents a type which it is felt would have less difficulty in finding regular employment on regular charters on bulk routes. This vessel is rather typical, in her general character, of many ocean going ore carriers, a few of which would be Hanna class ore carriers, the "Baltore", (ref. 3) and the proposed new Bulk Carriers of the United States Department of Commerce (ref. 4). As has been mentioned in answers to earlier questions, vessel F differs from those vessels principally in her lower speed and power, smaller breadth and her depth. The lower speed might have the effect of acting against her operational efficiency on ocean routes when the trend is toward 14-15 knot vessels to increase the number of round trips per season, but since the winter service would be considered as temporary to help defray expenses the element of profit motive would not be so important on her winter operations. It has been suggested that the probable volume of ore shipments to the United States from such points as Venezuela, Liberia, Chile, Scandanavia, Peru, Cuba and Labrador may reach 50,000,000 tons annually by 1960. This, it is estimated, would require a fleet of 80 vessels of about 25,000 tons capacity, working on a year-round basis. In addition, the carriage of bituminous coal to Europe with return cargoes of ore could provide employment for vessels in this group. Other ocean bulk trades which would be suitable for vessels in category F would be the grain trade from Canada, United States and Argentina and the bauxite trade from Trinidad to Quebec, Trinidad to New Orleans, Jamaica to British Columbia and Jamaica to La Quinta, Texas.

Vessel G represents a type, the combination ore and oil bulk carrier, which is becoming fairly common and is used, we understand, for the carriage of ore to the United States with return cargoes of petroleum to Liberia and alternative cargoes of petroleum from Venezuela. It is considered that the number of such vessels likely to appear on Seaway routes would be comparatively few and there would no doubt be a fairly good chance of some of these finding regular winter employment. Typical of such dual purpose type vessels in operation today are the ss. "Californian", ss. "Bomi

Hills", ss. "Chateaugay" and ss. "Enduro" and these vessels are all generally comparable to vessel G (Ref. 3). Again, it may be observed that vessel G is somewhat slower than these actual vessels and of less breadth and depth for comparable length. These differences, however, do not render vessel G at all impracticable for ocean operations and their effects on operating economy would be marginal.

Capacities of both vessels F and G are comparable to actual vessels of these types.

It is unlikely that the seasonal introduction to ocean trade routes of Vessels C and D from the Great Lakes would have a depressing effect upon freight rates, but in the case of E, F and G types, where the introduction of a few represents a comparatively large percentage of the total of this type world tonnage a depressing effect on rates could be expected. It would, however, be extremely difficult to assess the magnitude of this effect.

In general, this whole question is one of such complexity that it is not possible within the scope of the report to give a specific answer to the various sub-questions, supported by factual data. It is felt, however, that the introduction of, say, 50 vessels from the Seaway during the comparatively short off-season period into a world fleet of over 6,000 dry cargo vessels of between 5,000 and 30,000 tons capacity would not have any serious depressing effect upon the prevailing freight rates.

References #1, 2, 9 and 13, taken together lead us to the conclusion that next to vessel F, or to U.K. built Lakers such as I, the most serious competition to be expected on the Lakes would naturally derive from vessels in the C class. It will be observed that while the operating economy is not equal to vessel F, it is not very far removed and the difference in general flexibility between the two types for oceangoing trading is considerable. It is seen from the tabulations in Refs. #9 and 13 that very few dry cargo vessels of the capacities of vessels E, F and G are in operation as compared to those of C size and the great majority of such large dry cargo vessels would be F or G types. On the other hand the majority of the dry cargo vessels listed at deadweights less than 14,500 would be tramp type similar to vessels C and D. This is at least partially supported by Ref. #13 which shows the number of tramp (C) type vessels under construction as at December, 1955, from which it will be seen that the number of these vessels in the larger sizes, comparable to vessel E, are very few.

QUESTION 7

What would be the average time lost for drydocking a typical ocean vessel (a) in the years of quadrennial survey, (b) in other years?

Answer to Question 7

(Ref. Nos. 1 and 2)

The average time lost for drydocking a typical ocean vessel (a) in the years of quadrennial survey, would be seven days and (b) in other years, three days. It should be noted that these times are for drydocking time only and do not include deviation to repair ports or other contingent delays.

It may be noted, however, that it is generally considered that on the average an oceangoing vessel will lose from 30 to 35 days from her year in operation due to drydocking for surveys, deviation, damage and other repairs which may have to be carried out. We have, accordingly, entered figures on data sheets Refs. #1 and 2 showing the effect on operating costs of considering the operations on the Great Lakes as bearing a part of the cost of lost time due to the 35 day loss. It is assumed that this would take place during the off season and the share of depreciation chargeable to Lakes operations in the wheat movement is taken on the ratio of 230/330 in lieu of the ratio 230/365 assumed in the given data.

A similar adjustment is made on the ore sheet (ref. 2) for an operating season of 210 days. Since interest is affected in the same way these adjustments have been made for both interest and depreciation on the wheat and ore movements.

In regard to the operating season in the ore movement on the Great Lakes a season of 210 days carrying ore is assumed. In actual practice it is probable the vessels engaged in the ore trade would no doubt take advantage of the full 230 day Lakes season, the difference in operating time being taken up by one or more trips in the grain trade. An adjustment has therefore been made for depreciation and interest on the ore sheet (ref. 2) in the case of the two Laker type vessels to charge up the depreciation and interest in the ore movement in the proportion 210/230 of the total.

QUESTION 8

At what age is it the general practice to scrap and replace dry cargo vessels (a) serving exclusively in salt water (b) serving exclusively on the Great Lakes or St. Lawrence River? What are the corresponding ages for oil tankers on salt and on fresh water? What might be expected as the replacement age for vessels C, D, E, F and G if they were to spend approximately 230 days a year in fresh water and the balance in salt?

Answer to Question 8

To the best of our knowledge it is the general practice to scrap and replace dry cargo vessels (a) serving exclusively in salt water at the age of 25 years and (b) serving exclusively on the Great Lakes or St. Lawrence River at the age of 40 years. These are average figures and in actual practice may be exceeded by appreciable margins. The corresponding ages for oil tankers on fresh and salt water would be about 25 years and 17 years respectively.

The replacement age for vessels C, D, E, F and G spending 230 days a year in fresh water and the balance in salt might be expected to be, in the case of dry cargo vessels about 30-35 years, and, in the case of tankers about 20-25 years.

QUESTION 9

What is the general practice with respect to depreciation policies and rates applied to new vessels on salt water and on the Great Lakes, respectively, and what policy and rate would you consider as corresponding for vessels C to G? Does U.K. practice differ from Canadian to the extent that the conditions of service are comparable (e.g., in ocean service)?

Answer to Question 9

While the Canadian Government allows depreciation on the reducing balance method it is a fact that the general practice among Canadian and U.K. operators is to use the straight line method over a period somewhat less than the anticipated life mentioned in Question 8, e.g., 4% for Canadian operators on the Great Lakes and 5% for deep sea operators. See also Answer to Question 5 (f).

UNIT COST COMPARISON

The principal changes suggested in this report in the detail comparison of the basic vessels listed in the Canada Steamship Line's exhibit 200 are as follows:—

(1) Vessel deadweight capacity on 25′ 6″ draft:—

Affects mainly the bushel and ore capacities of vessels C and D with a small effect on vessels E, F and G.

(2) Trips per season:—

Affected principally by the differences in bushel and deadweight capacities noted in paragraph (1) above.

(3) Construction cost:—

Affects vessels D and E mainly, with smaller effects on all the other vessels.

(4) Working days per year:—

The policy suggested in this report, of writing off the fixed charges against 330 days of operation rather than 365 has a similar effect on all the oceangoing vessels C, D, E, F and G. The policy suggested in this report of writing off fixed charges for the Lakers engaged in the ore movement in the ratio of 210/230 days affect unit costs of the Lake vessels. This policy assumes that 20 days per season will be spent by these vessels carrying Lake cargo other than ore.

(5) Wages and Fuel Consumption:—

Alterations in these figures from basic C.S.L. figures as listed in exhibit 200 affect all vessels, though not equally. These changes are explained in Reference #1 (a).

The combined effect of these differences between the data given in exhibit 200 and the estimates made for this report are reflected in the unit costs derived for moving wheat and ore, e.g., costs per ton:

Vessel	Wheat Movement		Wheat Movement	
	C.S.L.	M.G.&G.	C.S.L.	M.G.&G.
A	$2.29/ton	$2.35/ton	$1.33/ton	$1.33/ton
B	1.79	1.88	.98	1.03
C	1.98	1.92	1.22	1.25
D	1.94	2.02	1.15	1.27
E	1.75	1.93	1.02	1.18
F	1.80	1.84	1.01	1.07
G	—	—	1.06	1.11
H	2.19	2.14	—	1.21
I	—	1.73	—	.94
J	—	1.82	—	1.00
FF	—	1.98	—	1.19

MILNE, GILMORE & GERMAN
Naval Architects

REPORT TO THE ROYAL COMMISSION ON COASTING TRADE
SUMMARY OF REFERENCES

1. Table of Operating Costs for service from head of Lakes to Kingston—Carrying Grain.
2. Table of Operating Costs for service from Seven Islands to Hamilton—Carrying Ore.
3. *"Modern Ore Carriers" by J. J. Henry—Presented before the Society of Naval Architects and Marine Engineers, May 1955.
4. *"New Ship Designs"—The U.S. Department of Commerce, Maritime Administration, July 1955.
5. *"On Design of Economic Tramp Ships" by Dr. E. C. B. Corlett—Presented before the Institution of Naval Architects, October 1955.
6. *"New Type of Bulk Carrier" (Ore and Grain)—Shipping World, December 28, 1955.
7. Shipbuilding Costs in United Kingdom—Curve of approximate cost of new Dry Cargo Ships from 1945 to 1954, with data on costs to 1956.
8. *"European Shipbuilding Prices"—Shipping World, Page 170, February 8, 1956.
9. Table Showing Number of Dry Cargo Vessels, in Deadweight Capacity Categories, in 1953. Information taken from Lloyd's Appendix to the Register.
10. Grain, Ore and Coal Tonnages moved on the Great Lakes System, 1955. See "Record Great Lakes Season"—Shipping World, January 1, 1956.
11. *"The Cost of a Cargo Ship"—Shipping World, January 11, 1956.
12. Price of Oil Fuels as at March 1956.
13. Ocean Tramp Vessels under Construction December 1, 1955—in the "World's Shipyards".
14. Canadian Average Weekly Wages and Salaries in Shipbuilding Industry 1949 to 1953.
15. *"Swedish Bulk Carrier Design"—Shipping World, November 9, 1955.
16. *"Financing Tonnage Replacement"—Shipping World, January 18, 1956.
17. *"Norwegian Shipping and Shipbuilding"—Shipping World, January 18, 1956.
18. Wheat Trade—Head of Lakes to Kingston—Vessel FF.
19. Ore Trade—Seven Islands to Hamilton—Vessel FF.

*Not reproduced herewith. (*Ed.*)

WHEAT TRADE—HEAD OF LAKES TO KINGSTON

Facing Tables (Insert)

Appendix XIII

Reference No. 1

Reference No. 1

WHEAT TRADE — HEAD OF LAKES TO KINGSTON

Note: C.S.L. figures shown in *italics*. Milne, Gilmore & German figures assume depreciation and interest charged to Lake operation on ratio of 230/330 for vessels C,D,E, and F.

BASIC SHIP PARTICULARS AND WHEAT CARRIED IN ONE SUMMER SEASON OF 230 DAYS

Vessel Identity Letter	Description of Ship	Speed M.P.H.	Bushel Capacity at 25′ 6″ or Less	Round Trip Miles	VOYAGE TIME, HOURS					Trips per Season	Bushels per Season	Tons Wheat		Ton-Miles per Season
					Running	Loading	Unload-ing	Net Total	Round Trip Including 5%			per Trip	per Season	
A	*THUNDER BAY*	14.4	623,000 Draft 23′ 0″*	2068	171.6	49.6	21.6	242.8	254.9	21.7	13,519,000	16,690	362,170	374,484,000
	CAN.	*14.4*	*623,000*	*2068*	*171.6*	*49.6*	*21.6*	*242.8*	*254.9*	*21.7*	*13,520,000*	*16,700*	*362,400*	*374,711,000*
B	*THUNDER BAY*	14.4	623,000 Draft 23′ 0″*	2068	171.6	49.6	21.6	242.8	254.9	21.7	13,519,000	16,690	362,170	374,484,000
	U.K.	*14.4*	*623,000*	*2068*	*171.6*	*49.6*	*21.6*	*242.8*	*254.9*	*21.7*	*13,520,000*	*16,700*	*362,400*	*374,711,000*
C	SHELTER DECKER 445′	14.4	377,100	2068	171.6	29.4	15.4	216.4	227.2	24.3	9,164,000	10,100	245,430	253,775,000
		14.4	*350,000*	*2068*	*171.6*	*28.8*	*14.4*	*214.8*	*225.5*	*24.5*	*8,580,000*	*9,400*	*229,800*	*237,610,000*
D	SHELTER DECKER 495′	14.4	455,400	2068	171.6	42.4	18.5	232.5	244.1	22.6	10,292,000	12,200	275,720	285,094,000
		14.4	*440,000*	*2068*	*171.6*	*42.0*	*18.1*	*231.7*	*243.3*	*22.7*	*9,990,000*	*11,800*	*267,900*	*276,967,000*
E	SHELTER DECKER 640′	14.4	653,300	2068	171.6	50.3	25.0	246.9	259.2	21.3	13,915,000	17,500	372,750	385,424,000
		14.4	*650,000*	*2068*	*171.6*	*50.2*	*24.8*	*246.6*	*258.9*	*21.3*	*13,850,000*	*17,450*	*371,700*	*384,322,000*
F	640′ ORE AND GRAIN	14.4	638,300	2068	171.6	50.0	22.0	243.6	255.8	21.6	13,787,000	17,100	369,360	381,918,000
		14.4	*635,000*	*2068*	*171.6*	*49.8*	*21.8*	*243.2*	*255.4*	*21.6*	*13,720,000*	*17,050*	*368,300*	*380,802,000*
G	640′ ORE AND OIL	14.4	——	——	Not Suitable for Wheat						——	——	——	——
		14.4												
H	*T. R. McLAGAN*	17.0	765,000 Draft 24′ 1″*	2068	149.6	53.1	26.1	228.8	240.2	23.0	17,595,000	20,490	471,270	487,293,000
	CAN.	*17.0*	*765,000*	*2068*	*149.6*	*53.2*	*28.2*	*231.0*	*242.5*	*22.8*	*17,442,000*	*20,500*	*467,200*	*483,085,000*
I	*T. R. McLAGAN*	17.0	765,000 Draft 24′ 1″*	2068	149.6	53.1	26.1	228.8	240.2	23.0	17,595,000	20,490	471,270	487,293,000
	U.K.	*17.0*	*765,000*	——	——	——	——	——	——	——	——	——	——	——
J	*T. R. McLAGAN*	17.0	765,000 Draft 24′ 1″*	2068	149.6	53.1	26.1	228.8	240.2	23.0	17,595,000	20,490	471,270	487,293,000
	U.K./CAN.	*17.0*	*765,000*	——	——	——	——	——	——	——	——	——	——	——

* *Approximately*

COMPARATIVE OPERATING EXPENSES

Vessel Identity Letter	Description of Ship	Where Built	1955 *Construction* Cost	Flag	Crew	VARIABLE EXPENSES							Total Variable Expenses	FIXED EXPENSES			Total *Fixed* Expenses	Total *Operating* Expenses
						Wages	Fuel	Provisions	Repairs and Maintenance	Supplies Dues, etc.	Overhead	Insurance		Fit-Out and Lay-Up	Depreciation	Interest at 2½%		
A	*THUNDER BAY*	CAN.	$ 4,850,000 *4,600,000*	CAN.	31 *31*	$	$	$	$	$	$	$	$	$	$	$	$	$ 716,850 *695,200*
B	*THUNDER BAY*	U.K.	3,230,000 *3,065,000*	U.K.	31 *31*													546,970 *514,070*
C	SHELTER DECKER 445′	U.K.	2,680,000 *2,600,000*	U.K.	36 *36*	38,400 *38,400*	92,800 *100,500*	14,700 *14,700*	22,110 *21,000*	17,000 *17,000*	18,500 *19,200*	36,980 *35,900*	240,490 *246,700*	—	93,400 *81,900*	46,700 *41,100*	140,100 *123,000*	380,590 *369,700*
D	SHELTER DECKER 495′	U.K.	3,510,000 *3,170,000*	U.K.	36 *36*	38,400 *38,400*	99,000 *105,200*	14,700 *14,700*	28,960 *25,600*	21,300 *21,300*	20,230 *20,500*	48,440 *43,700*	271,030 *269,400*	—	122,300 *99,900*	61,150 *50,200*	183,450 *150,100*	454,480 *419,500*
E	SHELTER DECKER 640′	U.K.	4,800,000 *4,100,000*	U.K.	36 *36*	41,000 *41,000*	117,730 *120,100*	14,700 *14,700*	39,600 *33,000*	27,800 *27,800*	24,080 *23,700*	64,030 *56,600*	328,940 *316,900*	—	167,300 *129,200*	83,650 *64,900*	250,950 *194,100*	579,890 *511,000*
F	ORE AND GRAIN 640′	U.K.	4,250,000 *4,300,000*	U.K.	36 *36*	41,000 *41,000*	119,600 *121,300*	14,700 *14,700*	35,060 *34,700*	27,800 *27,800*	23,820 *24,000*	56,700 *59,300*	318,680 *322,800*	—	148,100 *135,500*	74,050 *68,000*	222,150 *203,500*	540,830 *526,300*
G	ORE AND OIL 640′	U.K.	4,410,000 *4,400,000*	U.K.	36 *36*	—	—	—	—	—	—	—	—	—	—	—	—	—
H	*T. R. McLAGAN*	CAN.	5,820,000 *6,100,000*	CAN.	31 *31*													832,310 *851,800*
I	*T. R. McLAGAN*	U.K.	3,880,000 ——	U.K.	31 *31*													638,110 ——
J	*T. R. McLAGAN*	U.K.	3,880,000 ——	CAN.	31 *31*													680,330 ——

COMPARATIVE EXPENSES VERSUS INCOME AND COSTS PER TON AND PER TON-MILE

Vessel Identity Letter	Description of Ship	Built and Registered	Total Bushels Carried	Handling Expenses	Total Operating Expenses	Total Expenses Including Handling	Cost Per Bushel	Total Tons Carried	Cost Per Ton	Ton-Miles Per Season	Cost Per Ton-Mile	Income at 7 cents Per Bushel	Profit Before Taxes at 7 cents
A	*THUNDER BAY*	CAN.	13,519,000	$ 135,190	$ 716,850	$ 852,040	cents 6.30	362,170	$ 2.35	374,484,000	cents 0.228	$ 946,330	$ 94,290
		CAN.	*13,520,000*	*135,200*	*695,200*	*830,400*	*6.15*	*362,400*	*2.29*	*374,711,000*	*0.222*	*946,400*	*116,000*
B	*THUNDER BAY*	U.K.	13,519,000	135,190	546,970	682,160	5.05	362,170	1.88	374,484,000	0.182	946,330	264,170
		U.K.	*13,520,000*	*135,200*	*514,070*	*649,270*	*4.80*	*362,400*	*1.79*	*374,711,000*	*0.173*	*946,400*	*297,130*
C	SHELTER DECKER 445′	U.K.	9,164,000	91,640	380,590	472,230	5.15	245,430	1.92	253,775,000	0.186	641,480	169,250
		U.K.	*8,580,000*	*85,800*	*369,700*	*455,500*	*5.31*	*229,800*	*1.98*	*237,610,000*	*0.192*	*600,600*	*145,100*
D	SHELTER DECKER 495′	U.K.	10,292,000	102,920	454,480	557,400	5.42	275,720	2.02	285,094,000	0.196	720,440	163,040
		U.K.	*9,990,000*	*99,900*	*419,500*	*519,400*	*5.19*	*267,900*	*1.94*	*276,967,000*	*0.187*	*699,300*	*179,900*
E	SHELTER DECKER 640′	U.K.	13,915,000	139,150	579,890	719,040	5.17	372,750	1.93	385,424,000	0.187	974,050	255,010
		U.K.	*13,850,000*	*138,500*	*511,000*	*649,500*	*4.68*	*371,700*	*1.75*	*384,322,000*	*0.169*	*969,500*	*320,000*
F	ORE AND GRAIN 640′	U.K.	13,787,000	137,870	540,830	678,700	4.92	369,360	1.84	381,918,000	0.178	965,090	286,390
		U.K.	*13,720,000*	*137,200*	*526,300*	*663,500*	*4.84*	*368,300*	*1.80*	*380,802,000*	*0.175*	*960,400*	*296,900*
G	ORE AND OIL 640′	U.K.	——	——	——	——	——	——	——	——	——	——	——
		U.K.											
H	*T. R. McLAGAN*	CAN.	17,595,000	175,950	832,310	1,008,260	5.73	471,270	2.14	487,293,000	0.207	1,231,650	223,390
		CAN.	*17,442,000*	*174,400*	*851,800*	*1,026,200*	*5.88*	*467,200*	*2.19*	*483,085,000*	*0.212*	*1,220,940*	*194,740*
I	*T. R. McLAGAN*	U.K.	17,595,000	175,950	638,110	814,060	4.63	471,270	1.73	487,293,000	0.167	1,231,650	417,590
		U.K.	——	——	——	——	——	——	——	——	——	——	——
J	*T. R. McLAGAN*	Built U.K. Registered CAN.	17,595,000 ——	175,950 ——	680,330 ——	856,280 ——	4.87 ——	471,270 ——	1.82 ——	487,293,000 ——	0.176 ——	1,231,650 ——	375,370 ——

Reference No. 1(a)

The principal points of difference between original Canada Steamship Lines' estimates and our own are as follows:

(1) Deadweight carrying capacity of vessels C and D. For the speed of 14.4 miles per hour our estimates show a deadweight carrying capacity in excess of C.S.L. figures, which appear to be somewhat conservative. The effect of this difference between the two estimates is particularly important for vessel C and it will be seen that the relative position of C compared to D and E is greatly improved.

(2) Loading and unloading times, trips per season and all calculations for vessels C, D, E and F are affected by difference in deadweight carrying capacities between the given data and the check figures. Vessel H is at variance in the wheat movements in "unloading time" due to an amendment supplied by C.S.L. to their earlier basic makeup of this quantity, in which the figure was reduced by approximately two hours.

Basic loading times used by the C.S.L. were accepted without detailed check due to scarcity of reliable independent data. The figures used contain C.S.L. estimates of "lost time" applicable to each of the various sizes of vessels considered and are based upon C.S.L. voyage data accumulated from a large number of voyages for different sizes of Lake vessels. An assumption implicit in this data is that lost loading time differs with vessels of different size, an assumption which has an appreciable effect upon the final result and which has been accepted for the reason mentioned above.

Basic unloading times as used in C.S.L. figures contain a 10% penalty applied against vessels C, D and E. This penalty is accepted for use in the check figures.

(3) Price estimates are at variance between estimates by ourselves and C.S.L. in the cases of vessels D and E. Differences in price estimates shown for the remainder of the vessels are not considered to be of importance. It is regretted that no actual cases are known of recent construction of such vessels (D and E) and estimates are therefore unconfirmed by actual cases. Estimates shown are, however, considered to be reasonably close, and in line with our usual practice for estimating U.K. prices. We have taken the U.K. price estimate at 66% of the Canadian price.

(4) Wages for U.K. registered Upper Laker types such as vessels B and I have been adjusted in our estimate for cost of transporting a crew of men from the U.K. to Canada and of repatriation at the end of the operating season. This adjustment includes two weeks additional wages together with actual cost of their transportation.

(5) Fuel consumptions are at variance between the check figures and the given data, particularly in the ore movement between vessels C, D, E and F. The difference is not as great in the case of the wheat movement. Similar specific fuel consumption figures were applied to all diesel vessels in both movements and the consumptions calculated in all cases using the same basic assumptions as regards voyage time steaming, reduced speed time, port time, etc. It will be observed that the check figures are greater than the C.S.L. figures in the ore movement, and somewhat smaller in the wheat movement, and it is therefore felt that the basic assumptions used by C.S.L. for calculation of the given data between the ore and wheat movements may be mutually at variance.

(6) Repairs and Maintenance. It is noted that the figures allowed are low as compared to the usual average allowance over the life of a ship. The reason for this low figure is explained by C.S.L. as due to the fact that the allowance applies against new vessels. Since we are examining the possibility of competition from the seagoing vessels immediately after the completion of the Seaway, it seems reasonable to make the comparison on the basis of new vessels, and since all cases are treated in the same way we have accepted this method. Accordingly a figure of ¾ of 1 percent was adopted for checking purposes as being a reasonably representative average for the first few years for new vessels on Lakes trading rather than the more usual 2 to 2½% normally adopted as average over the life of a vessel. The approach is in very close agreement with actual allowance used by C.S.L. which works out to approximately 0.743%.

(7) Figures for overhead have been adjusted to the capital cost, using the same percentage allowances as used by C.S.L. which appear to be fair and reasonable.

(8) Insurance figures are fairly low as given by C.S.L., but we believe they could be obtained and have therefore accepted these figures, adjusted by us, of course, for differences in first cost. Insurance for vessels E, F and G have been worked out on the same basis as for vessels H, I and J since these vessels are all in the same category as to size. Vessels C and D have been treated on the basis used for vessels A and B for the same reason.

(9) Depreciation percentage has been assumed at 4% per annum for Lakers and 5% per annum for seagoing vessels, which is a common allowance. Canada Steamship Lines, however, have charged depreciation for the oceangoing vessels on the ratio of 230/365 against the operating season on the Lakes. The remainder has been charged against winter operations on ocean trade. The usual allowance for actual days per year spent operating for oceangoing tonnage is 330 days, the remaining time being an average allowance over the life of the vessel for the time lost in diverting the vessel to and from repair yards, time spent in drydock, repairs, voyage diversion, etc. C.S.L. figures assume this 35 day period of inactivity will be lost during winter operations, but their depreciation is charged in part against this period.

Milne, Gilmore & German's figure for depreciation charges the total depreciation against the actual operating time of the vessels, which in the case of the seagoing vessels could be assumed to be 330 days per annum on the average. Depreciation has been charged by M.G. & G. against operating time on the Lakes, therefore, in the ratio of 230/330 days.

(10) Interest figures at 2½% are adjusted from Canada Steamship Lines' figures for variation in estimates of first cost and also in the case of oceangoing vessels the interest against Lake operation has been charged in the ratio of 230/330 as for depreciation. 2½% represents a fair average on first cost over the amortization period.

(11) Handling expenses are based directly on grain capacity of the vessel.

Reference No. 2—Facing Tables (Insert)

Appendix XIII

Reference No. 2

Reference No. 2

ORE TRADE—SEVEN ISLANDS TO HAMILTON

ORE CARRIED IN ONE SUMMER SEASON OF 210 DAYS

Note: C.S.L. figures shown in *italics*. Milne, Gilmour & German figures assume depreciation and interest charged to the ore operation on ratio of 210/330 for vessels C, D, E, F, and G, 210/230 for the other vessels (lakers).

ORE CARRIED IN ONE SUMMER SEASON

Vessel Identity Letter	Description of Ship	Speed M.P.H.	Ore Capacity Long Tons at 25'6"	Round Trip Miles	VOYAGE TIME, HOURS				Round Trip Hours Including 5%	Trips Per Season	Tons Carried Per Season	Ton-Miles Per Season
					Running	Loading	Unloading	Net Total				
A	*THUNDER BAY* (CAN.)	14.4 *14.4*	18,000 *18,000*	1708 *1708*	143.4 *143.4*	6.00 *6.00*	24.0 *24.0*	173.4 *173.40*	182.1 *182.1*	27.7 *27.8*	498,600 *501,000*	425,800,000 *427,854,000*
B	*THUNDER BAY* (U.K.)	14.4 *14.4*	18,000 *18,000*	1708 *1708*	143.4 *143.4*	6.00 *6.00*	24.0 *24.0*	173.4 *173.40*	182.1 *182.1*	27.7 *27.8*	498,600 *501,000*	425,800,000 *427,854,000*
C	SHELTER DECKER 445'	14.4 *14.4*	10,100 *9,400*	1708 *1708*	143.4 *143.4*	3.4 *3.1*	21.5 *20.5*	168.3 *167.0*	176.7 *175.4*	28.5 *28.7*	287,850 *269,000*	245,820,000 *229,726,000*
D	SHELTER DECKER 495'	14.4 *14.4*	12,200 *11,800*	1708 *1708*	143.4 *143.4*	4.1 *3.9*	24.3 *23.8*	171.8 *171.1*	180.4 *179.7*	27.9 *28.1*	340,380 *332,000*	290,680,000 *283,528,000*
E	SHELTER DECKER 640'	14.4 *14.4*	17,500 *17,450*	1708 *1708*	143.4 *143.4*	5.8 *5.8*	33.3 *33.4*	182.5 *182.6*	191.6 *191.7*	26.3 *26.3*	460,250 *459,000*	393,050,000 *391,986,000*
F	640' ORE AND GRAIN	14.4 *14.4*	17,100 *17,050*	1708 *1708*	143.4 *143.4*	5.7 *5.7*	22.8 *22.7*	171.9 *171.8*	180.5 *180.4*	27.9 *28.0*	477,090 *477,000*	407,430,000 *407,358,000*
G	640' ORE AND OIL	14.4 *14.4*	16,750 *16,700*	1708 *1708*	143.4 *143.4*	5.6 *5.6*	22.3 *22.3*	171.3 *171.3*	180.0 *179.9*	28.0 *28.0*	469,000 *468,000*	400,530,000 *399,672,000*
H	*T. R. McLAGAN* (CAN.)	17.0 *17.0*	22,200 —	1708 —	126.0 —	7.4 —	29.6 —	163.0 —	171.2 —	29.5 —	654,900 —	559,280,000 —
I	*T. R. McLAGAN* (U.K.)	17.0 *17.0*	22,200 —	1708 —	126.0 —	7.4 —	29.6 —	163.0 —	171.2 —	29.5 —	654,900 —	559,280,000 —
J	*T. R. McLAGAN* (U.K./CAN.)	17.0 *17.0*	22,200 —	1708 —	126.0 —	7.4 —	29.6 —	163.0 —	171.2 —	29.5 —	654,900	559,280,000

COMPARATIVE OPERATING EXPENSES

Vessel Identity Letter	Description of Ship	Where Built	1955 Construction Cost	Flag	Crew	VARIABLE EXPENSES							Total Variable Expenses	FIXED EXPENSES			Total Fixed Expenses	Total Operating Expenses*
						Wages	Fuel	Provisions	Repairs and Maintenance	Supplies Dues, etc.	Overhead	Insurance		Fit-Out and Lay-Up	Depreciation	Interest at 2½%		
A	*THUNDER BAY*	CAN.	$ 4,850,000 *4,600,000*	CAN.	31 *31*	$	$	$	$	$	$	$	$	$	$	$	$	$ 665,170 *667,170*
B	*THUNDER BAY*	U.K.	3,230,000 *3,065,000*	U.K.	31 *31*													511,660 *492,970*
C	SHELTER DECKER 445'	U.K.	2,680,000 *2,600,000*	U.K.	36 *36*	35,100 *35,100*	93,700 *82,400*	13,400 *13,200*	22,200 *21,000*	15,500 *15,500*	17,990 *16,700*	33,760 *32,800*	231,650 *216,700*	— —	85,270 *74,900*	42,635 *37,400*	127,905 *112,300*	359,555 *329,000*
D	SHELTER DECKER 495'	U.K.	3,510,000 *3,170,000*	U.K.	36 *36*	35,100 *35,100*	103,600 *94,000*	13,400 *13,200*	29,000 *25,600*	19,500 *19,500*	20,060 *18,700*	44,230 *39,900*	264,890 *246,000*	— —	111,680 *91,300*	55,840 *45,700*	167,520 *137,000*	432,410 *383,000*
E	SHELTER DECKER 640'	U.K.	4,800,000 *4,100,000*	U.K.	36 *36*	37,500 *37,500*	115,100 *107,600*	13,400 *13,200*	39,700 *33,000*	25,400 *25,400*	23,110 *21,700*	58,460 *51,700*	312,670 *290,100*	— —	152,730 *118,100*	76,365 *59,200*	229,095 *177,300*	541,765 *467,400*
F	ORE AND GRAIN 640'	U.K.	4,250,000 *4,300,000*	U.K.	36 *36*	37,500 *37,500*	120,000 *110,500*	13,400 *13,200*	35,200 *34,700*	25,400 *25,400*	23,150 *22,100*	51,770 *54,200*	306,420 *297,600*	— —	135,230 *123,800*	67,615 *62,000*	202,845 *185,800*	509,265 *483,400*
G	ORE AND OIL 640'	U.K.	4,410,000 *4,400,000*	U.K.	36 *36*	37,500 *37,500*	120,300 *116,200*	13,400 *13,200*	36,500 *35,400*	25,400 *25,400*	23,310 *22,800*	53,710 *55,400*	310,120 *305,900*	— —	140,320 *126,700*	70,160 *63,500*	210,480 *190,200*	520,600 *496,100*
H	*T.R. McLAGAN*	CAN.	5,820,000 *6,100,000*	CAN.	31 *31*													791,920 —
I	*T.R. McLAGAN*	U.K.	3,880,000 —	U.K.	31 *31*													616,135 —
J	*T.R. McLAGAN*	CAN.	3,880,000 —	CAN.	31 *31*													653,155 —

*These costs will require to be increased to take care of Seaway tolls.

COMPARATIVE COST PER TON AND PER TON-MILE

Vessel Identity Letter	Description of Ship	Where Built	Registered	Total Tons Carried	Total Operating Expenses*	Cost Per Ton*	Ton-Miles Per Season	Cost Per Ton-Mile*
A	*THUNDER BAY*	CAN.	CAN.	498,600 *501,000*	$ 665,170 *667,170*	$ 1.33 *1.33*	425,800,000 *427,854,000*	cents 0.156 *0.156*
B	*THUNDER BAY*	U.K.	U.K.	498,600 *501,000*	511,660 *492,970*	1.03 *.98*	425,800,000 *427,854,000*	0.120 *0.115*
C	SHELTER DECKER 445'	U.K.	U.K.	287,850 *269,000*	359,555 *329,000*	1.25 *1.22*	245,820,000 *229,726,000*	0.146 *0.143*
D	SHELTER DECKER 495'	U.K.	U.K.	340,380 *332,000*	432,410 *383,000*	1.27 *1.15*	290,680,000 *283,528,000*	0.149 *0.135*
E	SHELTER DECKER 640'	U.K.	U.K.	460,250 *459,000*	*541,765* *467,400*	1.18 *1.02*	393,050,000 *391,986,000*	0.138 *0.119*
F	ORE AND GRAIN 640'	U.K.	U.K.	477,090 *477,000*	509,265 *483,400*	1.07 *1.01*	407,430,000 *407,358,000*	0.125 *0.119*
G	ORE AND OIL 640'	U.K.	U.K.	469,000 *468,000*	520,600 *496,100*	1.11 *1.06*	400,530,000 *399,672,000*	0.130 *0.124*
H	*T. R. McLAGAN*	CAN.	CAN.	654,900 —	791,920 —	1.21 —	559,280,000 —	0.142 —
I	*T. R. McLAGAN*	U.K.	U.K.	654,900 —	616,135 —	0.94 —	559,280,000 —	0.110 —
J	*T. R. McLAGAN*	U.K.	CAN.	654,900 —	653,155 —	1.00 —	559,280,000 —	0.117 —

*These costs will require to be increased to take care of Seaway tolls.

Check on Deadweight Capacity (Cargo) of Vessel "C"

Displacement (FW) = $\frac{445 \times 62 \times 25.5 \times .75}{36}$ = 14,657 tons

Light Ship		4,052
Deadweight (total)		10,605
Fuel 15 days	270	
Fresh Water	75	
Stores, etc.	40	
Crew and Effects	5	
Miscellaneous	35	
		425
Cargo Deadweight		10,180

Say 10,100 tons

Check on Deadweight Capacity of Vessel "D"

Displacement (FW) = $\frac{495 \times 68.5 \times 25.5 \times .76}{36}$ = 18,253 tons

Light Ship		5,490
Deadweight (total)		12,763
Fuel 15 days	300t	
Fresh Water	75	
Stores, etc.	45	
Crew and Effects	5	
Miscellaneous	35	
		460
Cargo Deadweight		12,303

Say 12,200 tons

Check on Deadweight Capacity of Vessel "F"

Displacement (FW) = $\frac{640 \times 73 \times 25.5 \times .79}{36}$ = 26,145 tons

Light Ship		8,084
Deadweight (total)		18,061
Fuel 15 days	356	
Fresh Water	75	
Stores, etc.	50	
Crew and Effects	5	
Miscellaneous	35	
		521
Cargo Deadweight		17,540

Say 17,500 tons

Reference No. 2(a)

The principal points of difference between original Canada Steamship Lines' estimates and our own estimates are as follows:

(1) Deadweight carrying capacities, vessels C and D. See remarks on this item in Reference No. 1(a).

It will be noted, however, that in the case of the ore trade all vessels have ample cubic capacity to load to 25' 6", thus resulting in higher deadweight capacity for the Upper Laker vessels, SS. *"Thunder Bay"* and SS. *"T. R. McLagan"* in the ore trade than in the wheat trade.

(2) Running times for the ore movement were worked out on the basis of an approach somewhat different than the method used by C.S.L. The results were close to C.S.L. figures which were, therefore, adopted. Running times for vessels not specifically included in the given data were calculated according to the check method. It is noteworthy that in the case of the 17 m.p.h. vessels the check method results in shorter running time than the C.S.L. method. That is, by adopting the C.S.L. method for a 17 m.p.h. vessel we would get the following:

1708 miles total round trip
less 360 miles round trip Montreal to Kingston
= 1348 miles at average sea speed.

$$\frac{1348 \text{ miles}}{17 \text{ m.p.h.}} = 79.29 \text{ hours}$$

add 50.00 hours for additional time to transverse the Seaway.

= 129.29 hours

whereas it will be seen that a figure of 126.0 hours was actually used for vessels H, I and J. It is considered that this somewhat shorter time would be more correct due to the greater speed such vessels will have in the areas between Kingston and Montreal where speeds will be unrestricted. Accordingly a reduction in the time to transverse the Seaway of 50 hours as applied by C.S.L. has been made for vessels of speeds greater than 14.4 m.p.h. The 50 hour time was checked independently and found to be reasonable for the 14.4 m.p.h. vessels.

(3) Basic rates of loading and unloading in tons per hour assumed by C.S.L. in the given data are considered reasonable, and the differences between the two estimates for quantity carried per season are due to differences in the estimated deadweight capacities. It may be noted, however, that an independent check was possible against unloading times using independent data. It was found from this that the penalities against vessels C. D and E assumed in the given data for unloading were reasonable.

(4) Price estimate discrepancies.
See remarks in Reference No. 1(a), Item 3.

(5) Wage estimate discrepancies.
See remarks in Reference No. 1(a), Item 4.
In the case of the ore trade an adjustment is made for the shorter season of 210 days, although the full cost of transporting and repatriating crews is included. See also Question 7.

(6) Fuel consumption discrepancies.
See remarks in Reference No. 1(a), Item 5.

(7) Repairs and Maintenance. See remarks in Reference No. 1(a), Item 6. In addition, it is reasonable to allow 10% margin for the more onerous duty in the ore trade, and this more than offsets the saving effect of the slightly shorter season. Calculations based upon Repair and Maintenance in the wheat trade × 210/230 for shorter season plus 10% for harder duty.

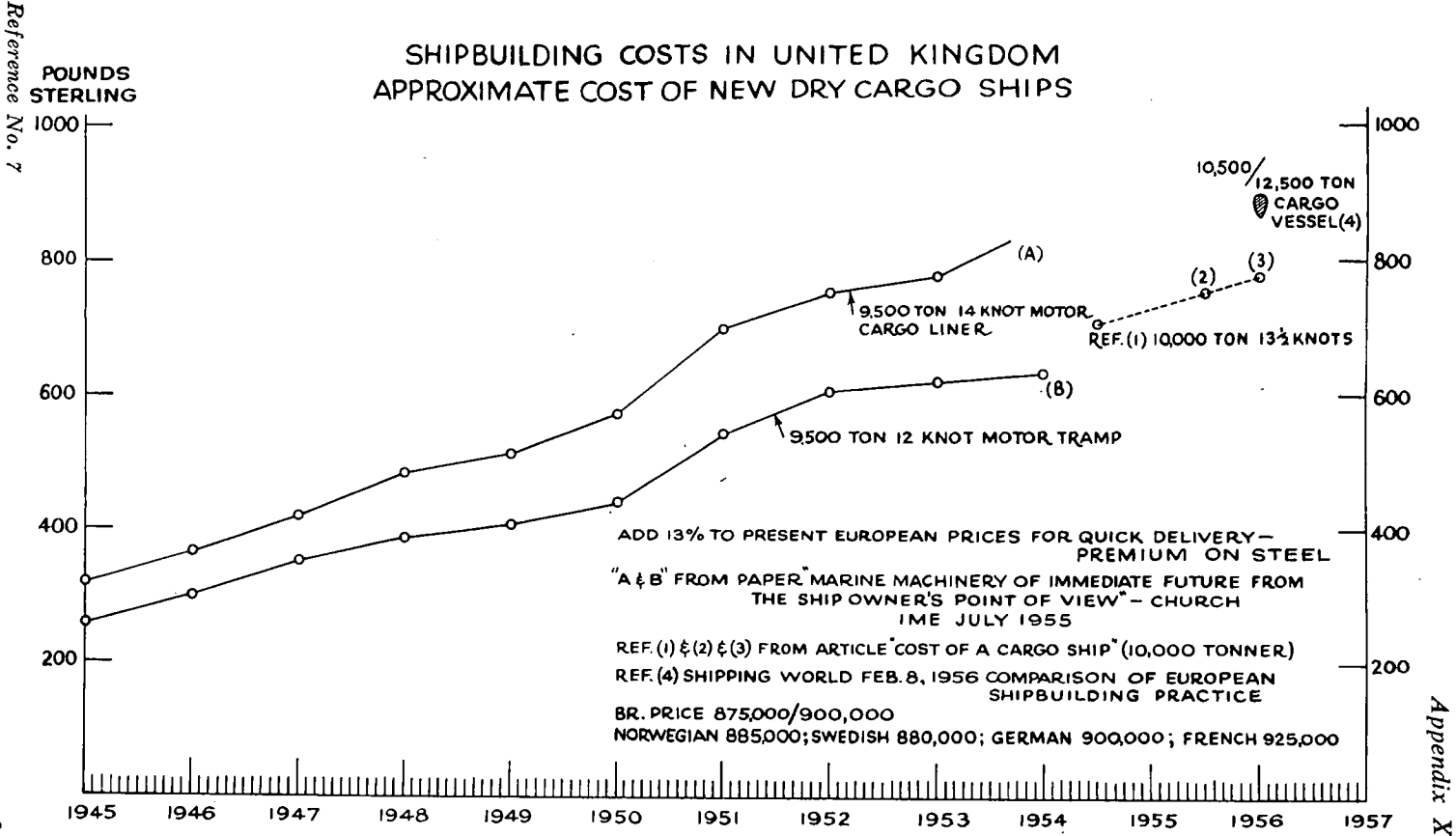
(8) Overhead. See remarks in Reference No. 1(a), Item 7.

(9) Insurance. See remarks in Reference No. 1(a), Item 8.

(10) Depreciation. See remarks in Reference No. 1(a), Item 9.
It should be noted that an adjustment has been made to these figures to accommodate the 210 day operating season as compared to a 230 day season in the wheat movement.

(11) Interest. See remarks in Reference No. 1(a), Item 10.
As noted above under item for depreciation (10), an adjustment has also been made to interest charged against the Lake operating season of 210 days in the ore movement as compared to 230 days in the wheat movement.

Reference Nos. 3, 4, 5 and 6—omitted.


SHIPBUILDING COSTS IN UNITED KINGDOM
APPROXIMATE COST OF NEW DRY CARGO SHIPS
POUNDS STERLING
1000
800
600
400
200
10,500/12,500 TON CARGO VESSEL(4)
(A)
(2)
(3)
9,500 TON 14 KNOT MOTOR CARGO LINER
REF. (1) 10,000 TON 13½ KNOTS
(8)
9,500 TON 12 KNOT MOTOR TRAMP
ADD 13% TO PRESENT EUROPEAN PRICES FOR QUICK DELIVERY— PREMIUM ON STEEL
"A & B" FROM PAPER "MARINE MACHINERY OF IMMEDIATE FUTURE FROM THE SHIP OWNER'S POINT OF VIEW" – CHURCH IME JULY 1955
REF. (1) & (2) & (3) FROM ARTICLE "COST OF A CARGO SHIP" (10,000 TONNER)
REF. (4) SHIPPING WORLD FEB. 8, 1956 COMPARISON OF EUROPEAN SHIPBUILDING PRACTICE
BR. PRICE 875,000/900,000
NORWEGIAN 885,000; SWEDISH 880,000; GERMAN 900,000; FRENCH 925,000
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957

Reference No. 8—omitted.

Reference No. 9

NUMBER OF DRY CARGO VESSELS AS OF YEAR 1953, IN MAJOR DEADWEIGHT CAPACITY CATEGORIES

Deadweight Capacity	Number of Vessels
5,000-10,500	4,019
10,501-14,500	2,352
over 14,500	61

The above data have been abstracted from Lloyd's Appendix to the Register, Section 4, "Deadweight, Etc., Dry Cargo Ships".

Reference No. 10

Extract from "American Shipping and Shipbuilding", an article appearing on page 7 of The Shipping World, January 4, 1956.

RECORD GREAT LAKES SEASON

By mid-December, the Great Lakes-St. Lawrence system was closed to navigation, after an active and in some respects a record-breaking season. The Lake Carriers' Association reported that by December 1, the combined shipments of iron ore, coal, and grain by Great Lakes vessels, American and Canadian, totalled 151,337,810 tons—almost 33½ million more than 1954 cargoes to the same month and day. November ore shipments of 7,409,793 tons were the second highest ever recorded for that month and brought the year's aggregate movement of that commodity to 87,275,463 tons, breaking all peacetime records. Coal cargoes in November, amounting to 4,668,461 tons, set a five-year record; but grain shipments fell to 1,625,325, the lowest monthly figure since-grain-movement data was first compiled in 1942. Total grain cargoes for the year, up to December 1, were 9,861,057 tons.

Reference No. 11—omitted.

Reference No. 12

PRICE OF OIL FUELS AS AT MARCH, 1956

Montreal	— Diesel, medium	$5.28/barrel	(foreign)
		5.77/barrel	(coastal)
	— Bunker C	2.56/barrel	
Halifax	— Diesel, medium	5.07/barrel	(foreign)
		5.56/barrel	(coastal)
	— Bunker C	2.41/barrel	

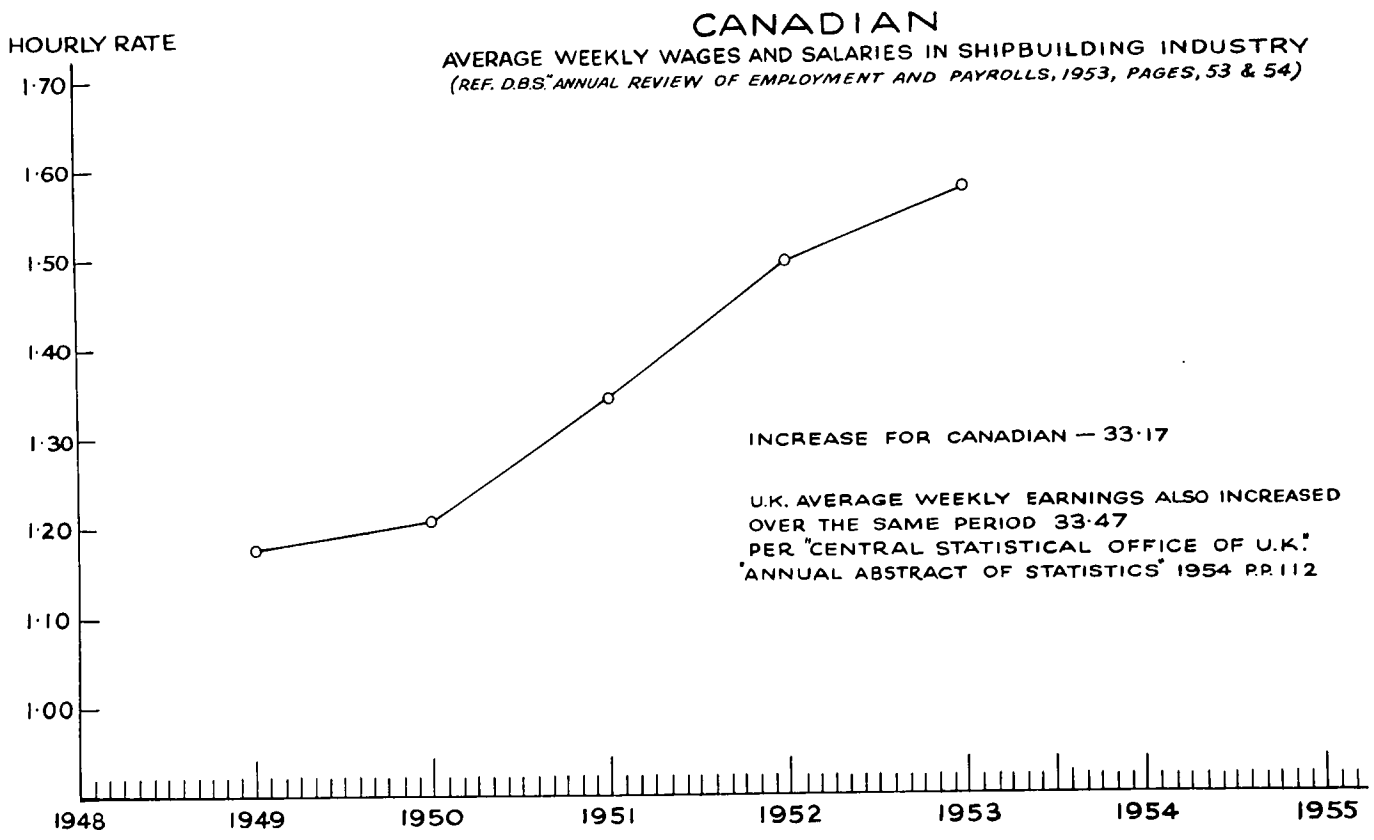
Reference No. 13

OCEAN TRAMP VESSELS UNDER CONSTRUCTION DECEMBER 1, 1955 IN THE WORLD'S SHIPYARDS

(*Shipping World and World Shipbuilding*)

Total No. of vessels under construction	562		
Total No. propelled by diesel machinery	471	= 85	%
Total No. propelled by steam machinery:			
(turbine)	69	= 12.5	%
(recip.)	14/554	= 2.5	%
Total No. under 5000 tons deadweight	53	= 9.45	%
Total No. between 5000 and 8500 t.dw.	89	= 15.8	%
Total No. from 8600 to 10,500 t.dw.	156	= 27.8	%
Total No. from 10,600 to 12,500 t.dw.	137	= 24.4	%
Total No. from 12,600 to 14,000 t.dw.	63	= 11.2	%
Total No. from 14,100 tc 16,000 t.dw.	56	= 10	%
Total No. from 16,100 to 19,000 t.dw.	7	= 1.25	%
Total No. over 19,000 tons deadweight	1	= .15	%
			(29,500 t.dw.)
TOTAL	562	= 100	%

Of 110 vessels for which we have records on number of screws 108 are single screw, or 98%.


CANADIAN
AVERAGE WEEKLY WAGES AND SALARIES IN SHIPBUILDING INDUSTRY
(REF. D.B.S. "ANNUAL REVIEW OF EMPLOYMENT AND PAYROLLS, 1953, PAGES, 53 & 54)
HOURLY RATE
1·70
1·60
1·50
1·40
1·30
1·20
1·10
1·00
1948
1949
1950
1951
1952
1953
1954
1955
INCREASE FOR CANADIAN — 33·17
U.K. AVERAGE WEEKLY EARNINGS ALSO INCREASED
OVER THE SAME PERIOD 33·47
PER "CENTRAL STATISTICAL OFFICE OF U.K."
"ANNUAL ABSTRACT OF STATISTICS" 1954 P.P. 112

Reference Nos. 15, 16 and 17—omitted.

Reference No. 18

WHEAT TRADE—HEAD OF LAKES TO KINGSTON—VESSEL FF

Vessel Identity Letter	FF	
Description of Ship	640′ Ore and Grain Vessel Speed 14.76 knots at 32′0″ dft. (10,900 SHP) 17 m.p.h. at 25′6″ dft. (8,500 SHP)	
Speed (m.p.h.)	17	
Bushel capacity at 25′ 6″	601,100	
Round trip (miles)	2068	
Voyage time (hours)	Running	= 149.6
	Loading	= 49.03
	Unloading	= 21.03
	Net Total	= 219.7
	Round trip including 5%	= 230.6
Trips per Season	23.9	
Bushels per Season	14,366,300	
Tons per Trip	16,100	
Tons Wheat per Season	384,790	
Ton-Miles per Season	397,872,000	
Where Built	U.K.	
1955 Construction Cost	$4,830,000	
Flag	U.K.	
Crew	36 Persons	
Wages	$ 41,000.	
Fuel	151,390.	
Provisions	14,700.	
Repairs and Maintenance	39,847.	
Supplies, Dues, etc.	27,800.	
Overhead	27,470	
Insurance	64,430.	
Total Variable Expenses		$366,640.
Fit Out and Lay Up	Nil	
Depreciation	168,300.	
Interest	84,150.	
Total Fixed Expenses		252,450.
Total Operating Expenses		$619,090.
Handling Expenses		143,660.
Total Expenses incl. Handling		$762,750.
Cost per Bushel	5.31 Cents	
Cost per Ton	$1.98	
Cost per Ton-Mile	0.192 Cents	
Income at 7c per Bushel	$1,005,640.	
Profit before Taxes at 7c	$242,890.	

Reference No. 19

ORE TRADE—SEVEN ISLANDS TO HAMILTON—VESSEL FF

Vessel Identity Letter	FF		
Description of Ship	640' Ore and Grain Vessel Speed 14.76 knots at 32'0" dft. (10,900 SHP) 17 m.p.h. at 25'6" dft. (8,500 SHP)		
Speed (m.p.h.)	17		
Ore Capacity at 25' 6"	16,100 Long Tons		
Round Trip (Miles)	1708		
Voyage Time (Hours)	Running	=	126.0
	Loading	=	5.4
	Unloading	=	21.5
	Net Total	=	152.9
	Round trip including 5%	=	160.6
Trips per Season	31.4		
Tons per Season	505,540		
Ton-Miles per Season	431,731,000		
Where Built	U.K.		
1955 Construction Cost	$4,830,000.		
Flag	U.K.		
Crew	36 Persons		
Wages	$ 37,500.		
Fuel	165,026.		
Provisions	13,400.		
Repairs and Maintenance	40,020.		
Supplies, Dues, etc.	25,400.		
Overhead	28,135.		
Insurance	58,829.		
Total Variable Expenses		$368,310.	
Fit Out and Lay Up	Nil		
Depreciation	$153,680.		
Interest at 2½%	76,840.		
Total Fixed Expenses		230,520.	
Total Operating Expenses		$598,830.	
Cost per Ton	$1.19		
Cost per Ton-Mile	0.139 Cents		

APPENDIX XIV

Vessel Earnings After Payment of Corporation Taxes

CANADIAN *versus* UNITED KINGDOM TAX LIABILITY

1. The Problem

The purpose of the following analysis is to consider which of four vessels dealt with in Chapter VI might be expected to perform a given shipping service at the lowest charge per ton of cargo moved. The four vessels are:

H—Great Lakes bulk carrier built and registered in Canada.

J—Great Lakes bulk carrier built in the United Kingdom, registered in Canada.

C—Unspecialized (tramp) type ocean vessel, built and registered in the United Kingdom.

F—Specialized seaway-ocean bulk carrier built and registered in the United Kingdom.

Attention is given mainly to the competitive position in the separate carriage of wheat and iron ore on Great Lakes routes after the Seaway is in operation. The examples are taken from Appendix XIII, a report received from the Commission's consulting naval architects, dealing with material originally submitted by Canada Steamship Lines Limited. A final section considers a more general employment of vessel C in Canadian waters, compared with employment of an identical vessel registered in Canada.

The basic assumption is that the charge to be associated with the performance of a given service by a particular vessel must be sufficient to provide what a typical owner would consider to be an adequate return on the investment in view of the risks. The adequacy of the return to be required is judged from the point of view of a shipowner at the time he decides whether or not to invest in a new ship to carry on the service or to extend his participation in it, for it is on such decisions that continuing service depends.

The return in question must be realized from vessel earnings after payment of income and profit taxes. At the levels of taxation obtaining in Canada and the United Kingdom this is a major consideration. Moreover, there are fundamental differences in the tax structure of the two countries. The U.K. investment allowance, claimable as rapidly as earned and in addition to depreciation, affords a substantial relief from taxation and may permit the recovery of a large part of the original investment within a year. Depreciation allowances of 33⅓% straight line and 15% or 12½% on the diminishing balance also permit a larger capital recovery in the early years than would be realized otherwise and so encourage investment, although in differing degree. Also relevant are the differences in the extent of double taxation of earnings, firstly as corporate income and secondly as income to the equity shareholders.

The problem is therefore to find a common basis for expressing the required rate of return, taking account of the fact that vessel earnings remaining after payment of current expenses and taxes will be greatest in the early years and will accumulate at different rates according to the tax liability.

In this connection it is shown below that the earnings of a single vessel would not likely be great enough in the early years of its operation to permit claiming the investment and depreciation allowances as rapidly as the law allows, but that the allowances may be so claimed in the case of a vessel added to an existing fleet. It

will be assumed that the latter is the case, because it would be more typical and because it shows the full effect of the allowances.

It is assumed also that, at the time the investment decision is taken, the prospective annual out-of-pocket expenses are those for "variable expenses" as given by the consulting naval architects in Appendix XIII. In the case of lakers H and J the out-of-pocket expenses include also the annual cost of fitting out and laying up. The assumption is retained that the vessels will have no scrap or other value at the end of their economic life of 20 or 25 years, as the case may be. It is assumed further that no bonded indebtedness is attributable to the acquisition of the ship, the presumption being that the return on investment would be more than sufficient to cover interest payments on any indebtedness that might be incurred in practice.

2. Corporate Tax Liability

It is assumed that the owners of vessels H and J are corporations subject to Canadian income tax on the basis of the federal statute only, as set out in Chapter VI, and that the corporate income includes at least $20,000 from other sources, so that vessel earnings are subject to a tax of 47% of the profit for tax purposes. Vessel H would qualify for depreciation at 33⅓% straight line under the Canadian Vessel Construction Assistance Act, while vessel J would be depreciated at 15% on the diminishing balance. It is assumed that vessels C and F are owned by corporations subject to United Kingdom income and profits taxes, that each qualifies for the 40% investment allowance, and that depreciation is claimed at 12½% on the diminishing balance; the combined rate of income and profits tax is 45½% on the undistributed portion of the profit for tax purposes and 30% on the distributed portion, as shown in Chapter VI.

3. Revenue Limitation on Depreciation and Investment Allowances

The investment and depreciation allowances have the obvious limitation that they can be claimed only to the extent that earnings permit. A large allowance is most advantageous to the shipowner when demand keeps his vessels fully employed at comparatively high freight rates. It may also be more valuable to the owner of a fleet than to the owner of a single vessel, especially if the other vessels of the fleet have comparatively small depreciation allowances left to be claimed.

Table I below illustrates the relation between the earnings of each of the four ships and the allowances that could be claimed on those earnings alone, if the vessels were employed in the wheat movement described in Appendix XIII. The assumed revenue is 8¾c a bushel or $3.26⅔ a long ton, at present the maximum rate allowed by the Board of Grain Commissioners for the movement to Kingston. At this level of revenue the owner of vessel J would alone be able to claim the maximum allowance available to him.

The depreciation allowance available to the owner of H would be $1,940,000; he would be able to claim $924,247 (item 3 of Table I), 15.9% of the original cost. If revenues and costs continued at this level it would be a little over six years before the vessel's cost would be fully depreciated for tax purposes. During this period no corporate income tax need be paid, and at the end of that time the total of the net earnings would equal the original cost of the vessel.

The owners of vessels C and F would be able to claim their full depreciation allowances (as apportioned to the 230-day season out of a 330 working-day year) out of vessel earnings, but not the full investment allowances (item 8 of Table I). Assuming that the cost-revenue ratio in winter employment was the same as with wheat and that costs and revenues continued at the given level, it would take a total of about three years for the owner to claim the full investment allowance. Since the allowance is in addition to normal depreciation, however, the rate of capital recovery in those three years would be very rapid.

TABLE I

AMOUNT OF DEPRECIATION AND INVESTMENT ALLOWANCES CLAIMABLE OUT OF VESSEL EARNINGS

Vessels H, J, C and F employed for 230 days carrying wheat from Fort William-Port Arthur to Kingston during first year of operation,[1] at $3.26⅔ per long ton (8¾c per bushel).

	Vessel H	Vessel J	Vessel C	Vessel F
1. Revenue				
Long tons per season	471,270	471,270	245,430	369,360
At $3.26⅔ a ton	$1,539,482	$1,539,482	$801,738	$1,206,576
Add re winter storage revenue[2]	14,725	14,725	.....	.....
Season's revenue	$1,554,207	$1,554,207	$801,738	$1,206,576
2. Out-of-Pocket Expenses				
Variable expenses, fit out and lay up[3]	$ 454,010	$ 428,130	$240,490	$ 318,680
Handling expenses	175,950	175,950	91,640	137,870
Total out-of-pocket	$ 629,960	$ 604,080	$332,130	$ 456,550
3. Excess of Revenue (1 — 2)	$ 924,247	$ 950,217	$469,608	$ 750,026
4. Depreciation Allowance				
Construction cost	$5,820,000	$3,880,000	$2,680,000	$4,250,000
Annual depreciation rate	33⅓%	15%	12½%	12½%
Year's depreciation	$1,940,000	$ 582,000	$335,000	$ 531,250
Depreciation apportioned to season[4]	$1,940,000	$ 582,000	$233,485	$ 370,265
5. Amount of H's Depreciation Allowance not Claimable out of Vessel Earnings (4 — 3)	$1,015,753			
6. Excess of Vessel Earnings over out-of-pocket Expenses and Depreciation (3 — 4)		$368,127	$236,123	$379,761
7. Investment Allowance				
Amount at 40%			$1,072,000	$1,700,000
Apportioned to season[5]			$ 747,152	$1,184,848
8. Amount of Investment Allowance not Claimable out of Vessel Earnings (7 — 6)			$511,029	$805,087

[1]For description of vessels see text; construction costs, cargo tonnages, and out-of-pocket expenses are those given by consulting naval architects, Appendix XIII.
[2]70% of 765,000 bushels of wheat at 2¾c; see Chapter VI, p. 88.
[3]Insurance charges account for the difference between vessels H and J.
[4]For vessels H and J (lakers), the year's allowance; for vessels C and F (ocean-going), 230/330ths of the year's allowance.
[5]230/330ths of the allowance.

It is likely that most of the various competing vessels will be units of a fleet, in which case the owner acquiring a new vessel might well be able to claim the full allowances available each year. In the circumstances of Table I, ownership of two or three other vessels might suffice. For example, the full depreciation allowance on vessel H could be claimed if the owner had other taxable income exceeding $1,015,753 (item 5 of Table I); one sister ship on which the full depreciation had been claimed earlier would earn a taxable income of $924,247 (item 3 of Table I), and the balance might come from one other vessel's earnings.

The advantage of being able to claim some part of a vessel's depreciation or investment allowance against other income is significant but it is not to be overrated. In the example just given, for instance, the fact that the full depreciation allowance on vessel H may be claimed in three years does not mean that the owner may thereby recover the vessel's original cost in that period. It means rather that, in addition to the revenue to be earned by H, acquisition of that vessel relieves him of a tax of 47% of $1,015,753 or $477,404 a year for three years; he would have realized the other 53% in any event. Over the succeeding three or four years the net earnings attributable to vessel H in a fleet would be less than those realized by the owner of a single vessel H by precisely 3 $\times$ $477,404 = $1,432,212. On the given revenue assumptions it would take just as long for the cumulative total to equal the original cost. Thus the advantage of the fleet-owner in a more rapid rate of capital recovery in the first three years is largely offset by a slower rate in the succeeding few years.

It will be assumed for the remainder of the analysis that each vessel is to be added to an existing fleet with earnings great enough that the respective depreciation and investment allowances may be claimed in full as they become available. The size of the existing fleets thereby implied may be judged by assuming that the revenue in the given wheat movement is $2.29 a ton (the rate derived for vessel F in Section 7 below), and substituting this figure in the calculations set out in Table I. It will be found that vessel J's own earnings would be sufficient to claim depreciation of $489,853 as against a permitted $582,000; earnings from one similar ship with a lesser sum claimable for depreciation—say one older by three years or more—would be sufficient to allow the remaining $92,147 to be claimed. In like manner it will be found that earnings from an existing fleet with a carrying capacity some six or seven times that of H, C, and F, respectively, would permit the full allowances on a new vessel to be claimed from the first year, providing that the age distribution of each fleet is fairly wide and hence that the total depreciation claimable on the other vessels is moderate. Fleets of this size are not unusual, hence the assumption appears reasonable.

4. "Disposable Funds" Realized from Vessel Earnings

The purpose of the present analysis was given as the determination of the comparative charges which the owners of various vessels might quote for the performance of a given service. The charge to be sought in each case was taken to be one at which prospective earnings of the given vessel would be sufficient to induce an operator to invest in it. It is therefore necessary to devise a formula of common application to measure the inducement to invest.

A shipowner's incentive to invest in a vessel must be found in the prospective excess of vessel earnings over out-of-pocket expenses incurred and income or profit taxes payable as a result of its operation. This excess is referred to hereafter as the *disposable funds* realized with respect to a given vessel. It is from these funds that the shipowner must recover his original investment in the ship or provide for its eventual replacement, and otherwise realize what he considers an adequate return.

The return on investment usually (but not necessarily) includes cash profits withdrawn from time to time. In the case of a corporate owner the withdrawal of profit is in the form of dividends, commonly an established amount at regular intervals.

The sums remaining after the payment of any dividend are referred to hereafter as the *retained funds*, i.e. that part of the *disposable funds* which remains in the hands of the management for reinvestment or for other purposes. Table II in Section 6 below shows the derivation of the two terms from a specific example.

In practice a desire for early realization of profit may conflict to some extent with the need to retain a portion of earnings at the disposal of the management. The two demands nevertheless involve different aspects of the owner's self-interest. Funds must be retained in the business not only for the recovery of the original capital invested in the vessel but also to meet higher replacement costs and so maintain the owner's equity in the existing fleet, as well as for the innumerable contingencies that may arise otherwise. In addition it may be desirable to forego immediate profit for the sake of increasing the equity in the fleet or expanding the fleet. Thus the vessel owner, whether an individual or a corporate body, may resolve the conflict by balancing immediate against longer-term interests.

For the purpose of reducing the earnings requirement to a set formula, the amount of *disposable funds* that must be in prospect in order to induce investment is taken as being the sum of the profits the shipowner will wish to take from time to time and the *retained funds* that he considers it necessary or expedient to have in prospect for committal to the business. The formula therefore emerges as the establishment of appropriate assumptions as to dividends and as to retained earnings. These two subjects are dealt with in Sections 5 and 6 below.

5. Assumptions Respecting Dividends

The major difficulty is to establish what rate of dividend declared by a U.K. corporation is equivalent to what rate declared by a Canadian corporation. The question must be considered from the point of view of the individual shareholder, since it is for him to say whether a given dividend is high or low. The shareholder makes this comparative judgment in terms of the yields he might realize on other investments open to him, including the yield at the going rate of interest. It is therefore assumed that the respective U.K. and Canadian dividend yields are equivalent if a typical shareholder in each country realizes an income from stock investment equal to that obtained from a like sum invested at interest. It is further assumed that the applicable rate of interest is 5% in each case.

A person subject to U.K. income tax finds that a 5% yield in dividends declared by a U.K. corporation affords precisely the same income after payment of personal tax as does an interest yield of 5%. If he holds "ordinary" stock valued on the market at £100 and an interest-bearing bond of the same value, each yielding £5 or 5%, each of the £5 in investment income is included in his taxable income and is liable to tax on the same basis. The corporation would have withheld 42½% of the dividend for income tax, hence the taxpayer may claim this amount as a credit in making his personal return, whereas the full tax may be due on the £5 interest if there has been no corresponding deduction at the source. Nevertheless the total tax liability is the same in each case, including liability to surtax if applicable.

Under Canadian law a taxpayer includes in his income the amount of dividends received (less allowable deduction for depletion and carrying charges if applicable) or the amount of interest, as the case may be. From the tax liability so calculated he may deduct a dividend tax credit of 20% of the net dividends received from a taxable Canadian corporation, providing the total income tax liability is not thereby reduced below zero.[1] The old age security tax (2% of taxable income, maximum $60) may not be reduced by this credit. The effect in most cases is that the tax rate on the dividends is 20% less than the rate applying to interest income or other taxable income (e.g. a nil tax compared with 20%, 13% compared with 33%, etc.). Thus

[1] *The Income Tax Act*, R.S.C. 1952, c. 148, s. 38 as amended Fifth Session, Twenty-Second Parliament, 1957.

in these cases, for every $100 invested in Canadian equity stock at a given dividend yield the taxpayer would realize a personal income after tax greater by 20% of the dividends than if he had invested a like sum in interest-bearing securities with the same yield.

In these circumstances various investors would each find that a different dividend yield afforded the same net income after taxes as a 5% interest yield, depending on the amount of the taxable income and the portion thereof represented by investment income. Thus at the one extreme an investor whose total income was not liable to tax would find that a 5% dividend yield provided him with the same income as a 5% interest yield. At the other extreme is the person whose taxable income exceeds $400,000, including investment income subject to 4% surtax.[2] If he were to invest in an additional $100 bond yielding $5 a year in interest, the tax on the $5 would be 82% or $4.10, so that the increase in his income after tax would be 90c. If instead he invested the $100 in shares of a taxable Canadian corporation at a yield of x%, the tax would be 82% of $\$x$ less the tax credit of 20% of $\$x = 62\%$ of $\$x$; his income after tax would be increased by 38% of $\$x$. In this case the dividend yield (x%) will be equivalent to the 5% interest yield if 38% of $\$x = 90$c, i.e. if the dividend yield is $90/38 = 2.37\%$. Thus in general the higher a taxpayer's income the lower is the range of dividend yields that he would find more remunerative than interest income.

Despite the possible variation from 5% to 2.37% in the dividend yield that various investors might find equivalent to an interest yield of 5%, it can be shown that 4% would be widely regarded as the approximate equivalent. Two examples will suffice.

Example 1—A taxpayer with income derived from salary, wages, or pension ("earnings" for short), personal exemptions $2,000, having a sum to invest in securities.

With earnings of $2,500, investment of $1,000 in bonds at 5% would increase his income by $50 to a total of $2,550. The tax would be 15% of $550 = $82.50, the net income after tax $2,467.50. Alternatively, $1,000 invested in Canadian shares at 4% would increase his income by $40 to $2,540. The tax would be $81.00 less a tax credit of 20% of $40 ($8), a net tax of $73. Hence the net income after tax would be $2,467, less by 50c than if the investment were in bonds.

Each additional $1,000 invested in bonds would increase the net income after tax by $42.50 compared with $42 from investment in shares, until investment income equalled $500. Thus, $10,000 invested in bonds would add $425 to net income after tax, $420 if invested in shares, a difference of $5 a year. With larger amounts to invest the difference would be proportionately less. Thus with $20,000 invested in bonds the net income after tax would be $3,265, the marginal tax rate being 17%, whereas with $20,000 invested in shares the net income would be $3,259, less by only $6 a year.

With earnings of $10,000 the marginal tax rate applicable to additional income is 28%. Each $1,000 invested in bonds would increase the net income after taxes by $36; if invested in shares the increase would be $36.80, greater by 80c. If the amount to be invested were as much as $20,000, the addition to net income would be $720 from bonds, $736 from shares, a difference of $16 a year.

[2]In general the surtax of 4% is payable on investment income in excess of $2,400.

This example shows that many typical taxpayers with anything from $100 to $20,000 or more to invest would realize about the same net income (after taxes) from Canadian shares yielding 4% in dividends as from bonds yielding 5% interest.

Example 2—A taxpayer dependent on investment income, personal exemptions $1,000.

If the funds from which the income is to derive amount to $50,000 and if the whole sum were invested in bonds yielding 5% interest, the annual income would be $2,500. The tax would be $239, including a surtax of $4, leaving $2,261 in net income after taxes. Alternatively, if $30,000 were invested in bonds yielding 5% and the remaining $20,000 in Canadian shares yielding 4%, the annual income would be $2,300. The tax would be $201 less a dividend tax credit of $160, a net tax of $41; the net income after taxes would be $2,259, less by only $2 a year.[3]

If the investment funds amount to $100,000 and if the whole sum were invested in bonds yielding 5%, the annual income would be $5,000. The tax and surtax would be $784, leaving $4,216 in net income. If $30,000 only were invested in bonds and $70,000 in Canadian shares yielding 4%, the annual income would be $4,300. The tax and surtax would be $637 and the dividend tax credit $560, a net tax of $77; the net income after taxes would be $4,223, greater by only $7 a year.[4]

This example shows that many taxpayers with comparatively large sums to invest would realize much the same net income (after taxes) on a substantial part of their investment funds whether that part were invested in Canadian shares yielding 4% or in bonds yielding 5%.

Having established that a U.K. corporate dividend yield of 5% may be considered the equivalent of a Canadian corporate dividend yield of approximately 4%, it remains to relate stock valuation to fleet valuation, and to identify one vessel's contribution to the total corporate dividend. Both these matters are covered in one assumption, that each vessel will be expected to earn in dividends each year of its useful life an amount equivalent to the interest yield on the average value of the ship over its life, a value taken to be half the construction cost. A similar assumption as to average values was made by CSL in calculating the annual interest charge in Exhibit 200. In the case of U.K. vessels the dividend expectation is thus taken to be 5% of half the construction cost, or simply 2½% of the original cost. In like manner the dividend expectation for the Canadian vessels is taken as 2% of the original cost.

6. Assumptions Respecting "Retained Funds"

A shipowner is concerned not only with the total amount of *retained funds* (as defined in Section 4 above) that a ship may earn over its useful life, but also with the rate at which the funds accumulate, e.g. the number of years that will elapse before they will equal the capital outlay for the vessel. At any given revenue per ton of wheat or of ore the funds will accumulate at different rates for each of the four vessels under consideration, mainly because of the differences in tax liability. For example, Table II below shows that, at a revenue of $3.26⅔ a ton of wheat

[3]The optimum combination would be $40,000 in bonds and $10,000 in shares, affording a net income of $2,262.

[4]The optimum combination would be $28,316 in bonds and $71,684 in shares. The net tax payable would be $60 (old age security tax); the net income after taxes would be $4,223.16.

TABLE II

VESSEL H — ANNUAL INCOME AND EXPENDITURES

Based on carriage of wheat for 230 days as in Appendix XIII. Vessel built in Canada at a cost of $5,820,000, depreciation allowance 33⅓% straight line, dividends 2%. Vessel assumed to be one of a Canadian registered fleet with other taxable income exceeding $1,015,753.

Assumed Annual Income

(a) Carriage of 471,270 tons of wheat at $3.26⅔ = $1,539,482

(b) Winter storage of 70% of 765,000 bushels of wheat at 2¾c ..... = 14,725

(c) Vessel's total annual earnings (income) $1,554,207

	Years 1 to 3, each	Years 4 to 25, each	Total 25 years
1. Corporate Income Tax	$	$	$
(a) Income	1,554,207	1,554,207	38,855,175
(b) Less deductions			
Out-of-pocket expenses (item 2, Table I)	629,960	629,960	15,749,000
Depreciation allowance	1,940,000	—	5,820,000
Total deductions	2,569,960	629,960	21,569,000
(c) Taxable Income (a) — (b)	—1,015,753[1]	924,247	17,286,175
(d) Taxes, 47% of (c)	— 477,404[2]	434,396	8,124,500
2. Income and Expenditures			
(a) Income	1,554,207	1,554,207	38,855,175
(b) Expenditures			
Out-of-pocket expenses	629,960	629,960	15,749,000
Taxes, 1(d) above	—477,404	434,396	8,124,500
Total (or net) Expenditures	152,556	1,064,356	23,873,500
(c) *Disposable Funds* (excess of income over expenditures), (a) — (b)	1,401,651	489,851	14,981,675
(d) Less dividends apportioned to earnings of Vessel H (4% of ½ of $5,820,000)	116,400	116,400	2,910,000
(e) *Retained Funds* (excess of income over expenditures and dividends), (c) — (d)	1,285,251	373,451	12,071,675

[1]A deduction of $1,015,753 is claimable to reduce the taxable income of other vessels in the fleet.
[2]The tax otherwise payable with respect to other fleet earnings is reduced by $477,404.

(8¾c a bushel), vessel H's *retained funds* would be $1,285,251 for the first year, i.e. the corporate funds would be greater by this amount because vessel H was added to the fleet. A similar calculation will show that, at the same revenue per ton, the comparable figure for vessel J (an identical ship built in the United Kingdom) would be $699,507 and for vessel F $1,053,766. The corporate owners would thus realize 22%, 18%, and 36% of the vessel's cost in its first year of operation, in addition to the specified dividend, assuming in the case of F that winter earnings were proportionate to earnings with wheat.

In these circumstances the method adopted for putting vessel earning requirements on a common basis is to assume that the value of the prospective *retained funds* capitalized at a given rate of return must equal the original cost of the vessel in each case. That means that each vessel is required to have the prospect of recovering its original cost over its economic life plus the same rate of return on invested capital, for the capitalized value is simply the present value of a series of amounts receivable in the future, calculated at a given rate of return. It is the sum which, invested at the given rate, would provide the specified payments and would be consumed in so doing, i.e. the payments comprise both capital recovery and earnings on the remaining investment.

Some guidance as to what prospective rate of return might be sufficient to induce investment may be had from the data available with respect to vessel H carrying wheat to Kingston, based on an actual vessel that has been used in that trade. If the prospective freight rate were 8¾c per bushel or $3.26⅔ per long ton, the maximum allowed at present by the Board of Grain Commissioners, and if other expectations conformed with the data of Appendix XIII, it will be seen from Table II above that the prospective *retained funds* would be $1,285,251 a year for 3 years and $373,451 a year thereafter for another 22 years, which is the same thing as $373,451 a year for 25 years plus $911,800 for each of the first 3 years. It is required to find the rate of return at which the present value of these annuities would equal $5,820,000.

The present value of $1 a year for n years at a rate of return of i% is $\left\{\dfrac{1-\dfrac{1}{(1+i)^n}}{i}\right\}$.

The common notation for this expression is $a\,\overline{\dfrac{i}{n}|}$. In this case the required rate of return is therefore to be found by solving the equation

$$\$373{,}451\ a\,\overline{\frac{i}{25}|} + \$911{,}800\ a\,\overline{\frac{i}{3}|} = \$5{,}820{,}000$$

whence $i = 9.48\%$.

Alternatively, were the prospective freight rate to be 7¢ a bushel or $2.61⅓ a long ton, the rate in two recent years, the equation would be

$$\$210{,}266\ a\,\overline{\frac{i}{25}|} + \$911{,}800\ a\,\overline{\frac{i}{3}|} = \$5{,}820{,}000$$

whence $i = 3.99\%$.

It must be emphasized that these rates of return relate only to a hypothetical example in which the ship is never idle for lack of cargo. On the basis of evidence submitted to the Commission neither an actual vessel H nor a fleet of them under one owner could earn such return at the given revenues, for it is common for a part of the lakes fleet to be laid up part of the season for lack of demand. The derived rates of return are useful, however, for the present purpose of making comparisons between

ships performing in the same hypothetical movement. For this purpose it is assumed that the *retained funds* in prospect for each vessel must represent capital recovery plus a return at the rate of 7%, intermediate between the two rates found above. It is to be emphasized further that the figure in question is a prospective rate of return, which is far from being an assured rate.

7. Required Revenue

Vessel H

Let R be the required revenue from a 230-day season carrying wheat, and r be the required revenue per ton of wheat, so that $471{,}270\ r = R$. The vessel's income for the year, including income from winter grain storage,[5] is thus $R + \$14{,}725$. It will be seen from Table III[6] that the prospective *retained funds* are $(.53R + \$469{,}325)$ each year for 3 years and $(.53R - \$442{,}475)$ each year for the next 22 years, which is the same thing as $(.53R - \$442{,}475)$ a year for 25 years plus \$911,800 for each of the first 3 years.[7] It is required to find the value of r that will make the present value of these annuities equal to \$5,820,000, capitalizing at 7%, i.e. required that

$$(.53R - \$442{,}475)a\overline{25|} + \$911{,}800\ a\overline{3|} = \$5{,}820{,}000.$$

The values of $a\overline{25|}$ and $a\overline{3|}$ may be read off from present value tables. The required value of R is thus found to be \$1,389,737, whence r equals \$2.95 per ton of wheat.

With respect to the iron ore movement, it is assumed that the vessel is so engaged for 210 days out of each 230-day operating year, so that 210/230ths of each year's depreciation allowance, taxes, dividends, and income from winter grain storage are apportioned to this period. Let the required revenue from shipping be R' for the 210-day season, and let the required revenue per ton of ore be r', so that $654{,}900\ r' = R'$. The vessel's income for the 210-day operation is thus $R' + \$13{,}445$, including the apportionment of winter earnings. Table IV[8] shows that the ore employment provides prospective *retained funds* of $(.53R' + \$496{,}705)$ for 3 years and $(.53R' - \$335{,}808)$ for the next 22 years, which is the same thing as $(.53R' - \$335{,}808)$ a year for 25 years plus \$832,513 a year for the first 3 years. It is required that the capitalized value of these sums at 7% equal 210/230ths of \$5,820,000 or \$5,313,913, on the assumption that prospective earnings in the remaining 20 days of each operating year will make up the balance of the capital value. It is therefore required that

$$(.53R' - \$335{,}808)\,a\overline{25|} + \$832{,}513\,a\overline{3|} = \$5{,}313{,}913$$

whence $R' = \$1{,}140{,}228$, $r' = \$1.74$ per ton of ore.

Vessel J

Tables V and VI[9] make similar calculations of the prospective *retained funds* to be earned by vessel J carrying wheat and iron ore, respectively. The additional depreciation allowance in the 25th year arises on the assumption that the original vessel cost is to be fully depreciated for tax purposes, i.e. that the vessel has no scrap or other value at the end of 25 years. Depreciation at the rate of 15% on the diminishing balance amounts to 98.28022% in 25 years, hence a final adjustment of 1.71978% is claimable.

Carrying wheat, the prospective *retained funds* are $(.53R - \$389{,}958)$ a year for 25 years plus $\$273{,}540(.85)^{n-1}$ each year for $n = 1$ to 25 years plus \$31,362 in the

[5]See Chapter VI p. 88. [6]See page 336.
[7]The additional *retained funds* in the first three years are 47% of the depreciation allowance, claimed in full in those three years.
[8]See page 337. [9]See pages 338 and 339.

25th year. The present value of an annuity of \$1 for 25 years ($a\overline{25|}$) can be obtained from published tables, and so can the present value of \$1 payable 25 years hence. The present value of an annuity which decreases in geometric progression may be computed from a formula which reduces in this case to $\frac{\$273,540}{(1.07 - .85)}\left\{1 - \left(\frac{.85}{1.07}\right)^{25}\right\}$. Adding the present values of the three components and equating the sum to \$3,880,000 it will be found that R must equal \$1,162,361. Since the vessel transports 471,270 tons of wheat, r equals \$2.47 per ton of wheat.

In like manner the ore employment provides prospective *retained funds* of ($.53R'$ — \$287,858) a year for 25 years plus $\$249,754(.85)^{n-1}$ each year for $n = 1$ to 25 years plus \$28,635 in the 25th year. It is required that the present value of these sums equal 210/230ths of \$3,880,000 or \$3,542,609, whence $R' = \$932,624$. The total quantity of ore transported is 654,900 tons, hence $r' = \$1.42$ per ton of ore.

Vessel C

Tables VII and VIII[10] show the prospective *retained funds* for vessel C. Depreciation at the rate of 12½% on the diminishing balance amounts to 93.07911% in 20 years, hence it is assumed that a final adjustment of 6.92089% is claimable in the 20th year.

Carrying wheat, the prospective *retained funds* are ($.545R$ — \$220,470) a year for 20 years plus $\$106,236(.875)^{n-1}$ each year for $n = 1$ to 20 years plus \$339,954 in the first year plus \$58,820 in the 20th year. The equation of present values at 7% is

$$(.545R - \$220,470)\,a\overline{20|} + \frac{\$106,236}{(1.07-.875)}\left\{1 - \left(\frac{.875}{1.07}\right)^{20}\right\} + \$339,954\,a\overline{1|} + \frac{\$58,820}{(1.07)^{20}} = \$2,680,000 \times \frac{230}{330} = \$1,867,879,$$

where the values of $a\overline{20|}$, $a\overline{1|}$, and $(1.07)^{20}$ may be obtained from tables. The required value of R is thus found to be \$577,714. The volume of wheat transported is 245,430 tons, hence r equals \$2.35 per ton of wheat.

With ore the equation of present values at 7% is in like manner

$$(.545R' - \$162,277)\,a\overline{20|} + \$96,998 \times 5.036488 + \$310,393\,a\overline{1|} + \frac{\$53,705}{(1.07)^{20}} = \$1,705,455,$$

whence $R' = \$455,879$. The amount of ore transported is 287,850 tons, hence $r' = \$1.58$ per ton of ore.

Vessel F

Tables IX and X[11] show the *retained funds* for vessel F.

Carrying wheat, the equation of present values is

$$(.545R - \$311,395)\,a\overline{20|} + \$168,471 \times 5.036488 + \$539,106\,a\overline{1|} + \frac{\$93,277}{(1.07)^{20}} = \$2,962,121,$$

whence $R = \$846,002$. The quantity of wheat transported is 369,360 tons, hence $r = \$2.29$ per ton of wheat.

Carrying ore, the equation of present values is

$$(.545R' - \$224,133)\,a\overline{20|} + \$153,821 \times 5.036488 + \$492,227\,a\overline{1|} + \frac{\$85,166}{(1.07)^{20}} = \$2,704,545,$$

whence $R' = \$662,007$. The amount of ore transported is 477,090 tons, hence $r' = \$1.39$ per ton of ore.

[10]See pages 340 and 341. [11]See pages 342 and 343.

Recapitulation

Vessel	Required Revenue per Ton Wheat	Ore
H—Laker built and registered in Canada	$2.95	$1.74
J —Laker built U.K., registered in Canada	2.47	1.42
C—Ocean tramp	2.35	1.58
F—Seaway-ocean bulk-carrier	2.29	1.39

8. Revenue Requirements for Year-Round Employment of Identical Vessels on United Kingdom and Canadian Registries.

Vessel C of the foregoing analysis is compared below with two identical vessels, one acquired at the same cost ($2,680,000) and registered in Canada, the other built in Canada at a cost of $4,020,000 and registered in Canada. The revenue requirements considered are those to cover vessel service only, exclusive of charges for cargo handling or shore facilities. It is assumed that each vessel is to operate a full year of 330 days, otherwise the basic assumptions are the same as above.

Vessel C, Built and Registered in U.K.

The out-of-pocket expenses of vessel C may vary considerably according to the trade in which the vessel is employed, notably the fuel costs, quite aside from the fact a wage bonus amounting to about $20 a day for the whole crew is payable when the ship is employed more than three months in Canadian and other North American waters. An acceptable approximation may nevertheless be had by projecting the variable costs for 230 days with wheat and 210 days with ore, as given in Appendix XIII, for a 330-day year. The projections are:

$$\$240{,}490 \times \frac{330}{230} = \$345{,}051$$

$$\$231{,}650 \times \frac{330}{210} = \$364{,}021$$

$$\text{Average per 330-day year} = \underline{\underline{\$354{,}536}}$$

The relevant data are as follows:

Yearly income requirement	R
Out-of-pocket expenses	$ 354,536
Investment allowance	$1,072,000
Depreciation allowance	$ 335,000(.875)$^{n-1}$
Additional depreciation in 20th year	$ 185,480
Dividends	$ 67,000

Following the procedure given in Table VII below it will be found that the prospective *retained funds* are (.545R — $249,897) a year for 20 years plus $152,425(.875)$^{n-1}$ each year for $n=1$ to 20 years plus $487,760 in the first year plus $84,393 in the 20th year. Capitalizing these amounts at 7% and equating the result to $2,680,000 gives a revenue requirement of $706,896 per 330-day year, which is an average of $2,142 per working day.

Identical Vessel Built in U.K., Registered in Canada

The out-of-pocket (variable) expenses would be greater than those of the U.K. vessel only with respect to wages and overhead, the latter charge being 10% of specified expenses including wages.[12] The U.K. wage costs are given as $38,400 for 230 days with wheat and $35,100 for 210 days with ore; projecting each of these figures for a 330-day year and taking the average, as above, gives a wage bill of $55,127 for the operating year, about $167 a day. It is estimated that wage costs on Canadian registry would be about $430 a day, which is $141,900 for 330 days, greater than the U.K. figure by $86,773. Adding 10% for overhead gives a total differential of $95,450 a year, i.e. the out-of-pocket expenses for a 330-day year on Canadian registry would be $354,536+$95,450=$449,986.

The relevant data are as follows:

Yearly income requirement	*R*
Out-of-pocket expenses	$ 449,986
Depreciation allowance	$ $402{,}000(.85)^{n-1}$
Additional depreciation 20th year[13]	$ 103,875
Dividends	$ 53,600

Following the procedure given in Table V below it will be found that prospective *retained funds* are ($.53R$ — $292,093) or 20 years plus $188{,}940(.85)^{n-1}$ each year for $n=1$ to 20 years plus $48,821 in the 20th year. Capitalizing at 7% and equating the result to $2,680,000 gives a revenue requirement of $874,755 for a 330-day year, an average of $2,651 per operating day. This requirement exceeds that of the U.K. vessel by $167,859 a year or $509 a day, a difference of about 24%.

Identical Vessel Built and Registered in Canada

It is assumed that the cost of the vessel built in Canada would be $4,020,000, 50% greater than the cost assumed for construction in the United Kingdom, and that this cost could be depreciated at 33⅓% straight line under the Canadian Vessel Construction Assistance Act. The only variable expense that would differ from the previous example would be the annual cost of insurance, which accounts for about $53,055 of the $449,986 variable costs there derived. Adding 50% to the insurance cost therefore gives a total of $476,513 for the out-of-pocket expenses of the Canadian-built vessel.

The relevant data are as follows:

Yearly income requirement	*R*
Out-of-pocket expenses	$ 476,513
Depreciation allowance 3 years at	$1,340,000
Dividends	$ 80,400

Following the procedure given in Table III below it will be found that the prospective *retained funds* are ($.53R$ — $332,952) or 20 years plus $629,800 for each of the first 3 years. Capitalizing at 7% and equating the result to $4,020,000 gives a revenue requirement of $1,049,810 for a 330-day year, an average of $3,181 per operating day. This revenue requirement is greater by 49% than the requirement for an identical vessel built and registered in the United Kingdom, greater by 20% than for one built in the United Kingdom and registered in Canada.

[12]See Appendix XIII. Overhead for vessel C is 10% of wages, fuel, provisions, repairs and maintenance, and supplies, dues, etc.

[13]3.87595% of original cost.

Identical Vessel Built in U.K., Registered in Canada

The out-of-pocket (variable) expenses would be greater than those of the U.K. vessel only with respect to wages and overhead, the latter charge being 10% of specified expenses including wages.[18] The U.K. wage costs are given as $38,400 for 230 days with wheat and $35,100 for 210 days with ore; projecting each of these figures for a 330-day year and taking the average, as above, gives a wage bill of $55,127 for the operating year, about $167 a day. It is estimated that wage costs on Canadian registry would be about $430 a day, which is $141,900 for 330 days, greater than the U.K. figure by $86,773. Adding 10% for overhead gives a total differential of $95,450 a year, i.e. the out-of-pocket expenses for a 330-day year on Canadian registry would be $354,536+$95,450=$449,986.

The relevant data are as follows:

Yearly income requirement	R
Out-of-pocket expenses	$ 449,986
Depreciation allowance	$ 402,000(.85)$^{n-1}$
Additional depreciation 20th year[19]	$ 103,875
Dividends	$ 53,600

Following the procedure given in Table V below it will be found that prospective *retained funds* are (.53R — $292,093) or 20 years plus $188,940(.85)$^{n-1}$ each year for $n=1$ to 20 years plus $48,821 in the 20th year. Capitalizing at 7% and equating the result to $2,680,000 gives a revenue requirement of $874,755 for a 330-day year, an average of $2,651 per operating day. This requirement exceeds that of the U.K. vessel by $167,859 a year or $509 a day, a difference of about 24%.

Identical Vessel Built and Registered in Canada

It is assumed that the cost of the vessel built in Canada would be $4,020,000, 50% greater than the cost assumed for construction in the United Kingdom, and that this cost could be depreciated at 33⅓% straight line under the Canadian Vessel Construction Assistance Act. The only variable expense that would differ from the previous example would be the annual cost of insurance, which accounts for about $53,055 of the $449,986 variable costs there derived. Adding 50% to the insurance cost therefore gives a total of $476,513 for the out-of-pocket expenses of the Canadian-built vessel.

The relevant data are as follows:

Yearly income requirement	R
Out-of-pocket expenses	$ 476,513
Depreciation allowance 3 years at	$1,340,000
Dividends	$ 80,400

Following the procedure given in Table III below it will be found that the prospective *retained funds* are (.53R — $332,952) or 20 years plus $629,800 for each of the first 3 years. Capitalizing at 7% and equating the result to $4,020,000 gives a revenue requirement of $1,049,810 for a 330-day year, an average of $3,181 per operating day. This revenue requirement is greater by 49% than the requirement for an identical vessel built and registered in the United Kingdom, greater by 20% than for one built in the United Kingdom and registered in Canada.

[18]See Appendix XIII. Overhead for vessel C is 10% of wages, fuel, provisions, repairs and maintenance, and supplies, dues, etc.

[19]3.875865% of original cost.

TABLE III

EARNINGS OF VESSEL H CARRYING WHEAT

Based on 230-day season as in Appendix XIII. Vessel cost $5,280,000, depreciation allowance 33⅓% straight line, dividends 2%. Vessel assumed to be one of a Canadian registered fleet.

Assumed Annual Income

(a)	Carriage of 471,270 tons of wheat at $r per ton	$R
(b)	Winter storage of wheat	$14,725
(c)	Total annual income	$R + $14,725

		Years 1 to 3, each	Years 4 to 25, each
1. Corporate Income Tax		$	$
(a)	Income	$R + 14,725$	$R + 14,725$
(b)	Less deductions		
	Out-of-pocket expenses (Item 2, Table I)	629,960	629,960
	Depreciation allowance	1,940,000	—
	Total deductions	2,569,960	629,960
(c)	Taxable income (a) — (b)	$R — 2,555,235$	$R — 615,235$
(d)	Taxes, 47% of (c)	$.47R — 1,200,960$	$.47R — 289,160$
2. Income and Expenditures			
(a)	Income	$R + 14,725$	$R + 14,725$
(b)	Expenditures		
	Out-of-pocket expenses	629,960	629,960
	Taxes, 1(d) above	$.47R — 1,200,960$	$.47R — 289,160$
	Total Expenditures	$.47R — 571,000$	$.47R + 340,800$
(c)	*Disposable Funds* (a) — (b)	$.53R + 585,725$	$.53R — 326,075$
(d)	Less dividends apportioned to earnings of vessel H, 2% of $5,820,000	116,400	116,400
(e)	*Retained Funds* (c) — (d)	$.53R + 469,325$	$.53R — 442,475$

TABLE IV

EARNINGS OF VESSEL H CARRYING IRON ORE

Based on carriage of iron ore for 210 days out of a 230-day season as in Appendix XIII. Vessel cost 55,820,000, depreciation allowance 33⅓% straight line, dividends 2%. Vessel assumed to be one of a Canadian registered fleet.

Assumed Income for 210 days	
(a) Carriage of 654,900 tons of iron ore at $r' per ton	$R'
(b) Winter storage of wheat[1]	$15,145
(c) Total income for 210 days	$R' + $15,145

		Years 1 to 3, each	Years 4 to 25, each
1. Corporate Income Tax		$	$
(a)	Income	$R' + 13,445$	$R' + 13,445$
(b)	Less deductions		
	Out-of-pocket expenses[2]	446,520	446,520
	Depreciation allowance[1]	1,771,304	—
	Total deductions	2,217,824	446,520
(c)	Taxable income (a) — (b)	$R' — 2,204,379$	$R' — 433,075$
(d)	Taxes 47% of (c)	$.47R' — 1,036,058$	$.47R' — 203,545$
2. Income and Expenditures			
(a)	Income	$R' + 13,445$	$R' + 13,445$
(b)	Expenditures		
	Out-of-pocket expenses[2]	446,520	446,520
	Taxes, 1(d) above	$.47R' — 1,036,058$	$.47R' — 203,545$
	Total expenditures	$.47R' — 589,538$	$.47R' + 242,975$
(c)	*Disposable Funds* (a) — (b)	$.53R' + 602,983$	$.53R' — 229,530$
(d)	Less dividends[1]	106,278	106,278
(e)	*Retained Funds* (c) — (d)	$.53R' + 496,705$	$.53R' — 335,808$

[1] 210/230ths of the similar item in Table III.
[2] Variable expenses plus fit-out and lay-up, from Appendix XIII.

TABLE V

EARNINGS OF VESSEL J CARRYING WHEAT

Based on a 230-day season as in Appendix XIII. Vessel cost $3,880,000, depreciation allowance 15% on diminishing balance, dividends 2%. Vessel assumed to be one of a Canadian registered fleet.

Assumed Annual Income

(a)	Carriage of 471,270 tons of wheat at $r per ton	$R	
(b)	Winter storage of wheat		$14,725
(c)	Total annual income	$R	+ $14,725

		Year n	Additional Depreciation 25th year[1]
1. Corporate Income Tax		$	$
(a)	Income	R + 14,725	
(b)	Less deductions		
	Out-of-pocket expenses (item 2, Table I)	604,080	
	Depreciation allowance	dn[2]	+ 66,727
	Total deductions	dn — 604,080	+ 66,727
(c)	Taxable income (a) — (b)	R — dn — 589,355	— 66,727
(d)	Taxes 47% of (c)	.47(R — dn) — 276,997	— 31,362
2. Income and Expenditures			
(a)	Income	R + 14,725	
(b)	Expenditures		
	Out-of-pocket expenses	604,080	
	Taxes, 1(d) above	.47(R — dn) — 276,997	— 31,362
	Total expenditures	.47(R — dn) + 327,083	— 31,362
(c)	*Disposable Funds* (a) — (b)	.53R + .47dn — 312,358	+ 31,362
(d)	Less dividends apportioned to earnings of vessel J, 2% of $3,820,000	77,600	
(e)	*Retained Funds* (c) — (d)	.53R + .47dn — 389,958	
	= .53R + 273,540(.85)$^{n-1}$ — 389,958		+ 31,362

[1]Depreciation at the rate of 15% on the diminishing balance amounts to 98.28022% in 25 years. The balance of 1.71978% is assumed to be claimable in the 25th year.

[2]Where dn is $582,000(.85)^{n-1}$.

TABLE VI

EARNINGS OF VESSEL J CARRYING IRON ORE

Based on carriage of iron ore for 210 days out of a 230-day season as in Appendix XIII. Vessel cost $3,880,000, depreciation allowance 15% on diminishing balance, dividends 2%. Vessel assumed to be one of a Canadian registered fleet.

Assumed Income for 210 days

(a)	Carriage of 654,900 tons of iron ore at $\$r'$ *per ton*	$\$R'$
(b)	Winter storage of wheat[1]	$13,445
(c)	Total income for 210 days	$\$R' + \$13,445$

		Year n	Additional Depreciation 25th year[1]
1. Corporate Income Tax		$	$
(a)	Income	$R' + 13,445$	
(b)	Less deductions		
	Out-of-pocket expenses[2]	422,890	
	Depreciation allowance[1]	$d'n$[3]	+ 60,925
	Total deductions	$d'n + 422,890$	+ 60,925
(c)	Taxable Income (a) — (b)	$R' - d'n - 409,445$	— 60,925
(d)	Taxes 47% of (c)	$.47(R' - d'n) - 192,439$	— 28,635
2. Income and Expenditures			
(a)	Income	$R' + 13,445$	
(b)	Expenditures		
	Out-of-pocket expenses[2]	422,890	
	Taxes, 1(d) above	$.47(R' - d'n) - 192,439$	— 28,635
	Total expenditures	$.47(R' - d'n) - 230,451$	— 28,635
(c)	*Disposable Funds* (a) — (b)	$.53R' + .47d'n - 217,006$	+ 28,635
(d)	Less dividends[1]	70,852	
(e)	*Retained Funds* (c) — (d)	$.53R' + .47d'n - 287,858$	
		$= .53R' + 249,754(.85)^{n-1} - 287,858$	+ 28,635

[1]210/230ths of the similar item in Table V.
[2]Variable expenses plus fit-out and lay-up, from Appendix XIII.
[3]Where $d'n$ *is* $\$531,395(.85)^{n-1}$.

TABLE VII

EARNINGS OF VESSEL C CARRYING WHEAT

Based on carriage of wheat for 230-day season out of 330-day year as in Appendix XIII. Vessel built in U.K. at cost of $2,680,000. Investment allowance 40%, depreciation allowance 12½% of diminishing balance, dividends 2½%, apportioned 230/330ths to the given employment. Vessel assumed to be one of a fleet registered in the United Kingdom.

	Year n	Investment Allowance 1st Year	Additional Depreciation 20th Year[1]
1. Corporate Taxes	$	$	$
(a) Seasonal income	R		
(b) Less deductions			
Out-of-pocket expenses[2]	332,130		
Investment allowance	—	+ 747,152	
Depreciation allowance	dn[3]		+ 129,274
Total deductions	dn + 332,130	+ 747,152	+ 129,274
(c) Taxable income (a) — (b)	R — dn — 332,130	— 747,152	— 129,274
(d) Dividends	46,697		
(e) Undistributed (c) — (d)	R — dn — 378,827	— 747,152	— 129,274
(f) Taxes			
30% of (d)	14,009		
45½% of (e)	.455(R — dn) — 172,366	— 339,954	— 58,820
Total taxes	.455(R — dn) — 158,357	— 339,954	— 58,820
2. Income and Expenditures			
(a) Income	R		
(b) Expenditures			
Out-of-pocket expenses[2]	332,130		
Taxes, 1(f) above	.455(R — dn) — 158,357	— 339,954	— 58,820
Total expenditures	.455(R — dn) + 173,773	— 339,954	— 58,820
(c) *Disposable Funds* (a) — (b	.545R + .455dn — 173,773	+ 339,954	+ 58,820
(d) Less dividends	46,697		
(e) *Retained Funds* (c) — (d)	.545R + .455dn — 220,470		
= .545R + 106,236(.875)$^{n-1}$ — 220,470		+ 339,954	+ 58,820

[1]Depreciation at the rate of 12½% of the diminishing balance amounts to 93.07911% in 20 years; the balance of 6.92089% assumed to be claimable in 20th year.
[2]From Appendix XIII, variable expenses.
[3]Where dn = $233,484(.875)^{n-1}$.

TABLE VIII

EARNINGS OF VESSEL C CARRYING IRON ORE

Based on carriage of iron ore for a 210-day season out of a 330-day year as in Appendix XIII. Vessel built in U.K. at cost of $2,680,000. Investment allowance 40%, depreciation allowance 12½% of diminishing balance, dividends 2½%, apportioned 210/330ths to the given employment. Vessel assumed to be one of a fleet registered in the United Kingdom.

	Year n	Investment Allowance 1st Year	Additional Depreciation 20th Year[1]
1. *Corporate Taxes*	$	$	$
(a) Seasonal income	R'		
(b) Less deductions			
Out-of-pocket expenses[2]	231,650		
Investment allowance	—	+ 682,182	
Depreciation allowance	$d'n$[3]		+ 118,033
Total deductions	$d'n$ + 231,650	+ 682,182	+ 118,033
(c) Taxable income (a) — (b)	R' — $d'n$ — 231,650	— 682,182	— 118,033
(d) Dividends	42,636		
(e) Undistributed (c) — (d)	R' — $d'n$ — 274,286	— 682,182	— 118,033
(f) Taxes			
30% of (d)	12,791		
45½% of (e)	.455(R' — $d'n$) — 124,800	— 310,393	— 53,705
Total taxes	.455(R' — $d'n$) — 112,009	— 310,393	— 53,705
2. *Income and Expenditures*			
(a) Income	R'		
(b) Expenditures			
Out-of-pocket expenses[2]	231,650		
Taxes, 1(f) above	.455(R' — $d'n$) — 112,009	— 310,393	— 53,705
Total expenditures	.455(R' — $d'n$) + 119,641	— 310,393	— 53,705
(c) *Disposable Funds* (a) — (b)	.545R' + .455$d'n$ — 119,641	+ 310,393	+ 53,705
(d) Less dividends	42,636		
(e) *Retained Funds* (c) — (d)	.545R' + .455$d'n$ — 162,277		
= .545R' + 96,998(.875)$^{n-1}$ — 162,277		+ 310,393	+ 53,705

[1]Depreciation at the rate of 12½% of the diminishing balance amounts to 93.07911% in 20 years; the balance of 6.92089% assumed to be claimable in the 20th year.
[2]Variable expenses from Appendix XIII.
[3]Where $d'n$ is $218,182(.875)^{n-1}$.

TABLE IX

EARNINGS OF VESSEL F CARRYING WHEAT

Based on the carriage of wheat for a 230-day season out of a 330-day year as in Appendix XIII. Vessel built in U.K. at cost of $4,250,000. Investment allowance 40%, depreciation allowance 12½% of diminishing balance, dividends 2½%, apportioned 230/330ths to the given employment. Vessel assumed to be one of a fleet registered in the United Kingdom.

	Year n	Investment Allowance 1st Year	Additional Depreciation 20th Year[1]
1. *Corporate Taxes*	$	$	$
(a) Seasonal income	R		
(b) Less deductions			
Out-of-pocket expenses[2]	456,550		
Investment allowance	—	+1,184,848	
Depreciation allowance	dn[3]		+ 205,005
Total deductions	dn + 456,550	+1,184,848	+ 205,005
(c) Taxable income (a) — (b)	R— dn — 456,550	—1,184,848	— 205,005
(d) Dividends	74,053		
(e) Undistributed (c) — (d)	R— dn — 530,603	—1,184,848	— 205,005
(f) Taxes			
30% of (d)	22,216		
45½% of (e)	.455(R— dn) — 241,424	— 539,106	— 93,277
Total taxes	.455(R— dn) — 219,208	— 539,106	— 93,277
2. *Income and Expenditures*			
(a) Income	R		
(b) Expenditures			
Out-of-pocket expenses[2]	456,550		
Taxes, 1(f) above	.455(R— dn) — 219,208	— 539,106	— 93,277
Total expenditures	.455(R— dn) + 237,342	— 539,106	— 93,277
(c) *Disposable Funds* (a) — (b)	.545R + .455dn — 237,342	+ 539,106	+ 93,277
(d) Less dividends	74,053		
(e) *Retained Funds* (c) — (d)	.545R + .455dn — 311,395		
= .545R + 168,471(.875)$^{n-1}$ — 311,395		+ 539,106	+ 93,277

[1]Depreciation at the rate of 12½% of the diminishing balance amounts to 93.07911% in 20 years; the balance of 6.92089% assumed to be claimable in the 20th year.
[2]Variable expenses from Appendix XIII.
[3]Where dn is $370,265(.875)^{n-1}$.

TABLE X

EARNINGS OF VESSEL F CARRYING IRON ORE

Based on the carriage of iron ore for a 210-day season out of a 330-day year as in Appendix XIII. Vessel built in U.K. at cost of $4,250,000. Investment allowance 40%, depreciation allowance 12½% of diminishing balance, dividends 2½%, apportioned 210/330ths to the given employment .Vessel assumed to be one of a fleet registered in the United Kingdom.

	Year n	Investment Allowance 1st Year	Additional Depreciation 20th Year[1]
1. *Corporate Taxes*	$	$	$
(a) Seasonal income	R'		
(b) Less deductions			
Out-of-pocket expenses[2]	306,420		
Investment allowance	—	+1,081,818	
Depreciation allowance	$d'n$[3]		+ 187,179
Total deductions	$d'n$ + 306,420	+1,081,818	+ 187,179
(c) Taxable income (a) — (b)	R'— $d'n$ — 306,420	—1,081,818	— 187,179
(d) Dividends	67,614		
(e) Undistributed (c) — (d)	R'— $d'n$ — 374,034	—1,081,818	— 187,179
(f) Taxes			
30% of (d)	20,284		
45½% of (e)	.455(R'— $d'n$) — 170,185	— 492,227	— 85,166
Total taxes	.455(R'— $d'n$) — 149,901	— 492,227	— 85,166
2. *Income and Expenditures*			
(a) Income	R'		
(b) Expenditures			
Out-of-pocket expenses[2]	306,420		
Taxes, 1(f) above	.455(R'— $d'n$) — 149,901	— 492,227	— 85,166
Total expenditures	.455(R'— $d'n$) + 156,519	— 492,227	— 85,166
(c) *Disposable Funds* (a) — (b)	.545R' + .455$d'n$ — 156,519	+ 492,227	+ 85,166
(d) Less dividends	67,614		
(e) *Retained Funds* (c) — (d)	.545R' + .455$d'n$ — 224,133		
= .545R' + 153,821(.875)$^{n-1}$ — 224,133		+ 492,227	+ 85,166

[1]Depreciation at the rate of 12½% of the diminishing balance amounts to 93.07911% in 20 years; the balance of 6.92089% assumed to be claimable in 20th year.
[2]Variable expenses from Appendix XIII.
[3]Where $d'n$ is $338,068(.875)^{n-1}$.

APPENDIX XV

Cost Differentials in the Export of Wheat After the Seaway is Completed

DIRECT OVERSEAS SHIPMENT *versus* TRANSHIPMENT AT MONTREAL

It is assumed that the direct overseas shipment is from Fort William-Port Arthur in vessel C of Appendix XIII, and that wheat for transhipment at Montreal is carried in vessel F, both vessels being on U.K. registry. Vessel C represents the typical ocean tramp. Vessel F is an ocean bulk carrier specially designed for seaway service, shown in Appendix XIV to be in a position to quote lower rates than the most economical laker on Canadian registry; it might presumably be on seasonal charter to a Canadian operator.

The first two examples below assume respectively that vessel C and vessel F proceed in ballast from Montreal to Fort William. However, both vessels would find advantage in carrying iron ore from Sept-Iles to a Lake Erie port on the upbound voyage. Accordingly the third and fourth examples assume that the vessel carries ore to Cleveland, more or less central among the ore ports and at present receiving the largest volume of any, with each vessel receiving the same revenue per ton of ore.

The comparison is in terms of the cost—cost to the shipper—of the water movement of a ton of wheat up to the time it leaves Montreal. The costs dealt with are an estimated charge for vessel time and the elevation charge at Montreal only; it is assumed that the per ton charges for other services (including lakehead fobbing) are the same for each mode of shipment. Vessel capacities, voyage times and operating costs are derived from Appendix XIII, except that the "handling expenses" with respect to wheat at Kingston have been excluded, being replaced where appropriate with the Montreal elevation charges. The estimated charge for vessel time is that calculated to yield a return of 7% after payment of taxes and dividends, derived from Appendix XIV, where the assumptions basic to the calculation are set out.

The revenue required by vessel C, in order that the given return be realized, will be found from Appendix XIV to be $486,074 for 230 days in the hypothetical wheat movement ($577,714 less $91,640 for the handling expenses), which is $2,113 a day; this charge is the one used in the first example. In the ore movement the required revenue is $455,879 for 210 days, or $2,171 a day, hence for the fourth example with the vessel carrying both wheat and ore the charge made is a simple average of the two rates, $2,142 a day.

The revenue required by vessel F will be found likewise to be $708,132 for 230 days with wheat ($846,002 less $137,870 for the handling expenses), or $3,079 a day; this charge is the one used in the second example. The requirement in the ore movement is $662,007 for 210 days, or $3,152 a day; for the third example the charge is the simple average, $3,116 a day.

Example 1: Direct Overseas Shipment via Ocean Tramp (Vessel C), Montreal to Fort William in ballast.

(a) Voyage time above Montreal:

Round trip Kingston to Fort William	227.2 hrs.
Less unload time at Kingston, 15.4 hrs.+5%	16.2 "
	211.0 hrs.
Add Round Trip Kingston to Montreal through Seaway (as per Exhibit 202) 44 hrs. + 5%	46.2 hrs.
Total time above Montreal	257.2 hrs.

(b) Charge for vessel time above Montreal $\frac{257.2 \times \$2,113}{24 \times 10,100}$ = \$2.24 per ton

(c) Reservation: If crew inexperience in the restricted waters causes slower voyage, add 21c per ton to the charge for each day of delay (\$2,113 ÷ 10,100).

Example 2: Transhipment at Montreal from inland carrier F to ocean-going vessel, with F proceeding Montreal to Fort William in ballast:

(a) Vessel F's round trip time Montreal-Fort William:

Round trip from Kingston	255.8 hrs.
Add Kingston to Montreal, 44 hrs. + 5%	46.2 "
	302.0 hrs.

(b) Charge for Vessel F's time, including time unloading $\frac{302.0 \times \$3,079}{24 \times 17,100}$ = \$2.27 per ton

(c) *Add:*

Montreal elevation charges[1] inward 0.9c bushel, outward 0.6c, total 1.5c × 37⅓ bu. = 0.56 per ton

Ocean vessel loading time (including delay), say 16.2 hrs. per 10,100 tons as for unloading at Kingston, $\frac{16.2 \times \$2,113}{24 \times 10,100}$ = 0.14 per ton

(d) Total of above charges up to the time shipment leaves Montreal \$2.97 per ton

(e) Reservation: If congestion should be experienced at Montreal as now at Fort William-Port Arthur, add 18c per ton for each additional day Vessel F would be delayed in unloading and 21c per ton for each additional day the ocean vessel would be delayed in loading.

(f) Advantage of direct overseas shipment on the given assumptions is \$2.97 — \$2.24 = 73c a ton or 2.0c a bushel.

[1]National Harbours Board, By-law Montreal B-7, Tariff of Charges.

The Economy of Two-way Cargoes

The economy can be measured in terms of the ship hours saved by the two-way movement of cargo as compared with independent movement. The round trip time Montreal-Fort William for Vessel F carrying wheat only was estimated in Example 2 above to be 302.0 hours. The round trip time with ore from Sept-Iles to Cleveland can be projected from the time to Hamilton, and likewise the voyage time for a combined ore and wheat movement. Cleveland is 161 statute miles farther than Hamilton from Sept-Iles, and the distance from Cleveland to Fort William-Port Arthur is 711 miles.[2]

Voyage Times for Vessel F:

(a) Round trip Sept-Iles to Cleveland, return in ballast:

Round trip Sept-Iles to Hamilton		180.5 hrs.
Add 161m. × 2 at 14.4 m.p.h.	22.4 hrs.	
Welland Canal delay	18.0 "	
	40.4 hrs.	
Add 5%	2.0 "	42.4 "
Total		222.9 hrs.

Charge per ton $\frac{222.9 \times \$3,152}{24 \times 17,100} =$ ..... $1.71 per ton of ore

(b) Round trip Sept-Iles to Fort William with ore and wheat:

Round trip to Cleveland, above		222.9 hrs.
Add Cleveland to Fort William:		
711m. × 2 at 14.4 m.p.h.	98.8 hrs.	
Additional delay	8.0 "	
Load and unload wheat	72.0 "	
	178.8 hrs.	
Add 5%	8.9 hrs.	
Additional time with wheat		187.7 hrs.
Total voyage time		410.6 hrs.

(c) Summary comparison:

Voyage time with wheat only, Example 2	302.0 hrs.
Voyage time with ore only, above	222.9 "
Total ship hours	524.9 hrs.
Voyage time with ore and wheat, above	410.6 "
Saving in ship hours (=21.7%)	114.3 hrs.

Example 3: Transhipment at Montreal from vessel F to ocean-going vessel, vessel F having carried wheat in an extension of a voyage with ore:

(a) Assume that Vessel F carries 17,100 tons of iron ore from Sept-Iles to Cleveland at a revenue of $1.71 a ton (from (a) above) or $29,241, proceeds to Fort William for a cargo of 17,100 tons of wheat to be transhipped to an ocean vessel at Montreal. Vessel F's voyage time would be 410.6 hours as per (b) above.

[2]Distances (in statute miles) from *Great Lakes Pilot*, 1955, U.S. Lake Survey, Corps of Engineers, U.S. Army, Detroit, Mich.

(b) Charges accruing against wheat:

Vessel F's total voyage charges $\frac{410.6 \times \$3,116}{24}$ =	$53,310
Less assumed ore revenue	$29,241
Required charge to wheat movement	$24,069
The charge to the wheat movement for Vessel F's time would therefore be $24,069 ÷ 17,100 =	$1.41 per ton
Add for elevation charges and ocean vessel loading time (Example 2(c))	0.70 " "
Total of these charges for wheat movement	$2.11 per ton

(c) Advantage of transhipment on the given assumptions (cf. Example 1) is $2.24—$2.11 = 13c a ton or about 0.3c a bushel, subject to the reservation noted in Examples 1 and 2.

Example 4: Direct Overseas Shipment via Vessel C, the vessel having delivered a cargo of iron ore from Sept-Iles to Cleveland on the way to Fort William.

(a) Assume that the vessel has discharged an inbound cargo at Montreal, proceeds to Sept-Iles to take on 10,100 tons of ore for Cleveland at a revenue of $1.71 a ton (as in Example 3) or $17,271, proceeds to Fort William for an overseas cargo of 10,100 tons of wheat.

(b) Voyage time from clearing Montreal to clearing Montreal:

Voyage time for wheat only, Example 1		257.2 hrs.
Additional time to handle ore:		
492m.[3] × 2 at 14.4 m.p.h.	68.3 hrs.	
Delays below Montreal	6.0 "	
Load and unload ore	24.9 "	
	99.2 hrs.	
Add 5%	5.0 "	104.2 "
Total voyage time		361.4 hrs.

(c) Voyage charge to be made against wheat:

Total voyage charges $\frac{361.4 \times \$2,142}{24}$ =	$32,255
Less assumed ore revenue	17,271
Required charge to wheat movement	$14,984
The charge for the wheat movement would therefore be $14,984 ÷ 10,100=	$1.48 per ton.

(d) Advantage of direct overseas shipments on the given assumption (cf. Example 3) is $2.11—$1.48=63c a ton or about 1.7c a bushel, subject to the reservations noted in Examples 1 and 2.

[3]In order to be comparable with previous examples, the distance from Montreal to Sept-Iles is taken as the difference between mileage of 854 for Hamilton to Sept-Iles (used in original Exhibit 200 and accepted in Appendix XIII) and mileage of 862 for Hamilton to Montreal given in *Great Lakes Pilot*, 1955. The distance is given as 503 statute miles in *Canadian Ports and Shipping Directory*, 12th edition, 1954, National Business Publications Ltd., Gardenvale, Que.

APPENDIX XVI

Ocean and Lake Freight Rates

Statistical Series for Figures 1 to 6 of Chapter VII

FIGURE 1—MONTHLY INDICES OF OCEAN FREIGHTS

(a) *Index Number of Shipping Freights, 1920 to 1937*

Source: Chamber of Shipping of the United Kingdom, Annual Reports, Converted from 1920 base to 1935 base.

1935 = 100

	1920	1921	1922	1923	1924	1925	1926	1927	1928
Jan.	648.4	244.1	173.8	155.1	162.1	158.3	131.8	160.0	133.5
Feb.	727.4	200.2	177.0	152.4	166.4	151.7	121.1	164.4	129.1
March	743.3	197.6	175.3	154.8	169.4	137.5	115.2	160.9	131.7
April	669.5	208.0	163.2	169.8	163.9	133.2	119.2	149.9	130.7
May	637.8	207.6	171.4	162.2	158.7	127.9	120.1	154.0	126.4
June	590.4	224.8	157.2	151.2	153.3	124.7	125.0	141.9	129.2
July	500.8	226.7	146.5	145.5	144.5	116.3	140.5	131.6	129.8
Aug.	442.8	212.0	146.8	131.9	146.8	124.4	144.3	133.8	135.1
Sept.	442.8	181.4	142.3	139.3	149.0	122.7	173.1	141.8	136.0
Oct.	490.2	162.5	149.3	144.1	158.8	129.4	227.3	144.1	143.8
Nov.	421.7	154.8	157.7	143.9	154.4	137.4	245.0	146.3	153.8
Dec.	305.7	175.6	163.6	147.9	148.7	142.1	174.5	142.9	153.3
Year	527.1	198.2	156.7	149.6	156.2	133.3	147.5	146.5	135.9

	1929	1930	1931	1932	1933	1934	1935	1936	1937
Jan.	150.4	103.1	108.4	96.9	99.3	100.4	97.9	111.8	172.1
Feb.	148.9	99.9	101.9	101.9	97.8	100.2	90.8	103.6	171.6
March	139.5	95.7	103.7	107.7	93.5	96.3	93.3	110.0	173.4
April	137.2	102.4	104.9	107.1	91.0	93.3	95.7	105.8	181.4
May	134.6	90.2	108.6	102.5	91.9	94.3	94.5	109.1	190.0
June	127.1	96.4	96.6	90.1	95.4	90.8	93.6	108.4	179.0
July	129.7	95.0	96.7	87.9	95.8	97.5	97.9	109.1	180.6
Aug.	129.4	108.6	98.4	92.1	93.7	106.9	96.5	115.8	201.3
Sept.	131.6	106.7	97.3	100.5	87.2	109.0	98.8	128.0	225.8
Oct.	120.5	96.1	113.8	98.0	94.6	103.4	115.9	136.6	209.9
Nov.	120.9	106.4	115.1	100.7	99.4	103.2	110.7	137.4	178.9
Dec.	109.8	110.6	111.5	103.8	108.5	99.6	118.6	167.2	155.7
Year	131.1	100.7	104.8	98.9	95.6	99.4	100.0	119.0	*

*Series discontinued, replaced with the following one.

FIGURE 1—MONTHLY INDICES OF OCEAN FREIGHTS (*Con.*)

(b) Weighted Index Number of Tramp Shipping Freights 1937 to 1939

Source: Chamber of Shipping of the United Kingdom.

1935=100

	1937	1938	1939
January	167.7	138.2	120.8
February	157.9	129.5	121.5
March	158.9	127.5	117.5
April	176.8	126.9	119.6
May	185.4	130.6	129.6
June	187.1	123.1	121.5
July	185.0	120.2	123.0
August	193.3	126.4	*
September	201.7	126.3	
October	190.0	127.6	
November	162.9	122.3	
December	141.0	124.1	
Year	175.6	126.9	

*Series discontinued on the outbreak of war.

(c) Weighted Index Number of Tramp Shipping Freights 1948 to 1953

Source: Chamber of Shipping of the United Kingdom.

1948=100

	1948	1949	1950	1951	1952	1953
Jan.	111.3	87.1	72.8	151.9	163.9	96.0
Feb.	104.5	100.5	75.5	164.7	157.3	92.3
March	105.5	95.0	75.8	180.6	137.7	96.2
April	102.7	94.6	74.4	176.8	109.4	100.9
May	104.6	99.7	71.4	203.8	110.9	97.4
June	99.8	86.7	74.3	179.0	99.1	95.3
July	99.4	73.3	78.8	179.6	90.2	*
Aug.	100.7	70.6	86.6	149.3	79.2	
Sept.	97.2	71.6	89.0	166.5	87.0	
Oct.	98.8	69.8	95.8	190.4	94.2	
Nov.	88.8	66.5	97.6	172.9	99.0	
Dec.	86.8	72.8	115.7	168.5	98.8	
Year	100.0	82.3	84.0	173.7	110.6	

*Series discontinued, replaced with separate series for time and voyage charters, the latter following.

FIGURE 1—MONTHLY INDICES OF OCEAN FREIGHT (*Concl.*)

(*d*) *Index Number of Tramp Shipping Freights (Voyage Charter) 1952 to 1957*

Source: Chamber of Shipping of the United Kingdom.

1952=100

	1952	1953	1954	1955	1956	1957
Jan.	146.4	79.3	71.9	115.1	144.3	173.7
Feb.	140.6	80.0	77.6	119.8	140.2	167.6
March	122.4	83.2	77.4	113.7	147.2	145.5
April	108.4	85.6	75.8	110.2	151.6	134.3
May	105.8	82.2	77.4	122.6	162.2	116.6
June	91.2	73.8	77.6	128.0	155.5	109.9
July	73.5	75.8	79.7	130.0	155.2	101.9
Aug.	71.2	73.9	80.1	129.9	157.9	
Sept.	76.3	73.9	90.6	138.1	156.1	
Oct.	84.9	77.5	99.5	148.9	153.6	
Nov.	88.0	73.8	110.4	135.5	171.4	
Dec.	83.7	71.5	115.5	140.1	189.4	
Year	100.0	77.5	86.1	127.7	157.0	

FIGURE 2—TIME CHARTER INDEX 1947 TO 1957

Source: Norwegian Shipping News

July to December 1947=100

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	103.8	103.8	82.9	65.6	147.1	224.2	63.0	64.6	125.0	160.8	249.0
Feb.	103.8	103.2	93.0	64.5	160.0	222.0	70.6	69.3	130.6	161.6	227.0
March	105.3	103.8	93.8	63.3	192.5	150.1	74.0	72.3	130.4	168.0	190.0
April	102.2	97.8	93.9	64.3	206.0	129.7	76.3	71.5	111.6	187.6	187.6
May	105.9	97.3	90.2	64.7	216.0	124.0	72.7	70.9	141.1	201.3	163.6
June	102.7	99.4	85.7	64.2	238.0	106.8	71.8	74.6	140.0	189.1	129.2
July	101.5	97.3	75.4	66.9	214.0	94.8	65.0	67.6	143.6	193.8	
Aug.	100.5	95.2	68.0	78.3	208.0	67.4	69.0	76.8	143.5	192.1	
Sept.	102.2	91.3	65.6	84.9	228.0	66.0	62.7	80.2	154.0	208.0	
Oct.	100.2	89.7	68.3	87.6	231.0	69.3	65.0	88.3	160.5	210.8	
Nov.	100.5	88.1	64.3	91.4	249.5	68.9	64.7	107.2	146.4	234.0	
Dec.	95.1	88.6	63.4	117.5	238.0	60.4	65.7	116.3	154.1	255.0	
Year	102.1	96.2	78.7	78.6	210.7	115.3	68.4	80.0	140.1	196.8	

FIGURE 3—RATES FOR HEAVY GRAIN, LINER PARCELS, MONTREAL TO LONDON, 1949 TO 1957

Rates in Shillings per ton of 2,240 pounds

Lows and Highs by Months

Source: Data made available from private records. Original data in shillings and pence per quarter of 480 pounds to July 1953, per ton of 2,240 pounds thereafter.

	1949		1950		1951		1952		1953		1954		1955		1956		1957	
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Jan.	51.3		37.3		67.7		116.7		51.3		47.0		51.0	70.0	80.0		90.0	100.0
Feb.	51.3		37.3		93.3		116.7		51.3		47.0		67.5	70.0	80.0	90.0	90.0	112.5
March	51.3		37.3		93.3		116.7		51.3		47.0		70.0	78.0	87.5	92.5	90.0	125.0
April	51.3		37.3		105.0		79.3		51.3		47.0		65.0	78.0	82.5	92.5	85.0	110.0
May	49.0		37.3		105.0		79.3		51.3		45.0	47.0	65.0	75.0	82.5	87.0	55.0	100.0
June	49.0		38.5		105.0		68.8		51.3		45.0		65.0	72.5	82.5	92.5	55.0	100.0
July	45.5		37.3		105.0		68.8		51.3		45.0	47.0	65.0	75.0	80.0	90.0	43.0	62.5
Aug.	40.8		37.3		105.0		49.0		42.0		45.0	47.0	70.0	80.0	80.0	85.0	42.5	60.0
Sept.	35.0		39.7		105.0		37.3	49.0	42.0		45.0	47.0	77.5		80.0	90.0		
Oct.	35.0		39.7		105.0		39.7		47.0		45.0	47.0	77.5		90.0	92.0		
Nov.	37.3		40.8		105.0		44.3		47.0		47.0	50.0	77.5		90.0	95.0		
Dec.	37.3		46.7		116.7		51.3		47.0		47.0	72.0	77.5	82.5	90.0	100.0		
Year	35.0	51.3	37.3	46.7	67.7	116.7	37.3	116.7	42.0	51.3	45.0	72.0	51.0	82.5	80.0	100.0		

FIGURE 4—WHEAT: LAKE FREIGHT RATES FROM FORT WILLAM-PORT ARTHUR TO MONTREAL DIRECT, 1946 TO 1957

Source: Board of Grain Commissioners for Canada, Statistics Branch.

(*a*) *Maximum Rates*

Period[1]	Cents per Bushel
1946 — season	8 c
1947 — season	10
1948 — April to September	11
— October to November	12½
1949 — season	12½
1950 — season	12½
1951 — season	16
1952 — season	16
1953 — season	16
1954 — season	16
1955 — season	16
1956 — season	16
1957 — season as shown below	16

[1]For tonnage loaded in December the maximum rate is increased by 2c per bushel.

(*b*) *Weighted Average Rates by Months* in cents per bushel

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	—	—	—	—	—	—	—	—	—	—	—	—
Feb.	—	—	—	—	—	—	—	—	—	—	—	—
March	—	—	—	—	—	—	—	—	—	—	—	—
April	8.0	10.0	11.0	12.5	12.5	16.0	16.0	16.0	16.0	13.5	16.0	16.0
May	8.0	10.0	11.0	12.5	12.5	16.0	16.0	16.0	14.79	13.5	16.0	16.0
June	8.0	10.0	11.0	12.5	12.5	16.0	16.0	16.0	14.5	13.5	16.0	16 0
July	8.0	10.0	11.0	12.5	12.5	16.0	16.0	16.0	14.5	13.5	16.0	16.0
Aug.	8.0	10.0	11.0	12.5	12.5	16.0	16.0	16.0	14.06	13.5	16.0	16 0
Sept.	8.0	10.0	—	12.5	12.5	16.0	16.0	16.0	13.5	13.5	16.0	
Oct.	8.0	10.0	12.5	12.5	12.5	16.0	16.0	16.0	13.5	13.5	16.0	
Nov.	8.0	10.0	12.5	12.5	12.5	16.0	16.0	16.0	13.5	13.5	16 0	
Dec.	—	—	—	—	—	—	—	—	—	—	17 0	

FIGURE 5—OATS: LAKE FREIGHT RATES FROM FORT WILLIAM-PORT ARTHUR TO MONTREAL DIRECT, 1946 TO 1957

Source: Board of Grain Commissioners for Canada, Statistics Branch.

(*a*) *Maximum Rates*

Period[1]	Cents per Bushel
1946	[2]
1947	[2]
1948 — April to September	9½c
— October to November	11
1949 — season	11
1950 — season	11
1951 — season	14
1952 — season	14
1953 — season	14
1954 — season	14
1955 — season	14
1956 — season	14
1957 — season as shown below	14

[1]For tonnage loaded in December the maximum rate is increased by 2c per bushel.
[2]No maximum.

(*b*) *Weighted Average Rates by Months* in cents per bushel

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	—	—	—	—	—	—	—	—	—	—	—	—
Feb.	—	—	—	—	—	—	—	—	—	—	—	—
March	—	—	—	—	—	—	—	—	—	—	—	—
April	6.25	8.0	9.5	—	9.93	12.5	12.5	12.5	12.5	11.5	13.0	13.0
May	6.25	8.0	8.95	10.0	9.93	—	12.63	12.5	12.21	11.5	13.0	13.0
June	—	8.0	—	9.5	10.21	12.5	12.5	12.5	12.0	11.36	13.0	13.0
July	6.25	8.0	9.0	9.5	9.5	—	12.5	12.5	12.0	11.5	13.0	13.0
Aug.	6.25	8.0	—	9.5	9.5	12.5	12.5	12.5	11.95	11.39	13.0	13.0
Sept.	6.25	8.0	—	9.62	10.0	12.5	—	12.67	11.18	11.0	13.0	
Oct.	6.25	8.0	11.0	9.5	9.79	12.5	12.5	12.5	11.0	11.07	13.0	
Nov.	—	8.0	11.0	10.04	9.5	—	12.99	12.5	11.0	11.27	—	
Dec.	—	—	—	—	—	—	—	—	—	—	—	

FIGURE 6—BARLEY: LAKE FREIGHT RATES FROM FORT WILLIAM-PORT ARTHUR TO MONTREAL DIRECT, 1946 TO 1957

Source: Board of Grain Commissioners for Canada, Statistics Branch.

(*a*) *Maximum Rates*

Period[1]	Cents per Bushel
1946	[2]
1947	[2]
1948 — April to September	10¼c
— October to November	11¾
1949 — season	11¾
1950 — season	11¾
1951 — season	15¼
1952 — season	15¼
1953 — season	15¼
1954 — season	15¼
1955 — season	15¼
1956 — season	15¼
1957 — season as shown below	15¼

[1]For tonnage loaded in December the maximum rate is increased by 2c per bushel.
[2]No maximum.

(*b*) *Weighted Average Rates by Months* in cents per bushel

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	—	—	—	—	—	—	—	—	—	—	—	—
Feb.	—	—	—	—	—	—	—	—	—	—	—	—
March	—	—	—	—	—	—	—	—	—	—	—	—
April	7.75	9.5	10.25	11.75	11.75	15.25	15.25	15.25	15.25	12.75	15.25	15.25
May	7.75	9.5	10.25	11.75	11.75	15.25	15.25	15.25	14.07	12.75	14.02	15.25
June	—	9.5	10.25	11.75	11.75	15.25	15.25	15.25	13.75	12.75	15.25	15.25
July	7.75	9.5	10.25	11.75	11.75	15.25	15.25	15.25	13.75	12.75	15.25	15.25
Aug.	7.75	9.5	10.25	11.75	11.75	15.25	15.25	15.25	13.51	12.75	15.25	15.25
Sept.	7.75	9.5	10.25	11.75	—	15.25	15.25	15.25	12.75	12.75	15.25	
Oct.	7.75	9.5	11.75	11.75	11.75	15.25	15.25	15.25	12.75	12.75	15.25	
Nov.	7.75	9.5	11.75	—	11.75	15.25	15.25	15.25	12.75	12.75	15.25	
Dec.	—	—	—	—	—	—	—	—	—	—	—	

APPENDIX XVII

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